



# BERTSCH



**Plate Rolls  
& Angle Rolls**

# Bertsch – Innovative, Heavy-Duty Rolling Equipment Since 1879

Bertsch bending rolls are designed and built to accurately form metal from gauge thickness through 14" thick and larger, and can be custom designed to meet specific applications.

## Key Advantages Of Bertsch Rolls

### More Pre-Bend

Bertsch machines pre-bend to the machine's rolling capacity. Most competitors specify less pre-bending capacity than rolling capacity.

### Designed for Longer Life

Rectilinear guides provide longer service life and maintain better parallelism over the life of the machine.

### Better Quality Parts

Rectilinear guides also produce the smallest flats on the ends of rolled parts.

### Easier to Use

Bertsch's electronic leveling system allows operators to make roll corrections on both ends of each roll, not just one end.

### Higher Capacity

Bertsch rates its machines for the nominal thickness and length of the machine. For example, a 1-inch, 10-foot machine can roll a 10-foot wide piece of 1-inch thick material to its minimum roll diameter. Other manufacturer's specifications are more closely matched to Bertsch's smaller capacity models.



*Hydraulic cylinder actuates the automatic self-locking hinge.*



*Pressure gauges monitor pinch pressure on both ends of the machine to monitor part squareness.*



*Pre-bending to the full rated capacity plate is accomplished with sufficient power in each side roll hydraulic cylinder. Many competitors are not capable of pre-bending to their maximum rated rolling capacity.*



*Rolls are easily adjusted on either end with Bertsch's unique electronic leveling system. Because most competitors allow adjustment on one end only, roll corrections are more difficult.*



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Four digital readouts, one for each side roll and two for pinch roll.

Customized crowned roll forgings adaptable to your specific rolling needs.

Operator safety ensured by electrical disconnect with lock-out feature, e-stop button located on control, and a trip switch located along both sides of the machine.



Variable speed differential achieved by the Independently Driven Top and Bottom Rolls, allowing them to seek their own speed when driving on the inner and outer radius. **Some competitors offer inferior gear-to-gear or chain drive systems, limiting them to fixed speed differentials.**



Operator controls are located on moveable pendant or console for ease of use.



Reduce potential leaks by eliminating connections and utilizing hard tubing throughout the machine, limiting the use of hoses only to areas requiring a flexible connection. **Most competitors use hose connections exclusively, creating the potential for more leaks.**



Spherical roller bearings increase drive's efficiency by reducing friction.



# Bertsch Rectilinear Guides

## Rectilinear Guides (Bertsch Design)—built for rolling heavy plate

### Concept

The Rectilinear Guide concept consists of forming rolls that are guided in place by a machined surface, and bearing blocks mounted directly above the hydraulic cylinder. The position of the rolls is controlled by the hydraulic cylinder with no additional moving parts.

### Advantages

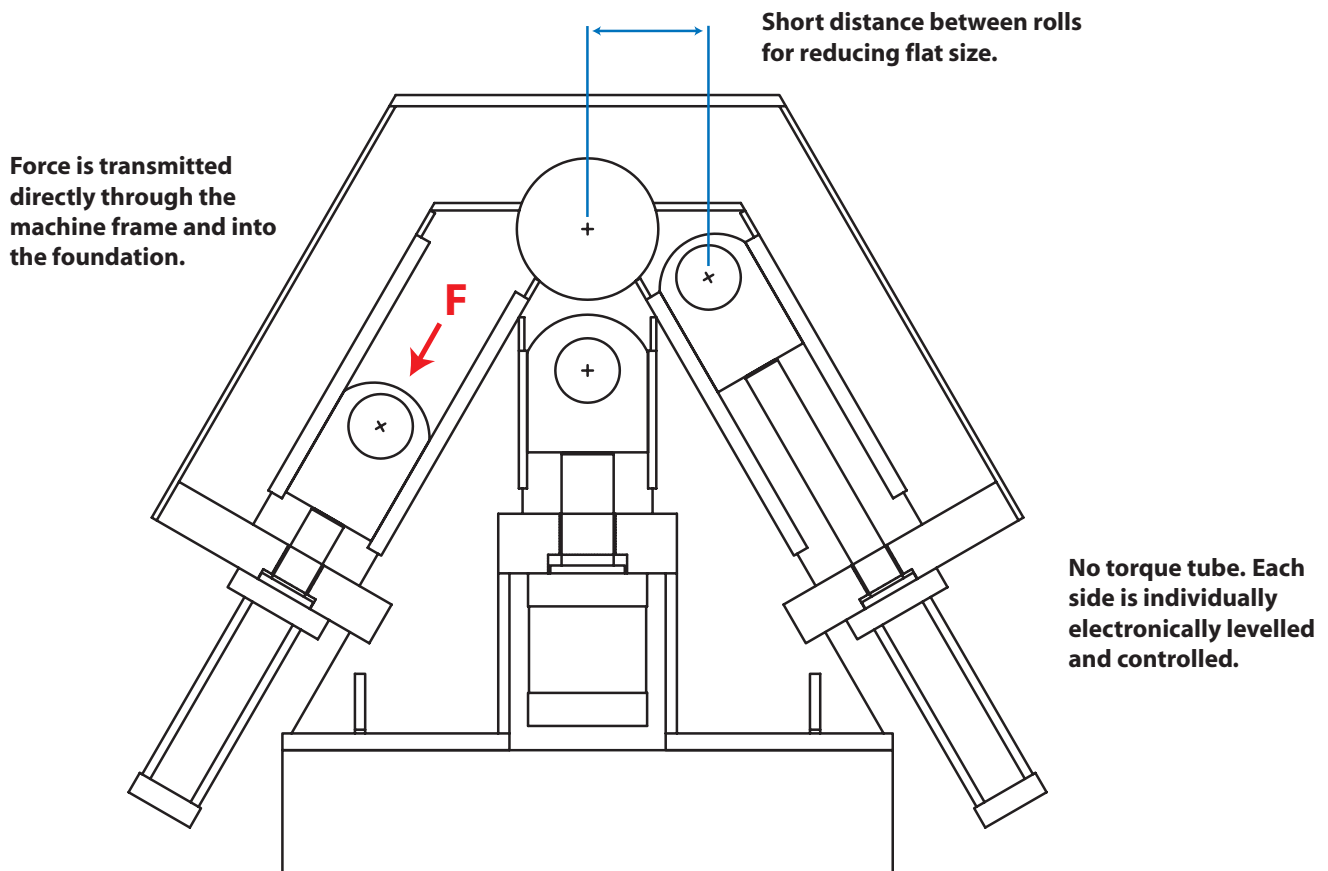
Bertsch's Rectilinear Guide system transmits the forming roll forces directly to the hydraulic cylinder, into the machine frame, and into the foundation. There are no load-bearing wear points or torsional stresses affecting roll parallelism and accuracy. This leads to a long service life, consistent parts, and low maintenance.

