



# PLATE ROLLS



**It's difficult to compete in today's  
world with yesterday's technology.**

**We have solutions.**





**JMTUSA.com**

Email: **JMT@JMTUSA.com**

Toll Free: **855-773-7727**  
(855-PRESS-BRAKE)

**JMT** machines are built by the largest volume fabrication machine tool producer and the most respected manufacturer of sheet metal machinery in the world. This factory is one of the world's most contemporary production plants, with a 1.5 million square foot footprint and over 1500 dedicated employees.

**JMT** machines are built to extremely stringent standards and the factory has maintained continuous product research and development since 1956. With 75 R&D and product engineers on-staff at the plant, **JMT** products utilize the most modern techniques in design and engineering, and are equipped with proven quality components to fulfill a customer's most exacting requirements. **JMT** combines "accuracy, speed, flexibility, durability, reliability and advanced technology" with the highest performance/price ratio in the world.

A nationwide network of **JMT** distributors and technical support personnel are in place to assist you.

Our machines are built with world-renown components such as Rexroth, Siemens and Schneider, which are available off the shelf from your local supplier, your dealer, or direct from **JMT**.

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**MACHINE PARTS INVENTORY**



**JMT's U.S. HEADQUARTERS**



**PLANTS BUILDING OUR JMT MACHINES**

# JMT Plate Rolls

Reliable mechanical and hydraulic systems are designed by experienced engineers at the factory by utilizing parametric 3D engineering technology as well as implementation of mechanical and kinematics analysis.

Safe and reliable electronics systems are designed by the factory's Research & Development Center. Only after extensive testing evaluations are the machines approved for production.

Robust machine bodies and construction ensure long machine life and low maintenance. User friendly control unit options are available. Precision parts are manufactured by using highly durable forged 4140 alloy steel rolls machined by a CNC lathe. Shorter cycle times are achieved by a high Torque Drive System. All high quality rolls are mounted in SKF dry lube bearings.

## JMT HRB-4 Series Plate Rolls

**Bending Lengths: 5' – 26'**

**Bending Thicknesses: 10 Gauge – 6"**

*Hydraulic 4 Roll Plate Bending Machine*

Accurate, easy to operate, fast and reliable

Easily maintains reference of the steel plate



## JMT HRB-3 Series Plate Rolls

**Bending Lengths: 6' – 14'**

**Bending Thicknesses: 1/4" – 2"**

*Hydraulic 3 Roll Plate Bending Machine*

Flexibility of three rolls for medium sizes by **JMT** technology

Pre-bending of both the leading and trailing edge



## JMT HRB-3V Series Plate Rolls

**Bending Thicknesses: 1" – 6"**

*Hydraulic 3 Roll Variable Geometry Plate Bending Machine*

Variable geometry of bottom rolls offers a wide rolling range



## JMT IP Motorized and Manual Rolls

**Bending Lengths: 3'4" – 10' • Bending Thicknesses: 18 Gauge – 5/16"**

*Economical Initial Pinch 3 Roll Asymmetrical Bending Machines*

**JMT MRB** Motorized Roll Bender (Cast Iron Frame)

**JMT MRB-S** Motorized Roll Bender (Stress-relieved Steel Frame)

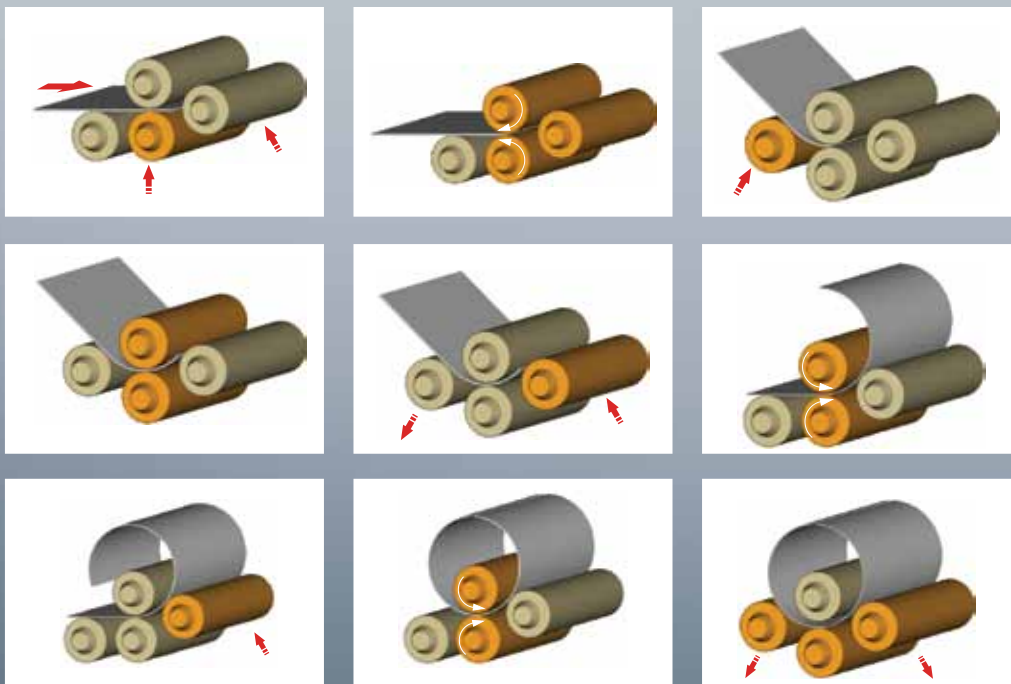
**JMT MRB-e** Motorized Roll Bender (Economical Light Gauge Roll)

**JMT RB** Manual Roll Bender



# ***JMT* HRB-4 SERIES PLATE ROLLS**

- **5' - 26' Bending Lengths**
- **10 Gauge - 6" Bending Thicknesses**
- Accurate, easy to operate, fast and reliable
- Flat zone of the part is minimized
- Pre-bending, conical bending and ellipse bending can be done easily
- Double pre-bends (both bends) in one pass
- Hydraulic and electrical systems have been safeguarded from overloading and require minimum maintenance. Hydraulic and electrical components are modular and designed according to world standards.
- The sheet reference is maintained by tightening of top and bottom rolls
- Most desirable bending operation for CNC applications
- More efficient for cycle times
- User friendly operation with less dependence on operator competence



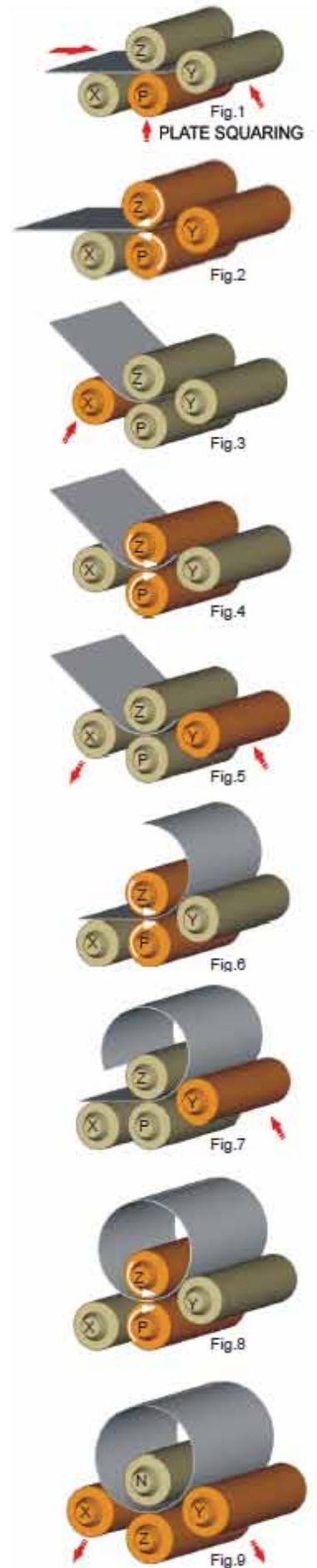




# BENEFITS OF 4-ROLL PLATE BENDING MACHINES

*Four roll plate rolls are more precise, productive, versatile, faster, safer and easier to operate than three roll machines. They are less dependent on operator competence. They are ideal for bending plates up to 6" thick.*

- The fastest and most accurate bends are made by four roll machines. The plate is held securely in place between the top and bottom rolls while the side rolls move vertically to create the bend.
- The bottom roll moves up to hold the plate edge securely against the top roll while the side roll is raised to form an accurate pre-bend, minimizing the flat zone on the plate edge. Pre-bending on a three roll machine requires that plates be tilted down as they are being fed. In contrast, plates are loaded horizontally at the feed level for pre-bending on a four roll machine, which allows the use of horizontal motorized roller tables to help feed the plate.
- Plate feeding can take place on either side of a four roll machine. If fed from only one side, they can even be placed up against a wall to save floor space.
- The side rolls are positioned to the right and left of the bottom roll and are on their own axes. The independent axis of each roll helps make a perfect bend. The "back" side roll (at the far side of the feeding point) also functions as a back gauge to square the plate for proper alignment (see *Figure 1 in diagram*). This eliminates the need for someone to assist the operator.
- The plate is kept square without slipping during both pre-bending and rolling because of the constant secure clamping of the top and bottom rolls.
- Four roll machines do not require the operator to remove, flip, and then try to square and reposition the plate a second time after pre-bending, as is the case with three roll IP machines. Keeping the material in the machine makes four rolls 50% more efficient than three roll IP machines, and allows a cylinder to be rolled to the required diameter immediately following pre-bending.
- Bending the back edge takes place after the cylinder is rolled, for a one direction, single pass operation.
- Cone rolling is easier on a four roll machine. The side rolls can be tilted to establish the cone angle and the bottom roll can also be tilted to clamp and drive the plate. (Standard feature on **JMT** rolls.)
- Four roll machines are the only type of plate rolls that can effectively make use of NC and CNC controls because of the constant clamping and driving of the material during all steps of rolling. Bending difficult shapes like polycentric or elliptic work pieces can be easily done with **JMT** CNC four roll machines.



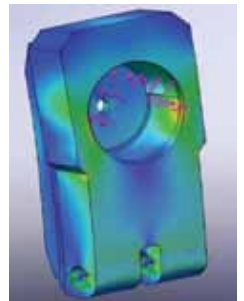
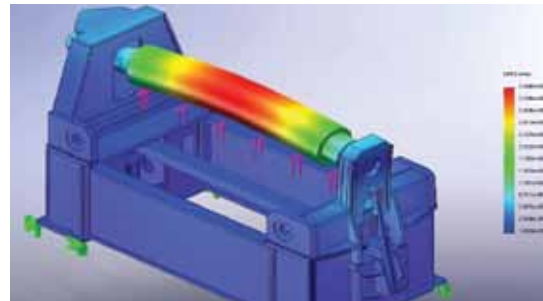
# JMT HRB-4 PLATE ROLL FEATURES



## Stable, Robust Machine Bodies

The **JMT** HRB-4 machine body is strengthened and lowered to minimize twists and deformation of the plate. This robust body is joined by steel bars to sturdy the machine frame.

The machine body, frame and steel bar connections are all stress relieved after the welding operation. The whole body is machined with 5-axis CNC machining centers, utilizing a fixed single reference point. This allows for parallelism of all axes and precision surfaces, as well as longevity and precision of the critical characteristics of the machine.