The centerline of the forming roll is close to that of the pinch roll. This allows the flat areas associated with pre-bending to be small and consistent. In addition, Bertsch sizes the direct-acting hydraulic cylinders to pre-bend to the maximum rolling capacity of each machine.

Each side of every forming roll is individually controlled, allowing fine roll adjustments, making cone rolling easy to set up. There are no torque tube stresses to account for.

### Disadvantages

Rectilinear Guides are more expensive to produce because they require additional machining, and the hydraulic cylinders have a larger diameter.





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## Planetary Swing Guides (Competitor's Design)—inexpensive, but less robust solution

### Concept

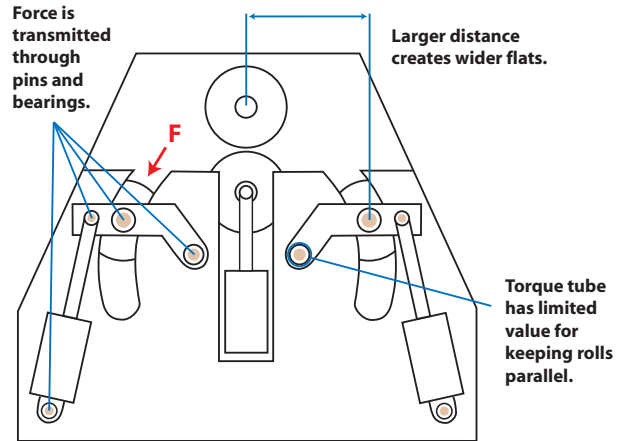
The Planetary Swing Guide concept consists of the forming rolls mounted to a lever arm. The hydraulic cylinders are mounted so that a mechanical advantage is formed allowing use of a smaller diameter, and less expensive cylinder. The rolls move along an arc, and are cam guided. A torque tube is mounted between the hinge end and gear end of the machine, and attached to the levers in order to maintain parallelism of the rolls.

### Advantages

This concept requires smaller cylinders and less machining than the rectilinear guides, and therefore costs less.

### Disadvantages

1. Each side of every forming roll requires a minimum of four pivot points (see diagram). These pivot points consist of a pin and a bearing. The entire bending load of the machine is translated through these pins and bearings resulting in faster wear. This wear creates loss of parallelism and therefore difficulty in maintaining consistency from part to part.
2. The centerline of the pinch and forming rolls are larger than on rectilinear machines. As a result, the



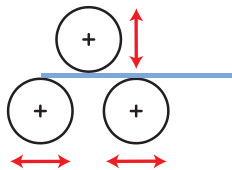
flat associated with pre-bending is larger, creating more part inconsistencies.

3. The amount of mechanical advantage becomes limited as the forming cylinder rises for pre-bending. The cylinders are typically not sized to handle this additional force, therefore the machines are not capable of pre-bending the material to its nominal rolling capacity.
4. The torque tube is sized in order to allow some twist for the purpose of cone rolling. The torque tube is not capable of keeping the rolls parallel.
5. The torque tube creates twisting stresses in the lever and machine frame.

## Variable Geometry Rolls (Competitor's Design)—low cost, but limited capability

### Concept

The Variable Geometry Roll concept uses only three rolls, and allows the bottom rolls to be adjusted from side to side.



### Advantages

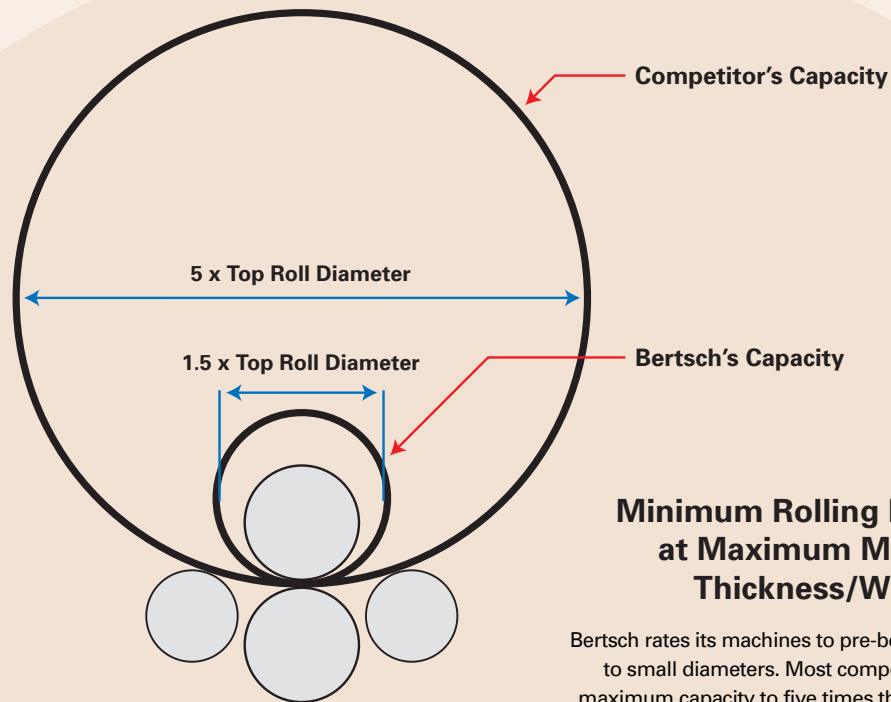
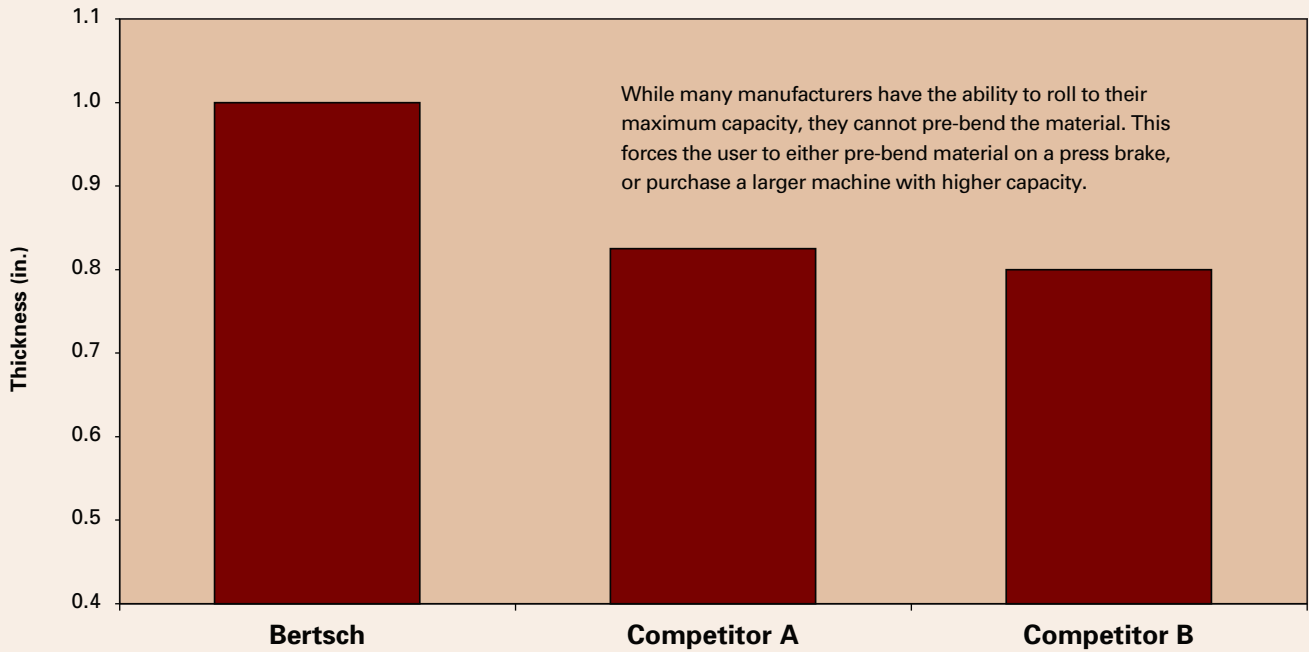
Less expensive solution by offering three rolls instead of four.

### Disadvantages

1. Pre-bend capacities are typically limited—to as much as 50 percent of rolling capacity.
2. The rated rolling capacity can only be achieved by spreading out the lower two rolls, creating excessive flats—7 to 10 inches depending on the size of the machine.
3. Machines are typically only driven by the top roll. Thin material can slip when rolled to large diameters.