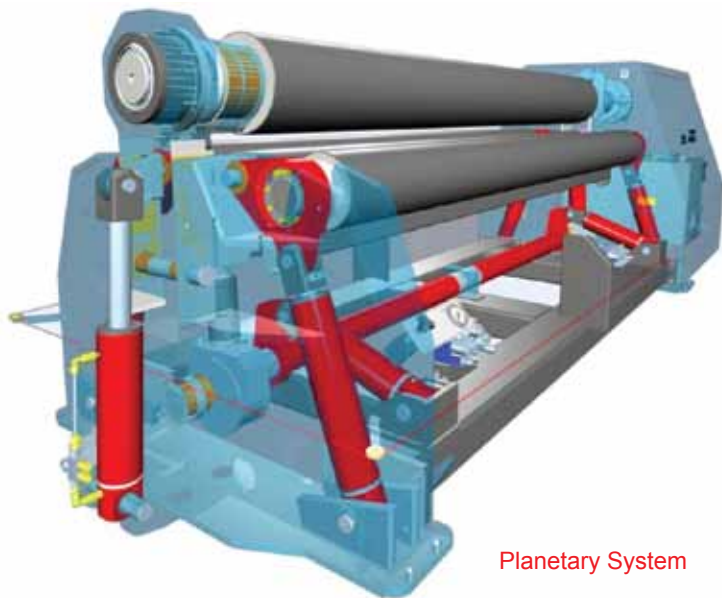


## Engineering and Product Advantage

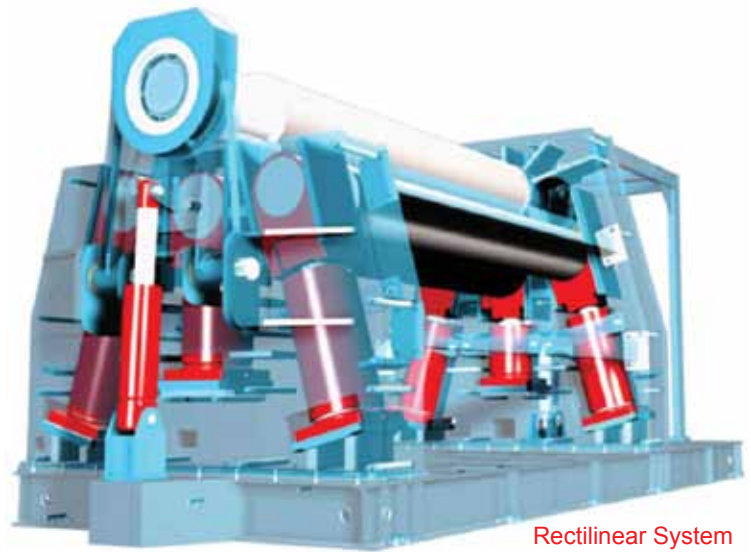
The mechanical and hydraulic systems on **JMT** HRB-4 machines are designed by experienced engineers at our factory. These engineers design the machines utilizing parametric 3D engineering technology as well as implementation of mechanical and kinematic analysis.

All mechanical, hydraulic, and electronic systems are designed and tested by electrical and mechanical engineers. Only following lengthy tests and evaluations are the machines authorized to be manufactured in serial production.





Planetary System



Rectilinear System

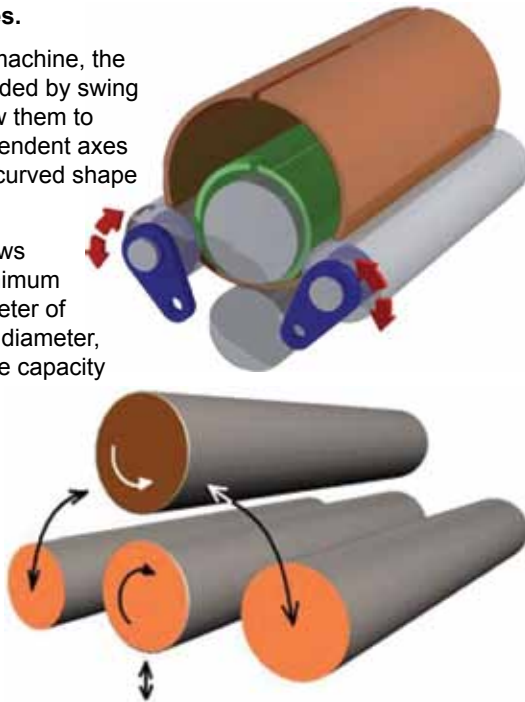
## Planetary Guides

**Rolls with a 17" or smaller top roll come standard with planetary guides.**

On a planetary machine, the side rolls are guided by swing arms which allow them to act as two independent axes moving along a curved shape path.

This system allows bending to a minimum work piece diameter of 1.1 x the top roll diameter, dependent on the capacity of the machine.

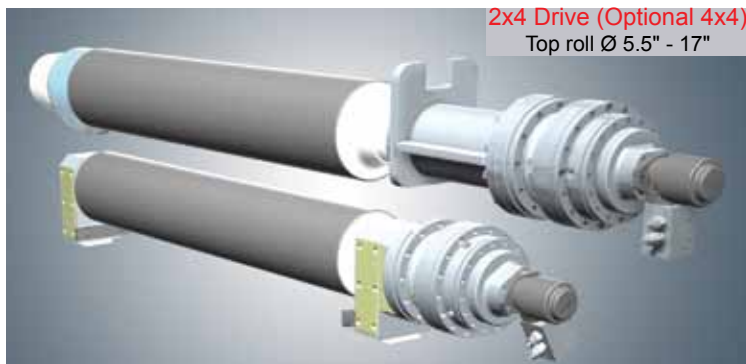
Side rolls approach the top roll along a curved path which allows perfect pre-bending as well as spring back minimization.



## Rectilinear Guides

**Rolls with an 17.72" or larger top roll come standard with rectilinear guides.**

On a rectilinear machine, the side rolls are guided by a rectilinear system that moves them in a straight line direction (instead of the curved path of planetary guides) giving them the strength to pre-bend and roll heavy plate.



2x4 Drive (Optional 4x4)  
Top roll Ø 5.5" - 17"



4x4 Drive (Standard)  
Top roll Ø 17.72" - 42"

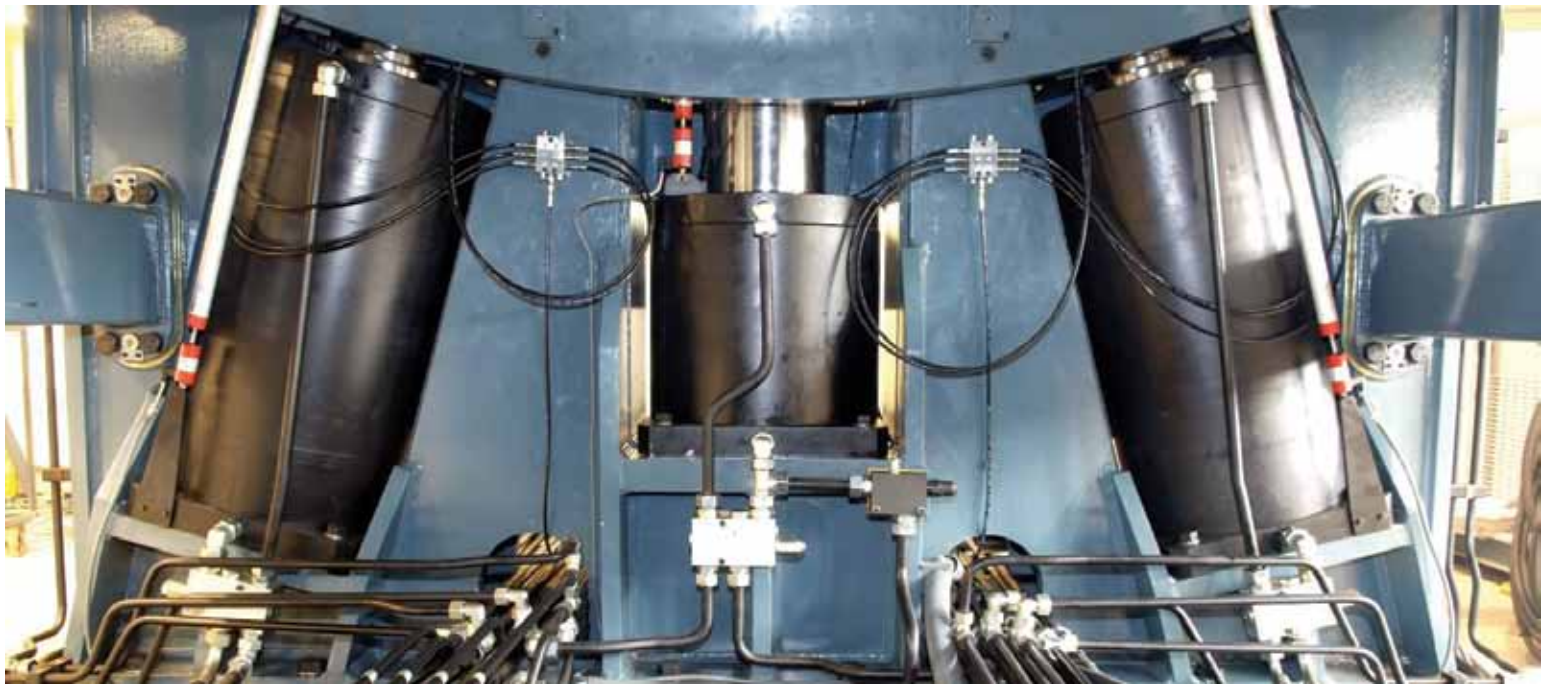


4 Rolls Driven on  
Rectilinear Machines

## High Torque Drive Systems (Standard)

Because of its high torque, a **JMT** machine bends the part with fewer steps. Rolls are powered by independent high torque hydraulic motors and planetary gear boxes. The activation system is positioned on the same axis as the roll, so high torque is transferred to the sheet without any power loss. On machines with 17.72" top rolls and above (rectilinear machines) all four rolls are driven.





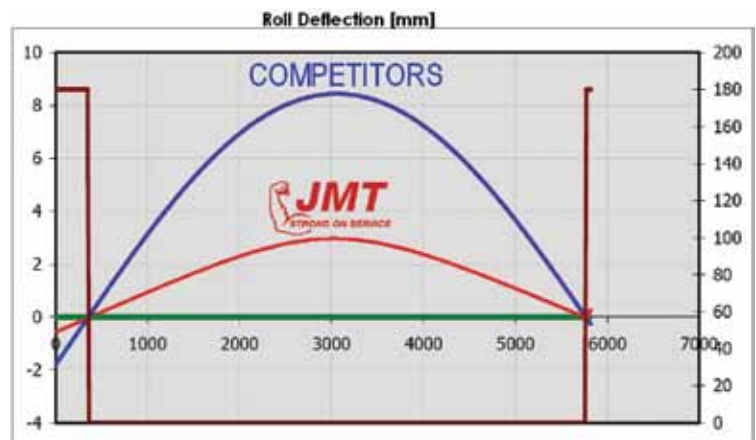
### Hydraulic System (Local Availability)

Rolls are positioned by hydraulic components. The precision of axes are maintained through the use of Bosch Rexroth valves. Pressure safety valves protect against peak pressures and overloads.