# The Bertsch Advantage

## Comparison of 1 in./10 ft. Rolls Pre-Bending

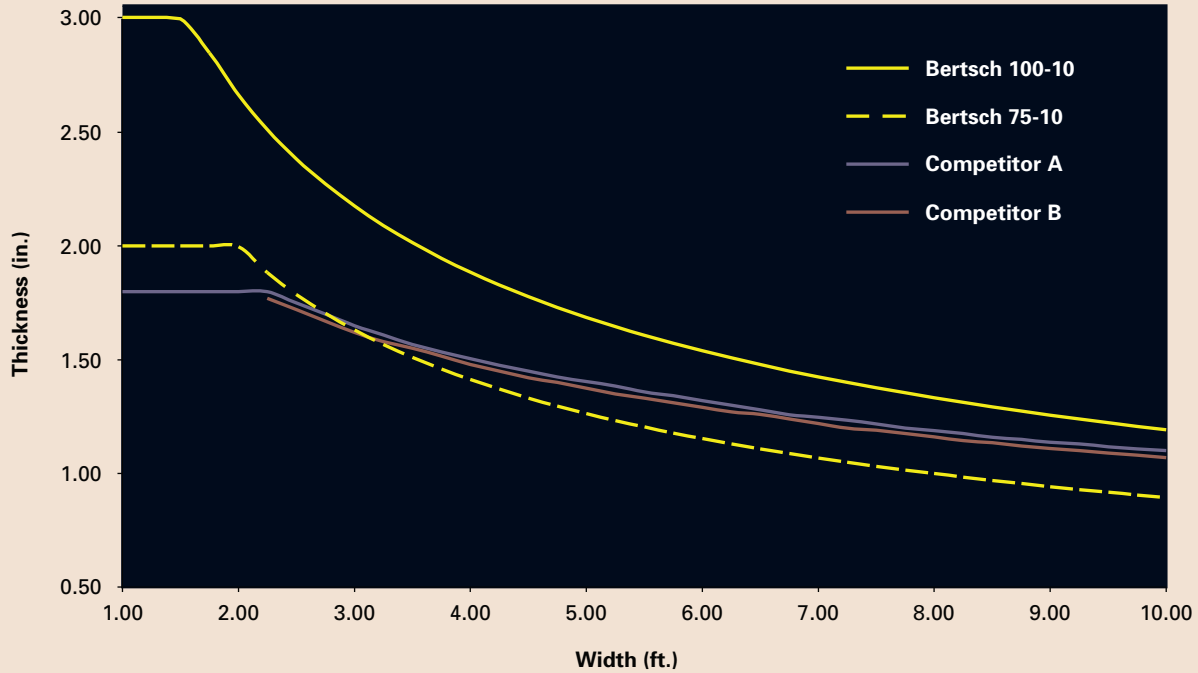




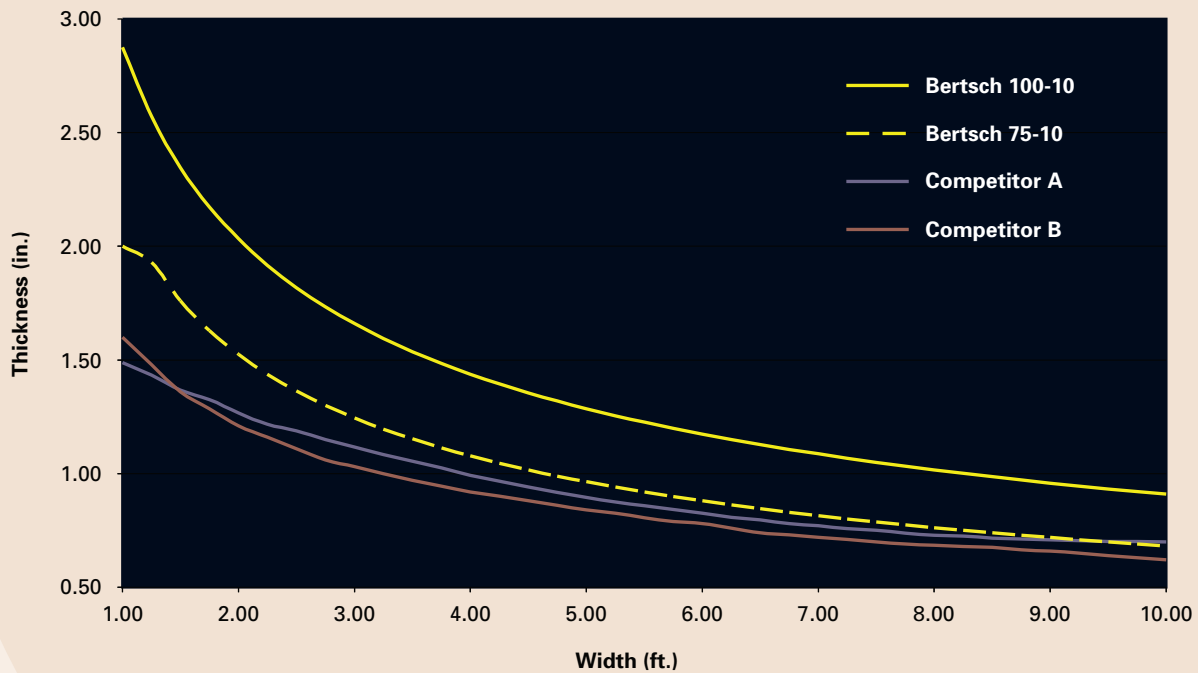
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## Comparison of 1 in./10 ft. Rolls Rolling Capacity – 146" Diameter



## Comparison of 1 in./10 ft. Rolls Rolling Capacity – 16.8" Diameter



# Bertsch Bending Roll Capacity Charts

Standard Rolls					5 Times Top Roll Diameter				Minimum Diameters (at Maximum Width)			
Model	Nominal Thickness	Width	Top Roll Diameter	Pre-Bend Capacity (Thick./Length)	Diameter	Max Thick at 100% Width	Max Thick at 70% Width	Max Thick at 30% Width	Thickness	Diameter Single Pass	Thickness	Diameter Multi-Pass
25-08	0.250	96	9.0	.250 / 96	45.0	0.295	0.352	0.538	0.188	11.0	0.250	17.5
25-10	0.250	120	9.0	.250 / 120	45.0	0.304	0.364	0.556	0.203	11.0	0.266	17.5
25-12	0.250	144	10.5	.250 / 144	52.5	0.326	0.389	0.595	0.219	12.7	0.281	19.0
37-08	0.375	96	10.5	.375 / 96	52.5	0.437	0.522	0.798	0.281	12.4	0.375	19.0
37-10	0.375	120	10.5	.375 / 120	52.5	0.438	0.523	0.799	0.281	12.4	0.375	19.0
37-12	0.375	144	12.0	.375 / 144	60.0	0.448	0.535	0.818	0.297	14.2	0.375	20.5
50-08	0.500	96	12.0	.500 / 96	60.0	0.579	0.692	1.056	0.375	13.9	0.500	20.5
50-10	0.500	120	12.0	.500 / 120	60.0	0.577	0.689	1.053	0.375	13.9	0.500	20.5
50-12	0.500	144	14.0	.500 / 144	70.0	0.631	0.754	1.152	0.406	16.1	0.531	22.5
75-08	0.750	96	15.0	.750 / 96	75.0	0.901	1.077	1.645	0.594	16.9	0.781	23.5
75-10	0.750	120	15.0	.750 / 120	75.0	0.856	1.024	1.563	0.563	16.9	0.750	23.5
75-12	0.750	144	16.0	.750 / 144	80.0	0.883	1.055	1.611	0.578	18.0	0.766	24.5
100-08	1.000	96	17.0	1.000 / 96	85.0	1.152	1.377	2.104	0.750	18.9	1.000	25.5
100-10	1.000	120	17.0	1.000 / 120	85.0	1.150	1.374	2.099	0.750	18.9	1.000	25.5

All Numbers in Inches.

Note: ASTM A36 steel has a MINIMUM Yield Strength of 36,000 psi. Above values are calculated using a Yield Strength of 45,000 psi.





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Large Custom Rolls					5 Times Top Roll Diameter				Minimum Diameters (at Maximum Width)			
Model	Nominal Thickness	Width	Top Roll Diameter	Pre-Bend Capacity (Thick./Length)	Diameter	Max Thick at 100% Width	Max Thick at 70% Width	Max Thick at 30% Width	Thickness	Diameter Single Pass	Thickness	Diameter Multi-Pass
#18	1.250	120	20.0	1.25 / 120	100.0	1.500	1.790	2.730	0.984	21.9	1.281	28.5
#20	1.500	120	22.0	1.50 / 120	110.0	1.760	2.110	3.220	1.156	24.0	1.500	30.5
#22	1.750	120	22.0	1.75 / 120	110.0	2.010	2.400	3.660	1.250	23.9	1.625	31.0
#24	2.000	120	25.0	2.00 / 120	125.0	2.190	2.620	4.010	1.453	27.0	1.906	36.3
#30	2.500	120	29.0	2.25 / 120	145.0	2.610	3.120	4.770	1.906	31.0	2.531	48.1
#32	3.000	120	31.0	2.50 / 120	155.0	3.030	3.620	5.530	2.266	33.0	3.000	57.1
#34	3.500	120	35.0	3.50 / 120	175.0	3.980	4.760	6.000	2.609	37.1	3.340	63.7
#36	3.750	120	38.0	3.83 / 120	190.0	4.410	5.270	6.000	3.031	40.1	3.859	73.5
#38	4.000	120	36.0	4.00 / 120	180.0	4.770	5.700	6.000	3.125	38.7	4.000	76.2
#40	4.500	120	40.0	4.50 / 120	200.0	5.400	6.450	8.000	3.531	43.8	4.448	85.5
#44	6.000	120	48.0	Consult Factory	Consult Factory				Consult Factory			

Models shown are nominal capacities. Actual sizes and capacities vary based on application needs.

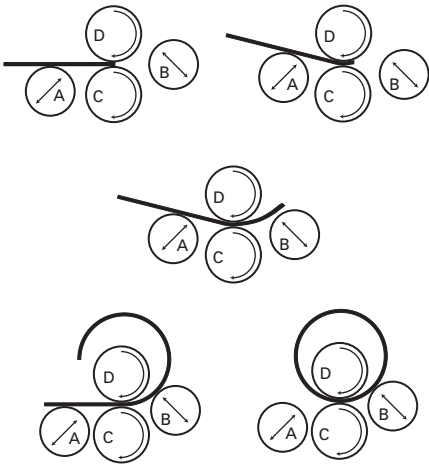
All Numbers in Inches.

Note: ASTM A36 steel has a MINIMUM Yield Strength of 36,000 psi. Above values are calculated using a Yield Strength of 45,000 psi.



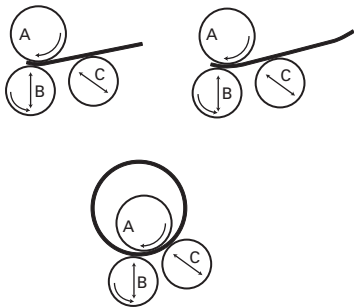
# Design Model Comparisons

Bertsch offers a complete line of hydraulic bending rolls: four-roll double pinch, three-roll initial pinch, and the three-roll double pinch.