### Electrical and Electronic System (Local Availability)

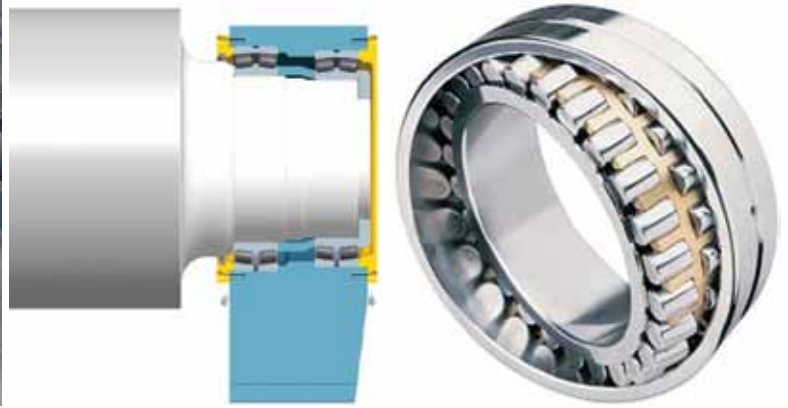
The electrical system is compatible with international safety regulations and consists of high quality electrical components manufactured by Siemens, Schneider, Phoenix and Opkon. All power supplies, electronics and motors are protected by the system from overloads.



### Hardened Rolls And Crowning System (Standard)

Highly durable forged 4140 alloy steel rolls are machined by CNC lathes to achieve optimal crown. Working surfaces of the rolls are CNC induction hardened to HRC 54+/-2. Special alloy rolls and special crown are available upon request.





## Strengthened Bearing Guidance System

The rolls are guided with spherical roller bearings. This guidance system requires less lubrication and assures long-term precision.



## Tight Diameter Rolling



## Excellent Pre-bending



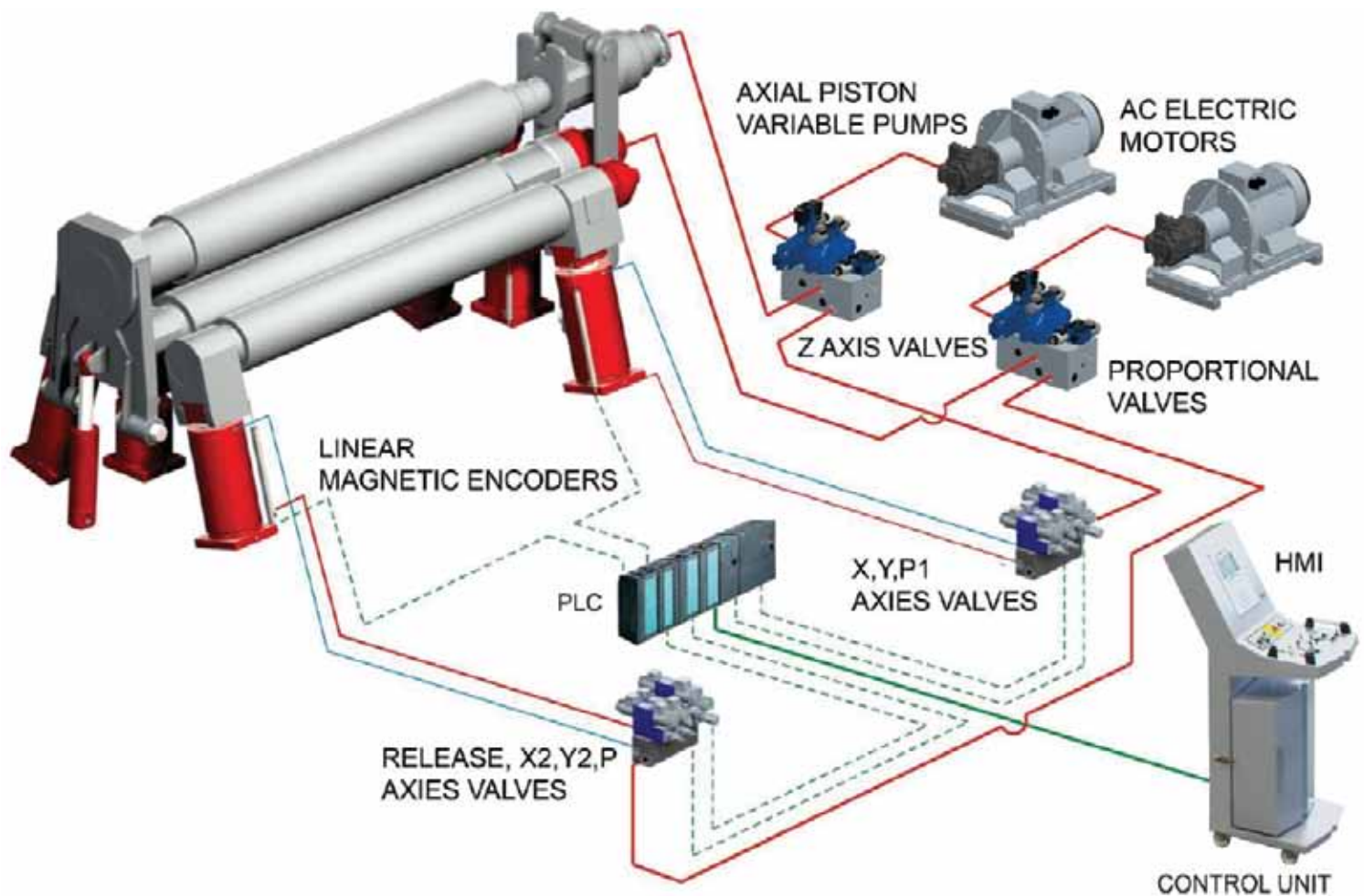
## CNC Induction Hardening (Standard)

## Strong Hydraulic Brakes (Standard)

A strong hydraulic brake system helps to prevent the sheet from slipping back, especially during the pre-bending.

Pressure safety valves protect the hydraulic motors and other components from overloads and peak pressures.





### Precise Four Roll Synchronization System (Standard)

The side rolls are positioned by four different strong hydraulic cylinders.

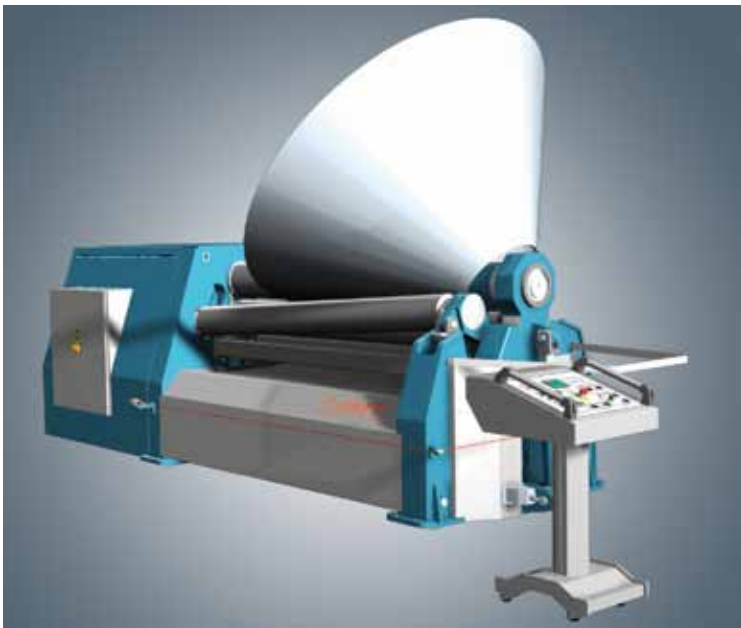
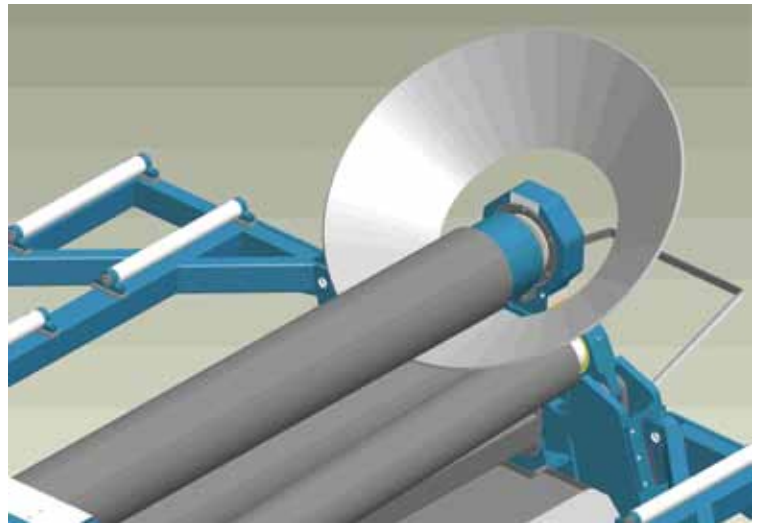
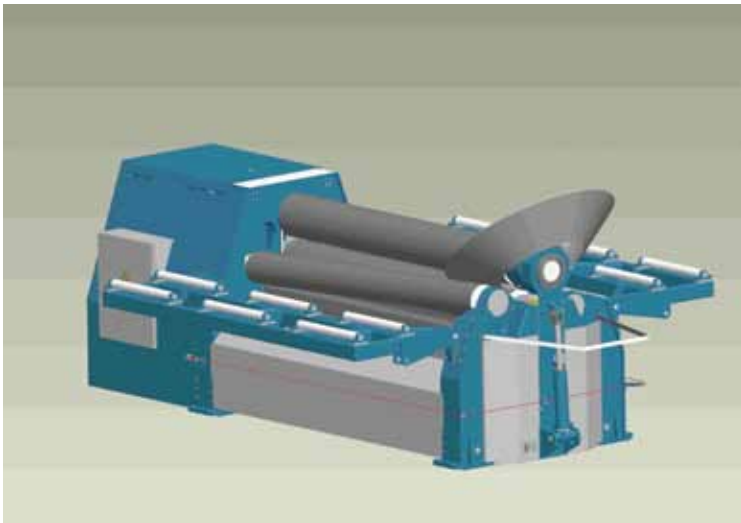
Hydraulic roll crowning compensation allows the rolling of different thicknesses of material with minimum deformation. The bottom roll maintains parallelism by a strong adjustable hydraulic torsion bar.

Synchronization between the rolls is acquired by Resistive Linear Position Transducer and PLCs. The PLCs respond within milliseconds due to high precision proportional load holding valves.



Expert Training Available from Our Professional Sales and Service Staff

## Conical Bending System (Standard)



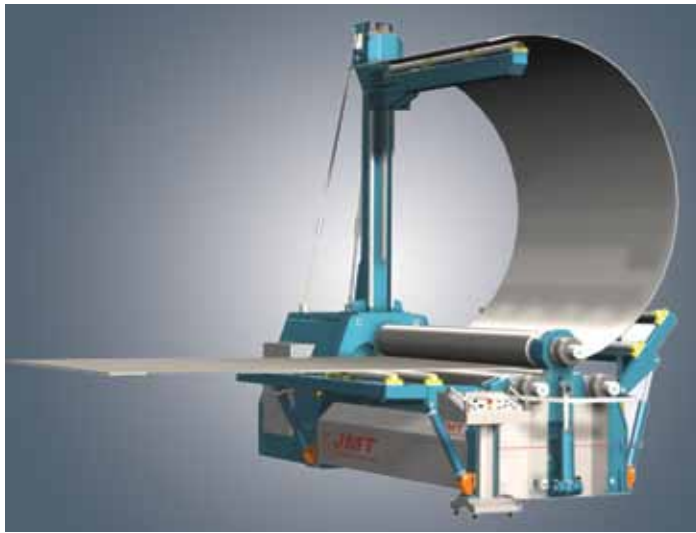
Through superior construction, a massive body and the ability to angle bottom and side rolls, the HRB-4 bends wide angle and small diameter conical parts with ease.

While most machines on the market can conically bend 3 times the diameter of the top roll, **JMT** HRB-4 machines can conically bend 1.5 times the top roll diameter (or tighter).



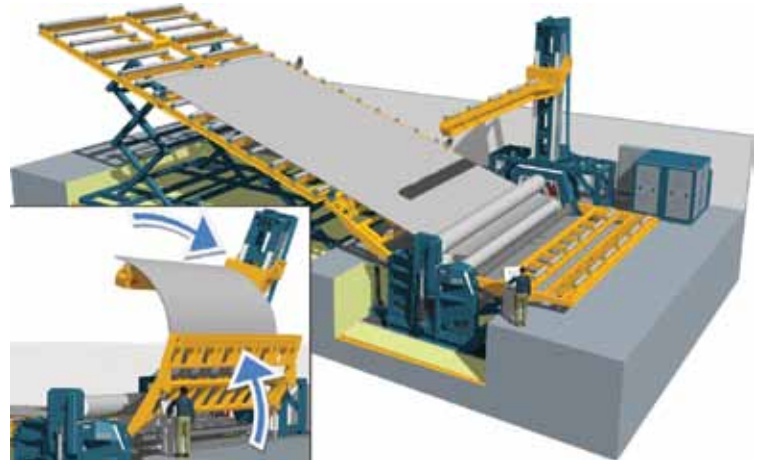
Special design for  
cone bending and  
easy handling.  
Hydraulic top roll  
lift is standard  
equipment.





### Side and Top Support Systems (Optional)

Optional hydraulic side or vertical supports help prevent distortion of the cylinder in large shaped bends. Side supports have hydraulic double cylinders which are produced with heavy-duty steel construction. The vertical supports' capacity can be manufactured to different tonnage and height requirements.



### Large Custom Rolls Systems (Optional)

### Vertical Operation Configuration (Optional)

A dual horizontal/vertical operation option is available for both 3 roll and 4 roll machines.

Advantages of a vertical configuration:

- It is ideal for forming tanks, vats and other large cylinders that require the material to be supported while the bend is created.
- It eliminates back-bending of large parts.
- It can eliminate the need for extreme ceiling heights.



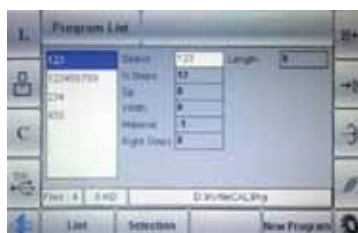
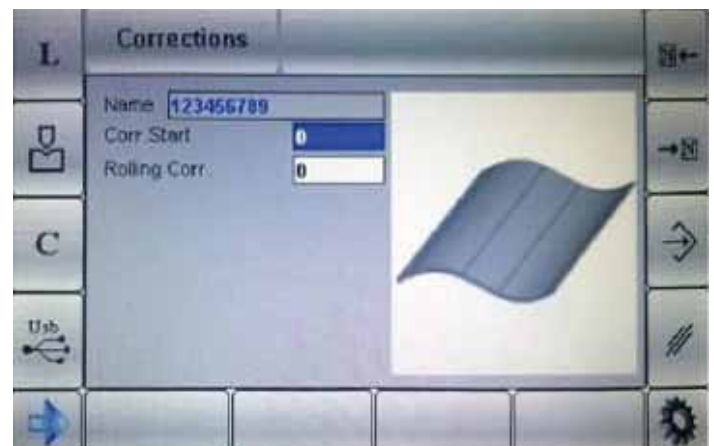
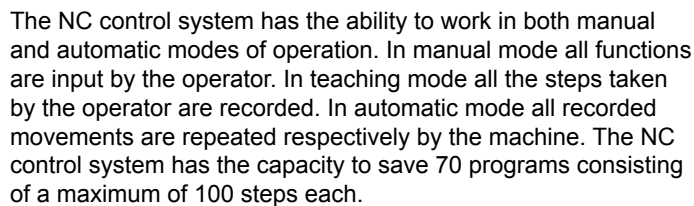
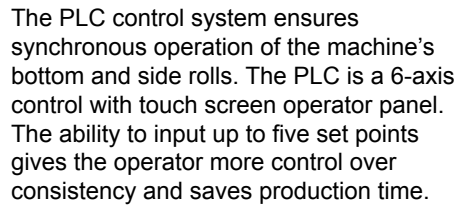
Above: A custom down-flange roll.



### Automatic Loading Unloading System (Optional)

*Many special applications are available for your requirements and customized plate rolls can be built to your specifications.*

## PLC Digital Readout (Standard)







Precise conical and poly-centric bending with CNC controls

JMT's user-friendly, versatile CNC control has interpolation capabilities with hydraulic proportional valves in order to roll different shapes without the need to stop at curvature change points.

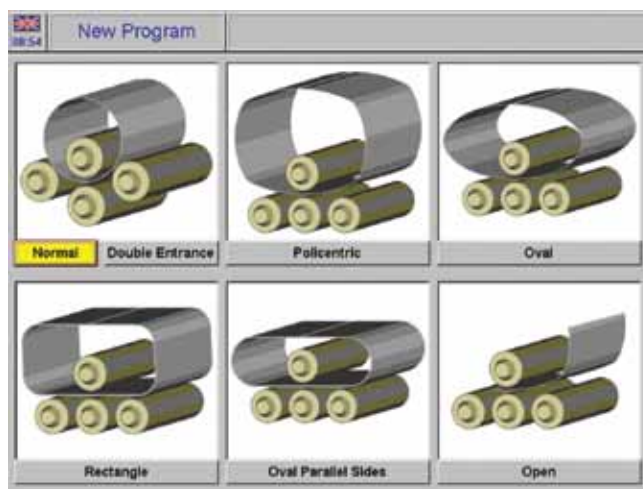
This control gives the operator the ability to efficiently produce everything from simple cylinders to complex parts with repeatability.

An extensive library of pre-programmed part shapes (with editable geometry) allows even inexperienced operators to produce quality parts. With the Autolearning Function, the operator can also create teach/record programs.

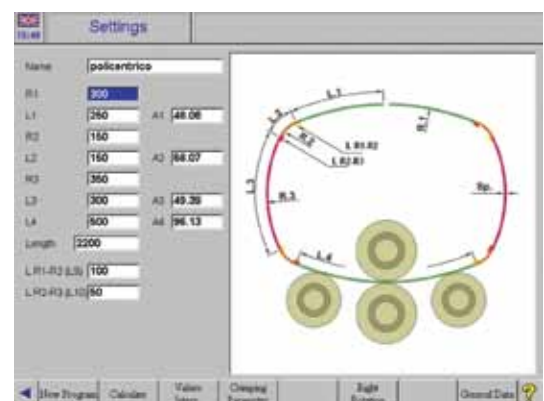
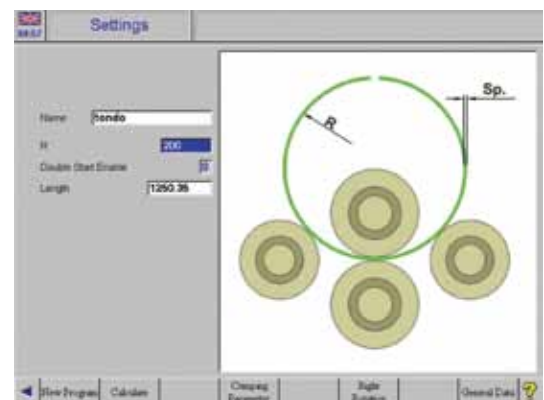
## Features:

- 12" TFT S VGA full color display with antiglare screen
- Ergonomic molded cabinet
- Dedicated scratch-proof, oil-proof, acid-resistant sealed membrane push button keyboard
- Interactive graphic editor for work pieces and tool data entry
- Automatic identification of the best bending sequence(s) (with manual override)
- Programming of all axes positions with error checking (automatic or manual)
- Internal memory for up to 10,000 programs (external memory available)
- Autolearning function (teach/record mode)
- Manual mode

**NOTE:** As with any type of fabrication, the quality of the finished parts depends not only on the equipment and the operator, but also on the consistency of the material being used. Slight adjustments (easily done) may be required from one material lot to another in order to maintain consistency of the parts.



Above are some of the more established shapes in the industry, including oval, buckets, round-square, etc.

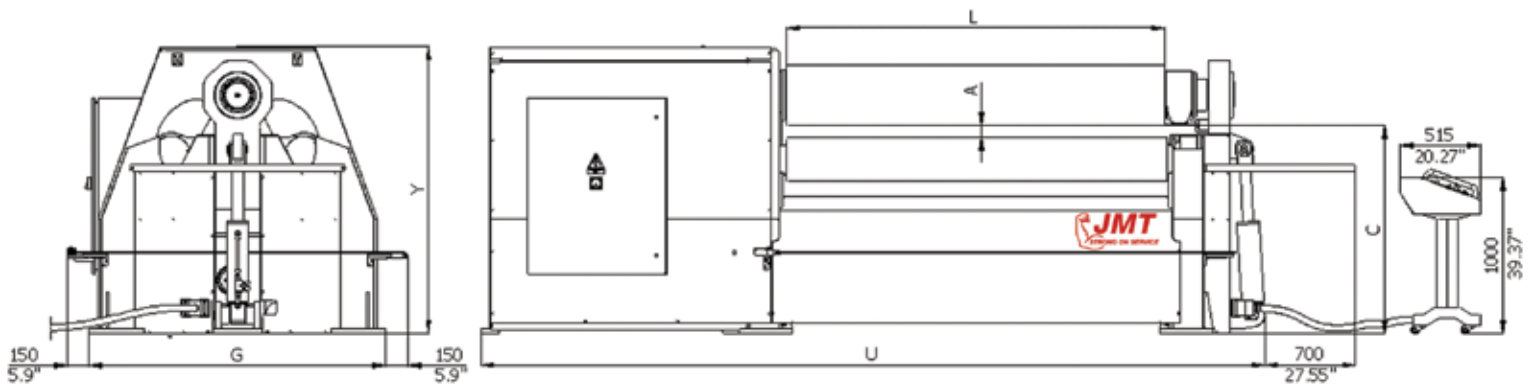


Multiple rolling profiles are already programmed in the control, making the programming of different sized profiles easy and painless.

The control will roll a part with only limited input from the console (minor adjustments can be made to adjust for material variations when necessary). Users may program any profile needed and save it to use with other similar parts by changing the parameters.