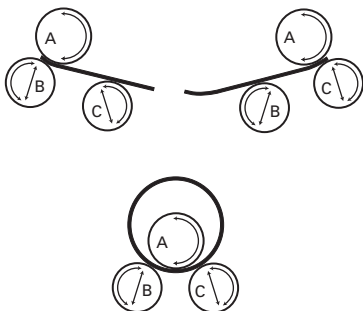
## Four-Roll Double Pinch

- Easiest machine to operate since material is clamped during the squaring process and held during the entire rolling process.
- Able to pre-bend, roll and post-bend the entire piece without releasing the pinch, allowing some parts to be pre-bend and the entire cylinder rolled in a single pass.
- Because the plate is clamped through the entire bending cycle, a rotary encoder can be utilized to indicate how much plate has been fed through the machine, allowing it to be fitted with an optional CNC control.
- Material is fed into the machine parallel to the floor, easily fitted with feed tables and side supports, or placed into a pit for ease of operation.
- Less floor space is required because the part is rolled up and over right after the first pre-bend.
- Machine can be fed from either direction.



## Three-Roll Initial Pinch

- Ability to pre-bend material to minimize flat.
- Able to bump form easily.
- Requires less floor space than three roll double pinch (both ends of the plate are preformed from the same side of the machine).
- Able to square plate prior to rolling.
- Machine can be easily fitted with feed tables, material supports, or set in a pit.
- Material remains square throughout the entire rolling process once it is squared and pinched between the pinching rolls.
- May require operator to remove plate from machine and rotate 180 degrees to pre-bend trailing edge of plate if the part requires pre-bending on both ends.



## Three-Roll Double Pinch

- Additional open height allows you to roll smaller channel, beam or bar in the roll.
- Ability to pre-bend material on both sides of machine without removing plate.
- Machine requires more shop floor space when rolling larger diameter cylinders due to material hanging out both sides during the pre-bending process.
- Manual plate alignment is required at both ends to square material.
- Plate is fed into the machine at an angle, which can make adding side supports, feed tables or setting the machine into a pit challenging.
- Requires the highest level of skill to operate, since there is no definite pinch to hold the plate from shifting during the rolling process.



## Choosing the Right Roll Size

There is no standard for claiming the capacity of a bending roll. This fact creates confusion on the part of the buyer, and ultimately results in bad purchase decisions. Rolling capacity is dependent upon several factors:

- Thickness of the rolled part
- Width of the rolled part
- Diameter of the rolled part
- Material yield and tensile strength
- Multiple Pass vs. Single Pass

Furthermore, rolling capacity and pre-bend capacity of a given machine may be different and stated sep-

arately. Even stated pre-bend capacities may be confusing since these are sometimes specified to 5 times or 10 times the top roll diameter (which may not benefit a user who wants to roll at 1.1 times or 1.5 times top roll diameter).

In order to make accurate comparisons between manufacturers, the buyer must communicate appropriate application information to each manufacturer so that the correct bending roll is proposed, and a good purchase decision is made. Bertsch has created the following chart that can be used by any manufacturer to appropriately size a bending roll for your application.

## Bertsch Application Review Form

### Thickness

Maximum Thickness to be Rolled	
Maximum Width (at Maximum Thickness)	
Minimum Diameter (at Maximum Thickness)	
Material Type or Grade (Maximum Thickness)	
Minimum Thickness to be Rolled	

### Maximum Rolled Part Width

Maximum Width to be Rolled	
Maximum Thickness (at Maximum Width)	
Minimum Diameter (at Maximum Width)	
Material Type or Grade (Maximum Width)	

### Minimum Diameter

Minimum Diameter to be Rolled	
Maximum Width (at Minimum Diameter)	
Maximum Thickness (at Minimum Diameter)	
Material Type or Grade (Minimum Diameter)	

Other Application Needs (Check All That Apply):

Cone Rolling

CNC Control

# Bertsch Large Custom Rolls

## Power and Precision up to 14" Thick



*Custom Bertsch rolls are built to handle the most severe applications.*

*Bertsch rolls are capable of rolling to 1.1 times top roll diameter. All Bertsch rolls can pre-bend at rated rolling capacity.*



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*Rectilinear Guides and Electronic Roll Leveling are the foundations of Bertsch's reputation for long-lasting heavy-duty rolls.*

# Bertsch Plate Roll Options

## Control Options



Bertsch offers a range of control units—from hand-held pendant to the pedestal-mounted CNC.

## CNC Control

Manual machines, equipped with digital readouts, are the most popular type of bending roll. These machines are capable of rolling simple rounds and radii by adjusting roll position and monitoring the digital read-outs.

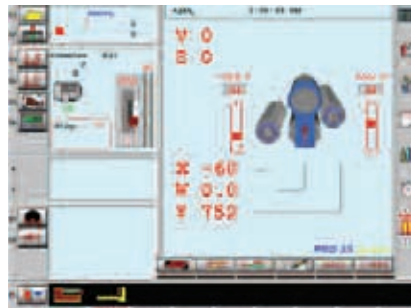
Bertsch's *Roll and Repeat*™ Basic CNC Control provides more versatility by having the ability to store bending steps in memory, for retrieval at any time – simply add the step-by-step sequence into memory, and the machine repeats the sequence for each part. The *Roll and Repeat*™ system provides flexibility, not complexity, and minor adjustments can be made to adjust for material variations when necessary.

When rolling complex geometry, it is beneficial to visualize the bending process graphically. Bertsch's high level CNC Control is a powerful, user-friendly control that improves the versatility and repeatability of your Bertsch Plate Roll. Using a SIEMENS Industrial PLC and dedicated software, it can be operated in either Computer Assisted or Manual modes.