# JMT HRB-4 PLATE ROLL STANDARD EQUIPMENT

- Touch screen control unit with six multi-pass programmable digital readouts
- Dual speed control (fast/slow)
- Cone bending
- Induction hardened rolls (HRC 58)
- Highly durable forged 4140 alloy steel rolls machined by CNC Lathes with optimal crown (special crown upon request)
- Side rolls electronically positioned and synchronized with PLC and high-end precision digital scales
- Automatic rolls peripheral speed compensation (optimum distribution of torque)
- Machine body constructed of stress-relieved high-yield steel
- Rolls seated in spherical bearings
- Top roll hydraulic opening device (drop end) with easy pull out system
- Bottom and top rolls driven with hydraulic motor and planetary gear box
- Side rolls driven (hydraulic motor and planetary gear boxes) on machines with 17.72" top roll and above
- Rolls with an 17.72" or larger top roll come standard with rectilinear guides.
- Safety barrier
- Electrical and hydraulic protection against overloads
- World standard electrical and hydraulic components (parts stocked by **JMT** or available off-the-shelf from your local supplier)
- Adjustable hydraulic pressure on bottom roll (crowning compensation)
- Permanent lubrication



# JMT HRB-4 PLATE ROLL OPTIONAL EQUIPMENT

- NC Control Unit
- CNC Control Unit with color graphical control
- All axis positioning with adjustable speed on CNC machines
- Polished rolls
- Variable speed control
- Wired or wireless remote
- Oil Cooler
- Side support system (both sides)
- Preparation for vertical support system
- Vertical overhead support system (mechanical or hydraulic)
- NC inclusion for vertical support control
- NC inclusion for side support control
- Changeable top roll for smaller diameters
- Welding possibility on the machine
- Material feeding table
- Automation
- Special roll crowning
- Special applications for Wind-tower production

**Many options and customizations are available — please contact us for details.**

Web: **JMTUSA.com**

Email: **JMT@JMTUSA.com**

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# JMT HRB-4 PLATE ROLL TECHNICAL DIMENSIONS

Model	Bending Length (L)	Pre-Bending and Rolling (1.5 x Top Roll Ø)	Rolling (3 x Top Roll Ø)	Top Roll	Bottom Roll	Side Rolls	Max. Pass Through (A)	Working Height (C)	Length (U)	Width (G)	Height (Y)	LBS	HP
HRB-4 1504	5' 1"	1/8"	5/32"	5.51"	5.12"	5.12"	1/2"	34"	137"	50"	45"	4,450	5
HRB-4 1505	5' 1"	5/32"	3/16"	5.91"	5.51"	5.12"	1/2"	34"	137"	50"	45"	4,950	5
HRB-4 1507	5' 1"	3/16"	5/16"	6.69"	5.91"	5.51"	5/8"	34"	137"	50"	45"	5,450	7
HRB-4 2003	6' 8"	14 Ga	1/8"	5.51"	5.12"	5.12"	1/2"	34"	156"	50"	45"	5,200	5
HRB-4 2004	6' 8"	1/8"	5/32"	5.91"	5.51"	5.12"	1/2"	34"	156"	50"	45"	5,700	5
HRB-4 2006	6' 8"	5/32"	1/4"	6.69"	5.91"	5.51"	5/8"	34"	156"	50"	45"	7,800	7
HRB-4 2008	6' 8"	1/4"	5/16"	7.87"	7.09"	6.69"	1-3/16"	33"	164"	58"	46"	10,600	10
HRB-4 2010	6' 8"	5/16"	3/8"	8.27"	7.48"	7.09"	1-3/16"	32"	164"	58"	46"	13,800	10
HRB-4 2013	6' 8"	3/8"	1/2"	9.06"	8.27"	7.48"	1-3/16"	32"	164"	58"	46"	16,900	15
HRB-4 2016	6' 8"	1/2"	5/8"	10.63"	9.84"	8.66"	2"	45"	168"	65"	55"	19,165	15
HRB-4 2020	6' 8"	5/8"	25/32"	11.81"	10.63"	8.66"	2"	45"	168"	65"	55"	22,500	20
HRB-4 2025	6' 8"	25/32"	1"	12.99"	11.81"	9.84"	2"	44"	172"	75"	67"	25,600	20
HRB-4 2030	6' 8"	1"	1-3/16"	14.17"	12.99"	9.84"	2-3/8"	59"	172"	75"	67"	35,800	25
HRB-4 2035	6' 8"	1-3/16"	1-3/8"	15.75"	14.57"	11.81"	2-1/2"	59"	195"	83"	75"	37,900	30
HRB-4 2040	6' 8"	1-3/8"	1-9/16"	16.93"	15.75"	12.99"	2-3/4"	58"	195"	87"	79"	43,000	40
HRB-4 2050	6' 8"	1-9/16"	2"	18.11"	16.54"	14.17"	3-3/8"	74"	215"	91"	87"	67,400	50
HRB-4 2065	6' 8"	2"	2-1/2"	19.29"	18.11"	14.57"	3-1/2"	73"	215"	91"	79"	72,400	60
HRB-4 2506	8' 4"	5/32"	1/4"	7.87"	7.09"	6.69"	1-3/16"	33"	172"	51"	46"	11,600	7
HRB-4 2508	8' 4"	1/4"	5/16"	8.27"	7.48"	7.09"	1-3/16"	33"	175"	55"	46"	12,800	10
HRB-4 2510	8' 4"	5/16"	3/8"	9.06"	8.27"	7.48"	1-3/16"	32"	175"	55"	46"	14,300	10
HRB-4 2513	8' 4"	3/8"	1/2"	10.63"	9.84"	8.66"	2"	45"	183"	65"	55"	23,800	15
HRB-4 2516	8' 4"	1/2"	5/8"	11.81"	10.63"	8.66"	2"	45"	183"	65"	55"	26,500	15
HRB-4 2520	8' 4"	5/8"	25/32"	12.99"	11.81"	9.84"	2"	44"	191"	75"	67"	27,580	20
HRB-4 2525	8' 4"	25/32"	1"	14.17"	12.99"	9.84"	2-3/8"	59"	191"	75"	67"	39,400	25
HRB-4 2530	8' 4"	1"	1-3/16"	15.75"	14.57"	11.42"	2-1/2"	58"	197"	81"	80"	44,000	40
HRB-4 2535	8' 4"	1-3/16"	1-3/8"	16.93"	15.75"	12.56"	2 3/4"	58"	197"	81"	84"	48,000	50
HRB-4 2540	8' 4"	1-3/8"	1-9/16"	18.11"	18.11"	14.56"	3 1/2"	74"	222"	90"	99"	69,800	60
HRB-4 2550	8' 4"	1-9/16"	2"	19.29"	19.29"	14.56"	4"	73"	226"	90"	102"	78,900	70
HRB-4 2565*	8' 4"	2"	2-1/2"	20.47"	20.47"	16.14"	4"	76"	230"	91"	103"	120,900	80
HRB-4 3006	10' 2"	5/32"	1/4"	8.27"	7.48"	7.09"	1-3/16"	33"	205"	58"	46"	13,700	10
HRB-4 3008	10' 2"	1/4"	5/16"	9.06"	8.27"	7.48"	1-3/16"	32"	205"	58"	46"	14,800	15
HRB-4 3010	10' 2"	5/16"	3/8"	10.63"	9.84"	8.66"	2"	45"	209"	65"	55"	27,800	15
HRB-4 3013	10' 2"	3/8"	1/2"	11.81"	10.63"	8.66"	2"	45"	209"	65"	55"	29,500	20
HRB-4 3016	10' 2"	1/2"	5/8"	12.99"	11.81"	9.84"	2"	44"	213"	75"	67"	31,600	20
HRB-4 3020	10' 2"	5/8"	25/32"	14.18"	12.99"	9.84"	2-3/8"	59"	213"	75"	67"	43,000	25
HRB-4 3025	10' 2"	25/32"	1"	15.75"	14.57"	11.81"	2-1/2"	59"	237"	83"	75"	47,000	30
HRB-4 3030	10' 2"	1"	1-3/16"	16.93"	15.75"	12.99"	2-3/4"	58"	237"	87"	79"	52,500	40
HRB-4 3035	10' 2"	1-3/16"	1-3/8"	17.72"	16.54"	14.17"	3-3/8"	74"	256"	91"	87"	76,900	50
HRB-4 3040	10' 2"	1-3/8"	1-9/16"	19.29"	16.93"	14.17"	3-1/2"	73"	256"	91"	87"	94,000	60
HRB-4 3050*	10' 2"	1-9/16"	2"	20.47"	19.29"	16.54"	4"	72"	264"	107"	99"	118,000	75
HRB-4 3065*	10' 2"	2"	2-1/2"	25.59"	24.02"	19.69"	5"	111"	288"	142"	144"	196,000	125
HRB-4 3085*	10' 2"	2-3/4"	3-3/8"	29.92"	28.35"	23.62"	6-3/8"	118"	296"	142"	156"	232,000	150
HRB-4 3105*	10' 2"	3-1/2"	4"	32.28"	30.71"	25.20"	7-3/4"	129"	296"	156"	170"	345,000	200
HRB-4 3120*	10' 2"	4"	4-1/2"	34.25"	32.28"	27.17"	8-3/4"	145"	296"	170"	189"	368,000	250
HRB-4 3140*	10' 2"	4-1/2"	5-1/2"	38.19"	36.22"	30.31"	10"	157"	303"	185"	105"	450,000	300
HRB-4 3160*	10' 2"	5-1/2"	6-3/8"	42.13"	40.16"	34.25"	11"	165"	335"	209"	216"	520,000	400
HRB-4 4006	13' 5"	5/32"	1/4"	10.63"	9.84"	8.66"	2"	45"	248"	65"	55"	31,000	15
HRB-4 4008	13' 5"	1/4"	5/16"	11.81"	10.63"	8.66"	2"	45"	248"	65"	55"	33,000	15
HRB-4 4010	13' 5"	5/16"	3/8"	12.99"	11.81"	9.84"	2"	44"	252"	75"	67"	35,715	20
HRB-4 4013	13' 5"	3/8"	1/2"	14.17"	12.99"	9.84"	2-3/8"	59"	252"	75"	67"	54,000	25
HRB-4 4016	13' 5"	1/2"	5/8"	15.75"	14.57"	11.81"	2-1/2"	58"	276"	83"	75"	56,500	30
HRB-4 4020	13' 5"	5/8"	25/32"	16.93"	15.75"	12.99"	2-3/4"	58"	276"	87"	79"	61,400	40
HRB-4 4025	13' 5"	25/32"	1"	18.11"	16.54"	14.17"	3-3/8"	74"	296"	91"	87"	84,000	50
HRB-4 4030	13' 5"	1"	1-3/16"	18.50"	16.93"	14.17"	3-1/2"	73"	296"	91"	87"	105,000	60
HRB-4 4035*	13' 5"	1-3/16"	1-3/8"	20.47"	19.29"	16.54"	4"	72"	303"	107"	99"	123,800	75

Standard machine specifications. Custom machines available upon request. Due to ongoing product development, specifications are subject to change.

\* For models marked with an asterisk: Ø Dmin = Ødx2 (prebending); Ødx4 (bending). Above info for Class 2 material (mild steel).

For different materials, please consult your sales representative. Bending capacities may need to be reduced for conical bending.

# **JMT HRB-3 SERIES PLATE ROLLS**



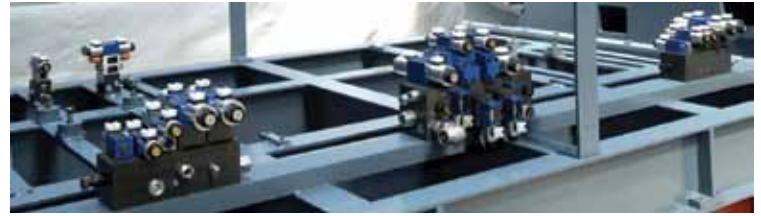
- **6' - 14' Bending Lengths**
- **1/4" - 2" Bending Thicknesses**
- Flexible machine for medium to thick material
- Cost effective solutions for large diameters
- Wide working range
- Excellent for rolling cones
- Great value for precision and reliability
- All rolls are driven with superior torque and speed



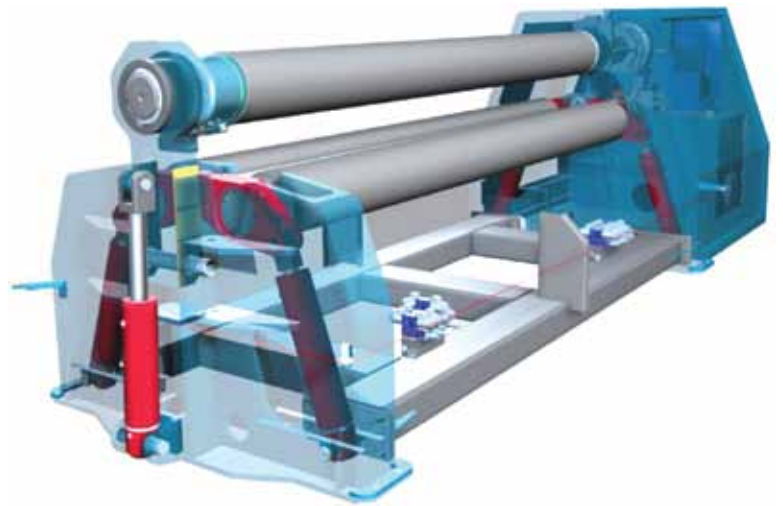
# JMT HRB-3 PLATE ROLL FEATURES



All Rolls Driven (Standard)



High End Hydraulic and Electrical System

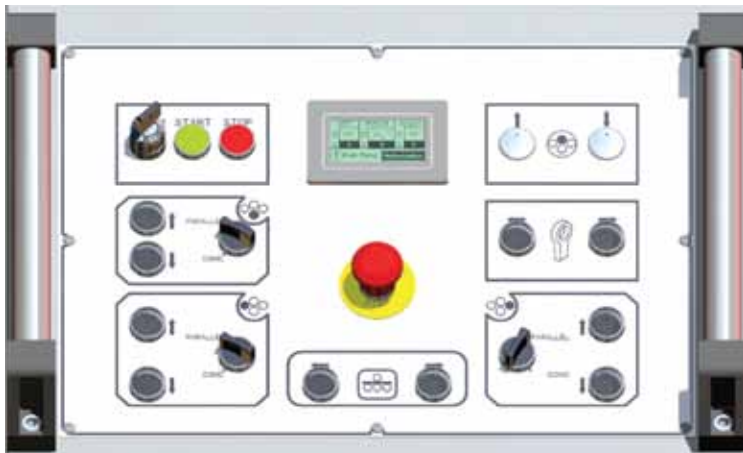


Other Standard Features of the HRB-3

- Strengthened Machine Body
- Strengthened Bearing Guidance System
- Induction Hardened Roll Surface
- Rolls Machined with an Optimum Crown
- Strong Hydraulic Brakes



Conical Bending System (Standard)



PLC Control System (Standard)

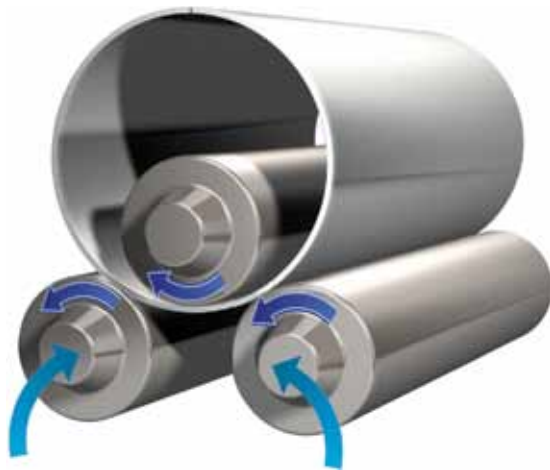


Many Options Available for the HRB-3

- Vertical Plate Roll Configuration
- Extended Rolls for Profile Bending
- Optional Side, Vertical or Special Sheet Support System

# JMT HRB-3 PLATE ROLL STANDARD EQUIPMENT

- Touch screen control unit with four multi-pass programmable digital readouts
- Dual speed control (fast/slow)
- Cone bending
- Induction hardened rolls (HRC 58)
- Highly durable forged 4140 alloy steel rolls machined by CNC Lathes with optimal crown (special crown upon request)
- Machine body constructed of stress-relieved high-yield steel
- Side rolls electronically positioned and synchronized with PLC and high-end precision digital scales
- Automatic rolls peripheral speed compensation (optimum distribution of torque)
- Rolls seated in spherical bearings
- Top roll hydraulic opening device (drop end) with easy pull out system
- All three rolls driven:
  - Top roll driven with hydraulic motor and planetary gear box
  - Side rolls up to 14.17" are hydraulic motor driven
  - Side rolls 14.17" and above are driven with a combination of hydraulic motors and planetary gear boxes
- Rolls with an 17.72" or larger top roll come standard with rectilinear guides.
- Safety barrier
- Electrical and hydraulic protection against overloads
- World standard electrical and hydraulic components (parts stocked by **JMT** or available off-the-shelf from your local supplier)
- Permanent lubrication



**JMT Planetary Rolls**



**JMT Rectilinear Rolls**

# JMT HRB-3 PLATE ROLL OPTIONAL EQUIPMENT

- Polished Rolls
- Variable speed control
- Wired or wireless remote
- Oil Cooler
- Side support system (both sides)
- Preparation for vertical support system
- Vertical overhead support system (mechanical or hydraulic)
- Material feeding table
- Changeable top roll for smaller diameters
- Extended rolls for section/profile bending
- Welding possibility on the machine

**Many options and customizations are available — please contact us for details.**

Web: **JMTUSA.com**

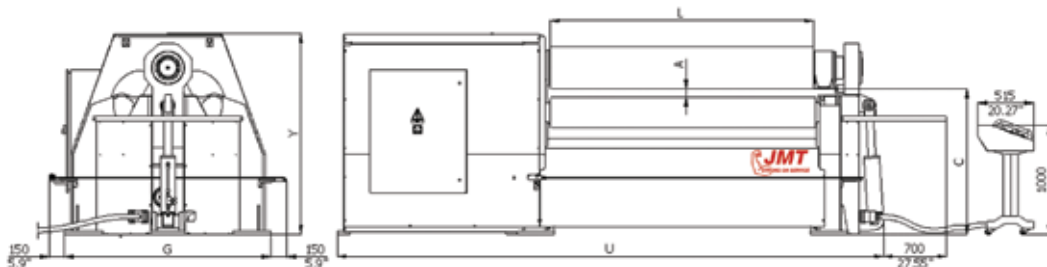
Email: **JMT@JMTUSA.com**

Call Toll Free: **855-773-7727**  
(855-PRESS-BRAKE)



# JMT HRB-3 PLATE ROLL TECHNICAL DIMENSIONS

Model	Bending Length (L)	Pre-Bending and Rolling (1.5 x Top Roll Ø)	Bending (3 x Top Roll Ø)	Top Roll	Side Rolls	Max. Pass Through (A)	Working Height (C)	Length (U)	Width (G)	Height (Y)	LBS	HP
HRB-3 2006	6' 8"	5/32"	1/4"	7.28"	6.50"	2-3/4"	31.89	152"	52"	46"	5,512	5
HRB-3 2008	6' 8"	1/4"	5/16"	7.87"	7.09"	2-3/4"	32.28	152"	52"	46"	7,276	7
HRB-3 2010	6' 8"	5/16"	3/8"	8.66"	7.87"	2-3/16"	32.28	156"	56"	46"	8,819	10
HRB-3 2013	6' 8"	3/8"	1/2"	9.06"	8.27"	3-3/16"	35.43	156"	56"	56"	10,583	10
HRB-3 2016	6' 8"	1/2"	5/8"	10.63"	9.84"	4"	38.58	164"	65"	56"	13,228	15
HRB-3 2020	6' 8"	5/8"	25/32"	11.81"	10.63"	4"	40.55	164"	65"	56"	15,874	15
HRB-3 2025	6' 8"	25/32"	1"	12.99"	11.42"	4"	42.32	172"	75"	67"	20,503	20
HRB-3 2030	6' 8"	1"	1-3/16"	14.17"	12.60"	4"	48.62	172"	75"	67"	22,047	25
HRB-3 2035	6' 8"	1-3/16"	1-3/8"	16.14"	14.96"	2-3/4"	48.82	195"	83"	75"	28,661	40
HRB-3 2040	6' 8"	1-3/8"	1-9/16"	16.93"	15.35"	4"	56.30	195"	87"	79"	35,274	40
HRB-3 2050	6' 8"	1-9/16"	2"	17.72"	16.54"	4"	62.60	215"	91"	87"	41,888	50
HRB-3 2506	8' 4"	5/32"	1/4"	7.87"	7.09"	2-3/4"	32.28	152"	52"	46"	9,500	7
HRB-3 2508	8' 4"	1/4"	5/16"	8.66"	7.87"	2-3/16"	32.28	176"	56"	46"	10,800	10
HRB-3 2510	8' 4"	5/16"	3/8"	9.06"	8.27"	3-3/16"	35.43	176"	56"	56"	12,126	10
HRB-3 2513	8' 4"	3/8"	1/2"	10.63"	9.84"	4"	38.58	184"	65"	56"	14,771	15
HRB-3 2516	8' 4"	1/2"	5/8"	11.81"	10.63"	4"	40.55	184"	65"	56"	17,637	15
HRB-3 2520	8' 4"	5/8"	25/32"	12.99"	11.42"	4"	42.32	191"	75"	67"	22,929	20
HRB-3 2525	8' 4"	25/32"	1"	14.17"	12.60"	4"	48.62	191"	75"	67"	25,354	25
HRB-3 2530	8' 4"	1"	1-3/16"	16.14"	14.96"	2-3/4"	48.82	215"	83"	75"	33,070	40
HRB-3 2535	8' 4"	1-3/16"	1-3/8"	16.93"	15.35"	4"	56.30	215"	87"	79"	41,888	40
HRB-3 2540	8' 4"	1-3/8"	1-9/16"	17.72"	16.54"	4"	62.60	235"	91"	87"	50,707	50
HRB-3 3006	10' 2"	5/32"	1/4"	8.66"	7.87"	2-3/16"	32.28	197"	56"	46"	11,024	10
HRB-3 3008	10' 2"	1/4"	5/16"	9.06"	8.27"	3-3/16"	35.43	197"	56"	56"	13,228	10
HRB-3 3010	10' 2"	5/16"	3/8"	10.63"	9.84"	4"	38.58	205"	65"	56"	16,535	15
HRB-3 3013	10' 2"	3/8"	1/2"	11.81"	10.63"	4"	40.55	205"	65"	56"	19,842	15
HRB-3 3016	10' 2"	1/2"	5/8"	12.99"	11.42"	4"	42.32	213"	75"	67"	26,015	20
HRB-3 3020	10' 2"	5/8"	25/32"	14.17"	12.60"	4"	48.62	213"	75"	67"	33,500	25
HRB-3 3025	10' 2"	25/32"	1"	16.14"	14.96"	2-3/4"	48.82	237"	83"	75"	37,479	40
HRB-3 3030	10' 2"	1"	1-3/16"	16.93"	15.35"	4"	56.30	237"	87"	79"	46,298	40
HRB-3 3035	10' 2"	1-3/16"	1-3/8"	17.72"	16.54"	4"	62.60	256"	91"	87"	55,116	50
HRB-3 3040	10' 2"	1-3/8"	1-9/16"	18.50"	17.72"	4"	68.90	256"	91"	87"	66,139	60
HRB-3 3050	10' 2"	1-9/16"	2"	20.47"	19.29"	6"	74.80	264"	107"	99"	83,776	70
HRB-3 4006	13' 5"	5/32"	1/4"	10.63"	9.84"	4"	38.58	245"	65"	56"	19,842	15
HRB-3 4008	13' 5"	1/4"	5/16"	11.81"	10.63"	4"	40.55	245"	65"	56"	24,251	15
HRB-3 4010	13' 5"	5/16"	3/8"	12.99"	11.42"	4"	42.32	252"	75"	67"	30,865	20
HRB-3 4013	13' 5"	3/8"	1/2"	14.17"	12.60"	4"	48.62	252"	75"	67"	39,684	25
HRB-3 4016	13' 5"	1/2"	5/8"	16.14"	14.96"	2-3/4"	48.82	276"	83"	75"	48,502	40
HRB-3 4020	13' 5"	5/8"	25/32"	16.93"	15.35"	4"	56.30	276"	87"	79"	55,116	40
HRB-3 4025	13' 5"	25/32"	1"	17.72"	16.54"	4"	62.60	296"	91"	87"	66,139	50
HRB-3 4030	13' 5"	1"	1-3/16"	18.50"	17.72"	4"	68.90	296"	91"	87"	74,958	60
HRB-3 4035*	13' 5"	1-3/16"	1-3/8"	20.47"	18.50"	6"	74.80	304"	107"	99"	103,618	70



Standard machine specifications.  
**Custom machines available upon request.**  
 Due to ongoing product development, specifications are subject to change.  
 \* For models marked with an asterisk:  
 Ø Dmin= Ødx2 (prebending); Ødx4 (bending).  
 Above info for Class 2 material (mild steel).  
 For different materials, please consult your sales representative. Bending capacities may need to be reduced for conical bending.