Computer Assisted Mode allows the operator to work with icons on a graphic screen to choose the basic shape and then input simple data such as: Plate Thickness, Plate Width, Yield Strength and Desired Diameter.

The powerful software calculates the necessary theoretical positioning for all rolls and rotation requirements, including sequencing of steps.

For highly complex shapes, or experienced operators, the machine can be programmed quickly in Manual Mode. This single screen allows many steps to be programmed quickly and easily.



Standard with 4 Axis (3 lower roll positioning and rotation control), it can be upgraded to as many as 13 axis for more complex or involved shapes and can include support systems, ejectors, feed tables, and much more.

As with any CNC program, the quality of your finished parts depend heavily on the consistency of raw material and availability of accurate test data. Minor adjustments will be necessary from one material lot to the next in order to achieve the most consistent results.



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## Optional Equipment and Enhancements



### Overhead & Side Supports

Recommended when rolling larger diameters. Hydraulically adjustable and used to maintain cylinder shape during rolling.

### Alloy Hardened Rolls

Recommended when forming cones or when rolling hard materials that may leave permanent scarring in the roll surface.

### Material Feed Systems

Custom designed for rolling application to reduce labor.

### Plate Travel Monitor

Linear encoder measures plate travel, as a digital readout indicates plate location. Used when rolling parts requiring a flat prior to a radius.

### Electronic Speed Control

Infinitely variable roll rotation speed provided directly from operations console

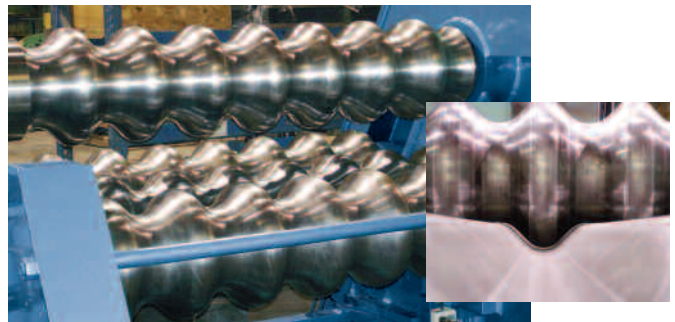
### Polished & Ground Rolls

For applications where surface is critical and minimal defects are allowed.



### Cone Rolling Attachment

The attachment is a removable snubber device, designed to retard the small end of the cone, allowing the large end to travel at a greater surface speed



### Custom Rolls

Custom designs to fit every rolling need — from rolling corrugated material to automated cells.



# Bertsch Bending Roll Applications

*Bertsch bending rolls are ideal for producing rolled parts for a wide range of industries.*



**Fabricating equipment**

**Pressure vessels**

**Concrete mixers**

**Mining equipment**



**Heat exchangers**

**Boilers**

**Pipelines**

**Drilling rigs**



**Electric motors**

**Heavy turbines**

**Water treatment  
equipment**

**Chimney tubes**



**Air compressors**

**Snow plows**

**Heavy equipment loaders**

**Excavating equipment**





**Water towers**

**Wind towers**

**Road compacting  
equipment**

**Storage tanks**

**Fuel tanks**

**Nuclear reactors**

**Grain & Water  
storage systems**

**Water heaters**

**Autoclaves**

**Food & beverage  
processing equipment**

**Coolers**

**Structural steel  
manufacturing**

**Filters**



# Bertsch Hydraulic Angle Rolls

## Machine Design:

The Bertsch Double Pinch design reduces end flats to a minimum. The top roll is in a fixed position, while the two lower rolls have independent hydraulic adjustments. This design provides ease of operator control as well as more uniform rolling results.

## Vertical or Horizontal Working Position:

The Bertsch Angle Roll can be designed to work equally well in the vertical or horizontal position.

## Hydraulic Drive:

All three rolls are driven by planetary speed reducers for positive feed and efficient torque transmission. Bertsch Angle Rolls are designed with a self speed compensating drive for proper roll rotation between the top and lower rolls.

## Hydraulically Adjustable Guide Rollers:

The hardened guide rollers are hydraulically adjustable from the operator's control pendant. Each guide roll assembly is provided with a "leg-in" attachment.

## Operator's Control Pendant:

All essential operator functions are located in a "walk-around" pendant type control for maximum mobility.

## Standard Dies Furnished:

One complete set of standard dies is furnished with each machine. Each die set is supplied with one hardened spacer to provide support for the tip of the vertical leg being formed. Standard dies will accept: flat bar, bar-on-edge, square bar, angle leg-in, angle leg-out, "T" leg-in, "T" leg-out, and "T" on web.





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## Angle Roll Specifications Chart