# ***JMT* HRB-3V SERIES**

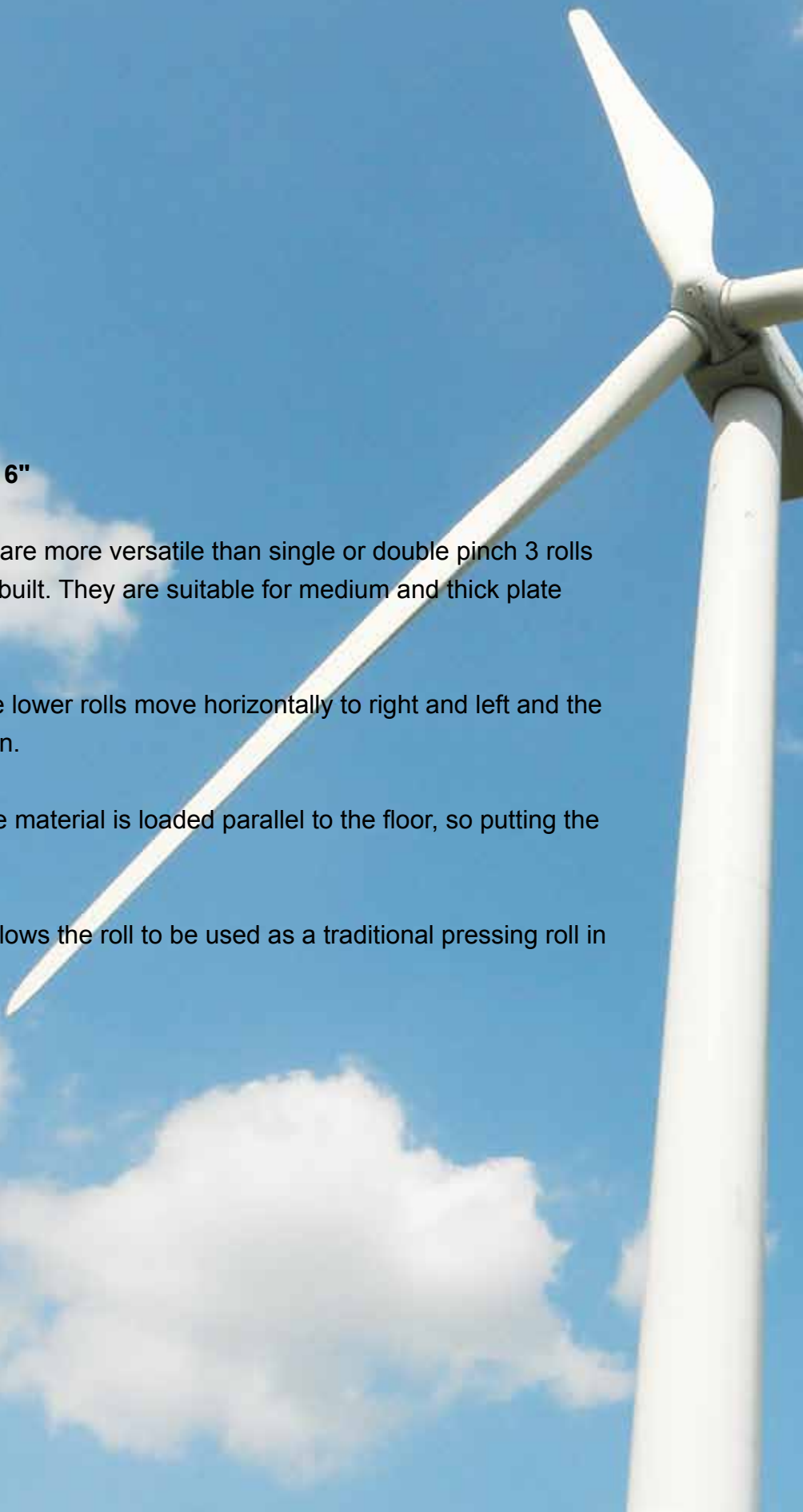
## **Bending Thicknesses: 1" – 6"**

Variable geometry plate rolls are more versatile than single or double pinch 3 rolls because of the way they are built. They are suitable for medium and thick plate bending.

Unlike the standard 3-roll, the lower rolls move horizontally to right and left and the upper roll moves up and down.

Similar to 4-roll machines, the material is loaded parallel to the floor, so putting the machine in a pit is an option.

The current system design allows the roll to be used as a traditional pressing roll in addition to standard rolling.







# JMT HRB-3V PLATE ROLL FEATURES



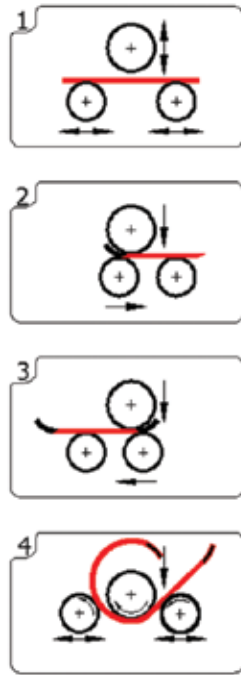
## BENEFITS OF 3-ROLL VARIABLE GEOMETRY PLATE ROLL BENDING MACHINES

Three-roll variable geometry plate roll bending machines are more precise, productive and safer plate roll benders because of their user-friendly operation with less dependence on operator competence.

**JMT** HRB-3Vs are suitable for medium and thick plate bending. Unlike the usual cylinder machines, the lower rolls move horizontally to the right and left while the upper roll moves up and down.

As with four-roll machines, the material is introduced in a parallel fashion so the machine pit can be at working level.

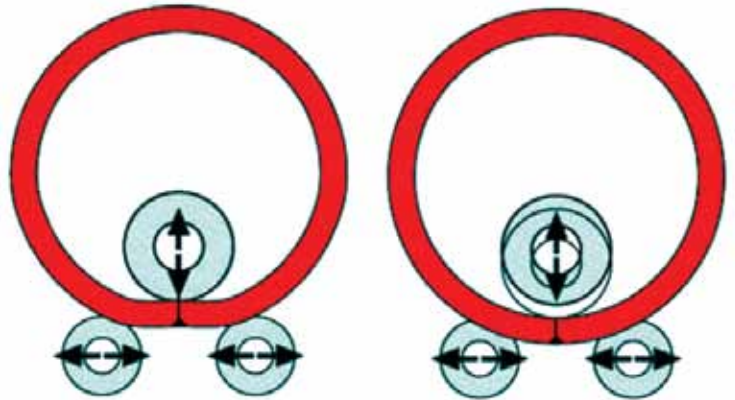
Because of its unique design, the upper roll can be used as a traditional press.



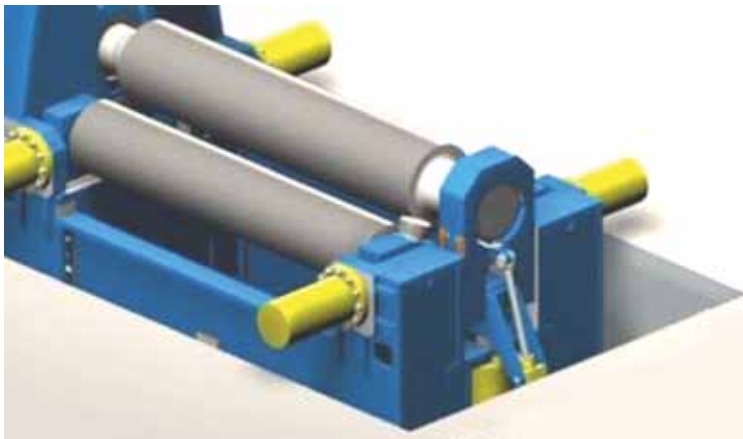
## Stable, Robust Machine Bodies (Standard)

The **JMT** HRB-3V machine body is strengthened and lowered to minimize twists and deformation of the plate. This robust body is joined by steel bars to sturdy the machine frame.

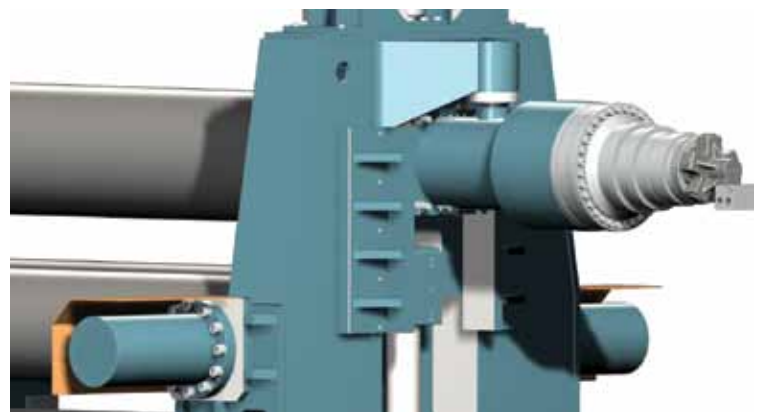
The machine body, frame and steel bar connections are all stress relieved after the welding operation. The whole body is machined with 5-axis CNC machining centers, utilizing a fixed single reference point. This allows for parallelism of all axes and precise surfaces, as well as longevity and precision of the critical characteristics of the machine.



## Pressing Out the Flat Spot in Rolled Material

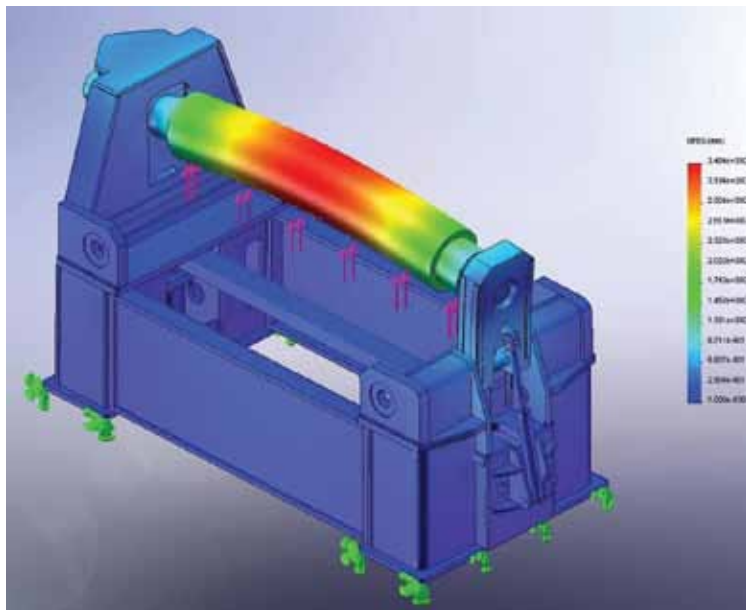


## Machine Installed in a Pit Style Configuration



## High Torque Roll Drive System (Standard)

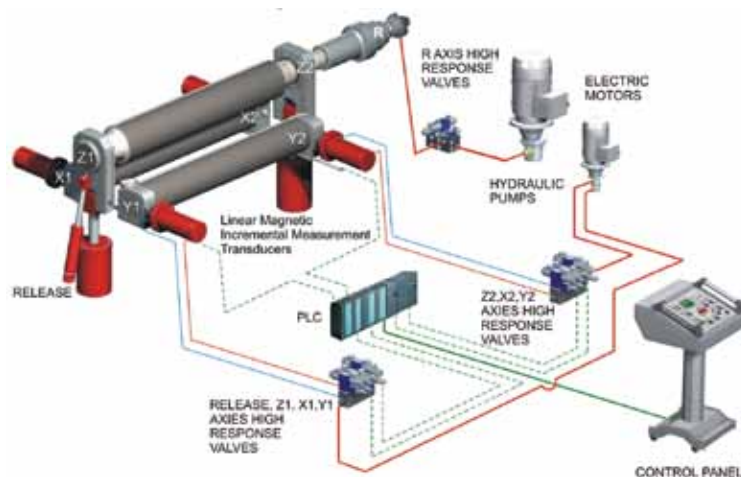




## Engineering and Product Advantage

The mechanical and hydraulic systems on **JMT HRB-3V** machines are designed by experienced engineers at our factory. These engineers design the machines utilizing parametric 3D engineering technology as well as implementation of mechanical and kinematic analysis.

All mechanical, hydraulic, and electronic systems are designed and tested by electrical and mechanical engineers. Only following lengthy tests and evaluations are the machines authorized to be manufactured in serial production.

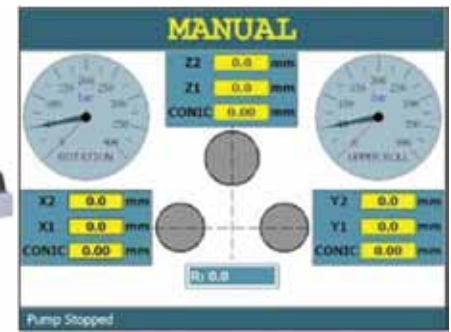


## Precise Roll Positioning System (Standard)

The side rolls on a **JMT HRB-3V** are positioned by four strong hydraulic cylinders. The top roll is positioned by two strong hydraulic cylinders with adjustable pinching pressure. Synchronization between the rolls is acquired by linear magnetic incremental measurement transducers and the PLC's millisecond response.

## Hardened Rolls And Crowning System (Standard)

Highly durable forged 4140 alloy steel rolls are machined by CNC lathes to achieve optimal crown. Working surfaces of the rolls are CNC induction hardened to HRC 54+/-2. Special alloy rolls and special crown available upon request.



## PLC Control (Standard)

The PLC control system with a 7-axis control ensures synchronous operation of the machine's top and side rolls.

## JMT HRB-3V STANDARD EQUIPMENT

- PLC control system
- Dual cone rolling device
- Induction hardened rolls
- Rolls positioning from electronic synchronized by PLC
- Rolls translations and rotation movement hydraulic systems are independent in dual rolling speed.
- Stress relieved steel construction body
- Rolls housed in sealed spherical roller bearings
- High stroke top roll and hydraulic drop end
- Top roll drive has planetary gear box and hydraulic motor
- Braking system on side rolls
- Protected slide surfaces
- Hydraulic protection from overloads and it is monitored on the screen.
- Centralized lubrication system
- Portable control panel
- Safety wire around the machine
- Triple speed for rolling
- Dual speed for rolls positioning
- Top roll press and rotation pressure gauges are monitored on the screen.

## JMT HRB-3V OPTIONAL EQUIPMENT

- NC control system
- Side supports at both side
- Vertical support crane system
- Changeable top roll for smaller diameters
- Polished rolls
- Oil coolant
- Oil heating
- Welding possibility on the machine
- Preparation for vertical support crane system and side supports
- Plate Feeding table
- Plate alignment unit
- Separated power cabin
- Special applications for wind-tower production

# JMT IP MOTORIZED & MANUAL ROLLS



RB Roll

## JMT RB Manual Roll Bender

### RB Standard Specifications

- Conical bending
- Cast frame
- SAE 1050 steel rolls
- Bottom and pinch rolls manually adjusted
- Bottom and pinch rolls with wire grooves

### Optional Accessories

- Hardened rolls
- Ground rolls



MRB-e Roll

## JMT MRB-e Motorized Initial Pinch Bending Rolls

### MRB-e Standard Specifications

- Conical bending
- Cast frame
- SAE 1050 steel rolls
- Portable foot pedal
- Emergency stop
- Bottom and pinch rolls manually adjusted
- Bottom and pinch rolls with wire grooves
- Top and bottom rolls are driven

### Optional Accessories

- Digital Readout(s)
- Hardened rolls
- Ground rolls

**Economical  
Light Gauge  
Roll**



MRB Roll

## JMT MRB Motorized Initial Pinch Bending Rolls

### MRB Standard Specifications

- Conical bending
- Back roll has motorized adjustment
- Bottom roll is manually adjusted
- Top and bottom rolls powered by electrical motor, gearbox and gear drive
- Portable control console
- Hardened, SAE 1050 steel rolls
- Cast iron frame
- Precise bending with motor brake

### Optional Accessories

- Digital readout(s)
- Remote (wired or wireless)
- Bottom roll motorized for clamping
- Ground rolls
- Extended rolls for section bending
- Section rolls

**Cast Iron  
Frame**



MRB-S Roll

## JMT MRB-S Motorized Initial Pinch Bending Rolls

### MRB-S Standard Specifications

- Conical bending
- Back roll has motorized adjustment
- Bottom roll is manually adjusted
- Top and bottom rolls powered by electrical motor and gearbox
- Portable control console
- Hardened, SAE 1050 steel rolls
- Stress-relieved steel construction frame
- MRB-S 2500 and 3000 series machines feature a bottom roll support system to increase bending quality
- Precise bending with motor brake

### Optional Accessories

- Digital readout(s)
- Remote (wired or wireless)
- Bottom roll motorized for clamping
- Ground rolls
- Extended rolls for section bending
- Section rolls

**Stress-  
Relieved Steel  
Frame**



# JMT IP MOTORIZED & MANUAL ROLLS TECHNICAL DIMENSIONS

Manual Model	Bending Length	Capacity*	Top Roll Ø	Length	Height	Width	LBS	HP
RB 1001	3' 4"	18 Ga.	2.20"	60"	44"	21"	485	—
RB 1002	3' 4"	14 Ga.	2.95"	69"	45"	21"	816	—
RB 1003	3' 4"	1/8"	3.54"	69"	45"	21"	904	—
RB 1202	4' 2"	14 Ga.	2.95"	79"	45"	21"	948	—
RB 1203	4' 2"	1/8"	3.74"	79"	45"	21"	1,136	—
RB 1525	5'	12 Ga.	3.74"	89"	45"	21"	1,312	—
RB 2015	6' 7"	16 Ga.	3.54"	109"	45"	21"	1,422	—

Motorized Model	Bending Length	Capacity*	Top Roll Ø	Length	Height	Width	LBS	HP
MRB-e 1001	3' 4"	18 Ga.	2.20"	69"	44"	34"	618	1
MRB-e 1002	3' 4"	14 Ga.	2.95"	69"	45"	34"	849	1
MRB-e 1003	3' 4"	1/8"	3.54"	79"	45"	34"	970	1.5
MRB-e 1202	4' 2"	14 Ga.	2.95"	79"	45"	34"	1,004	2
MRB-e 1203	4' 2"	1/8"	3.74"	89"	45"	34"	1,224	2
MRB-e 1525	5'	12 Ga.	3.74"	89"	45"	34"	1,389	2
MRB-e 2015	6' 7"	16 Ga.	3.54"	109"	45"	34"	1,500	2

MRB 1004	3' 4"	10 Ga.	4.33"	75"	45"	38"	3,635	3
MRB 1204	4' 2"	10 Ga.	4.72"	85"	45"	38"	3,966	3
MRB 1503	5'	12 Ga.	4.33"	95"	45"	38"	4,060	3
MRB 1504	5'	10 Ga.	5.12"	95"	45"	38"	4,142	3
MRB 2004	6' 7"	10 Ga.	5.51"	115"	45"	38"	4,451	3

MRB-S 1506	5'	1/4"	5.91"	123"	45"	41"	5,630	4
MRB-S 2005	6' 7"	3/16"	5.91"	142"	45"	41"	6,571	4
MRB-S 2006	6' 7"	1/4"	6.69"	142"	48"	46"	6,992	5
MRB-S 2504	8' 3"	10 Ga.	5.91"	162"	45"	41"	7,453	5
MRB-S 2506	8' 3"	1/4"	7.48"	168"	48"	46"	8,268	7
MRB-S 2508	8' 3"	5/16"	8.66"	168"	48"	46"	9,767	7
MRB-S 3004	10'	10 Ga.	7.09"	182"	45"	41"	9,370	5
MRB-S 3006	10'	1/4"	8.66"	188"	48"	46"	10,847	7

Standard machine specifications. **Custom machines available upon request.**

Due to ongoing product development, specifications are subject to change.

For different materials, please consult your sales representative.

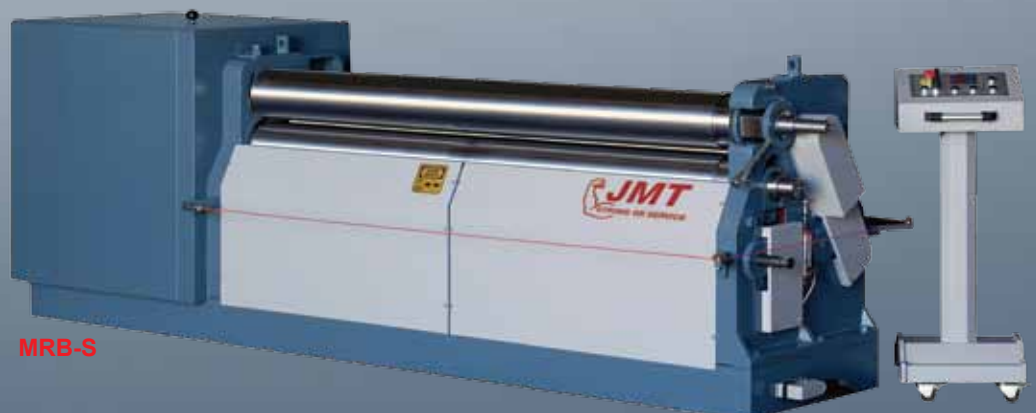
\*Machines have greater capacity on shorter bending widths.



Roll Grooves on an MRB-e Bender



Bottom Roll Support System on MRB-S 2500 and 3000 Series Machines



MRB-S



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