SIZE	AR-7	AR-15	AR-25	AR-45	AR-60	AR-100
DIE DIAMETER	10 1/2"	12"	15"	18"	23"	24"
HORSEPOWER	7 1/2	10	15	25	30	50
MACHINE SIZE	45" H x 44 1/2" W x 52" L	52 3/4" H x 55 1/4" W x 70" L	61 3/8" H x 62 1/2" W x 71" L	70" H x 70" W x 74" L	70" H x 95" W x 90" L	90" H x 100" W x 110" L
WEIGHT	4,000 Pounds	6,000 Pounds	8,000 Pounds	12,000 Pounds	22,000 Pounds	32,000 Pounds
<b>MAXIMUM PROFILE AND MINIMUM DIAMETER WHEN USING STANDARD TOOLING</b>						
<b>S = Standard Tooling    O = Optional Tooling</b>						
	3" x 3" x 5/16"    35" dia.	4" x 4" x 3/8"    48" dia.	5" x 5" x 3/8"    60" dia.	5" x 5" x 3/4"    60" dia.	6" x 6" x 3/4"    72" dia.	6" x 6" x 1"    72" dia. <b>S</b>
	2 1/2" x 2 1/2" x 1/4"    40" dia.	3" x 3" x 3/8"    45" dia.	4" x 4" x 3/8"    60" dia.	5" x 5" x 1/2"    75" dia.	6" x 6" x 5/8"    90" dia.	6" x 6" x 1"    90" dia. <b>S</b>
	ST3B x 8#    50" dia.	ST4B x 7 1/2#    160" dia.	ST5B x 9 1/2#    192" dia.	ST5WF x 17#    144" dia.	ST6WF x 46#    100" dia.	ST6WF x 66 1/2#    86" dia. <b>S</b>
	ST3B x 8#    50" dia.	ST4B x 7 1/2#    160" dia.	ST5B x 9 1/2#    192" dia.	ST5WF x 17#    144" dia.	ST6WF x 46#    100" dia.	ST6WF x 66 1/2#    86" dia. <b>S</b>
	1/2" x 3"    30" dia.	3/4" x 3 1/2"    35" dia.	1" x 4"    40" dia.	1" x 5"    50" dia.	1" x 6"    60" dia.	1 5/8" x 6"    60" dia. <b>S</b>
	1" x 4 1/2"    19" dia.	1 1/4" x 5 1/2"    20" dia.	1 1/2" x 7"    23" dia.	2" x 7"    28" dia.	2" x 8 1/2"    33" dia.	2 1/2" x 9 1/2"    35" dia. <b>S</b>
	1 5/8"    19" dia.	2"    20" dia.	2 1/2"    25" dia.	3"    30" dia.	3 1/4"    33" dia.	4"    40" dia. <b>S</b>
	4I x 9 1/2#    17" dia.	5I x 14 3/4#    20" dia.	6I x 17 1/4#    22" dia.	7WF x 15.3#    28" dia.	8WF x 24#    65" dia.	10WF x 33#    80" dia. <b>S</b>
	-	-	3I x 7 1/2#    60" dia.	4I x 9 1/2#    96" dia.	5I x 14 3/4#    168" dia.	6I x 17 1/4#    192" dia. <b>S</b>
	1 3/4"    19" dia.	2 1/4"    22" dia.	3"    30" dia.	3 1/2"    36" dia.	4"    40" dia.	4 1/2"    45" dia. <b>O</b>
	2" Sch. 80    28" dia.	2 1/2" Sch. 80    34" dia.	3 1/2" Sch. 40    48" dia.	4" Sch. 40    55" dia.	5" Sch. 40    66" dia.	6" Sch. 40    80" dia. <b>O</b>
	4 x 7 1/4#    16" dia.	5 x 9#    18" dia.	6 x 13#    20" dia.	7 x 12 1/4#    22" dia.	8 x 18 3/4#    24" dia.	12 x 30#    30" dia. <b>O</b>
	4 x 7 1/4#    16" dia.	5 x 9#    18" dia.	6 x 13#    20" dia.	7 x 12 1/4#    22" dia.	8 x 18 3/4#    24" dia.	12 x 30#    30" dia. <b>O</b>

### Standard Features:

- Vertical or horizontal working position
- All three rolls driven
- Double pinch design
- Two lower rolls are independently adjustable
- Energy efficient "load sensing" hydraulic pump
- Mechanical pointer and scale indicator for each adjustable lower roll (digital readouts optional)
- Operator's "walk-around" pendant control station
- Hardened steel guide rollers
- Pressure filter
- Set of standard dies
- Heavy fabricated frame
- Complete with electrical disconnect

Note: All specifications subject to change without notice.

### Standard Safety Features:

- Electric cabinet having door interlocked with fusible type disconnect
- Power "on" button at control station with built-in light
- Line starter with thermal overload and low voltage protection
- A system pressure relief valve limiting the hydraulic drive and bending rolls to a factory preset pressure
- Reduced voltage electrical controls
- Emergency "stop" buttons mounted on both sides of the machine and in the operator's control station
- Toggle type switches, having spring return to "off" position, for controlling all the operating functions of the machine



## About Bertsch:

Bertsch was founded in 1879 and has earned worldwide recognition as a leader in the manufacturing of innovative, heavy duty metal forming equipment.

Even before the turn of the century, Bertsch built many designs and types of shears, press brakes, power rolls, punches, rivets and other equipment.

As the industry progressed, Bertsch research and development used advanced technology for design innovations that meet today's demands for quality, increased output and lower production costs.

Bertsch introduced many technological firsts:

- The first electronically leveled, all hydraulic, planetary driven Four Roll bending machine in the United States
- The first steel plate bending roll for nuclear submarine and power plant applications
- The first heavy plate roll for fabrication of offshore drilling jackets.

Bertsch experience guarantees reliability, Bertsch construction guarantees ruggedness, and Bertsch designs guarantee advanced technology today and into the future.

Bertsch became a member of the MegaFab family in 2003, joining Piranha (ironworkers, press brakes and shears) and Whitney (plasma/punch machines, laser cutting machines, portable punch presses). MegaFab is the leader in the machine tool market serving the plate and structural steel industries.



# BERTSCH

*Bertsch — A Division of MegaFab*

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