

WALDEMAR DESIGN & MACHINE



PR SERIES ANGLE & PROFILE BENDING ROLLS

2025



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WHY YOU NEED A PR SERIES

Being in the metal industry you understand the demand there is for angle, tubing, pipe, channel, I-beam and other profiles in the manufacturing industry. Whether you are making a tanker trailer or a spiral staircase handrail the ability to roll profiles is essential to your business. WDM knows the demands that are placed on you to provide your customers with consistent, quality parts and products which is why we offer the PR Series. The PR Series takes WDM's 35 years of knowledge making durable roll bending machines and combines that with a high production mindset. What you get is a heavy duty 3-roll pinch pyramid style angle roll where the 2 bending rolls are stationary and the top roll is the only moving variable. By limiting the die variables to just one setting you drastically increase the repeatability you can achieve even if the machine is operated by several different operators. The PR Series is highly recommend for large production applications where consistency is required from piece to piece.

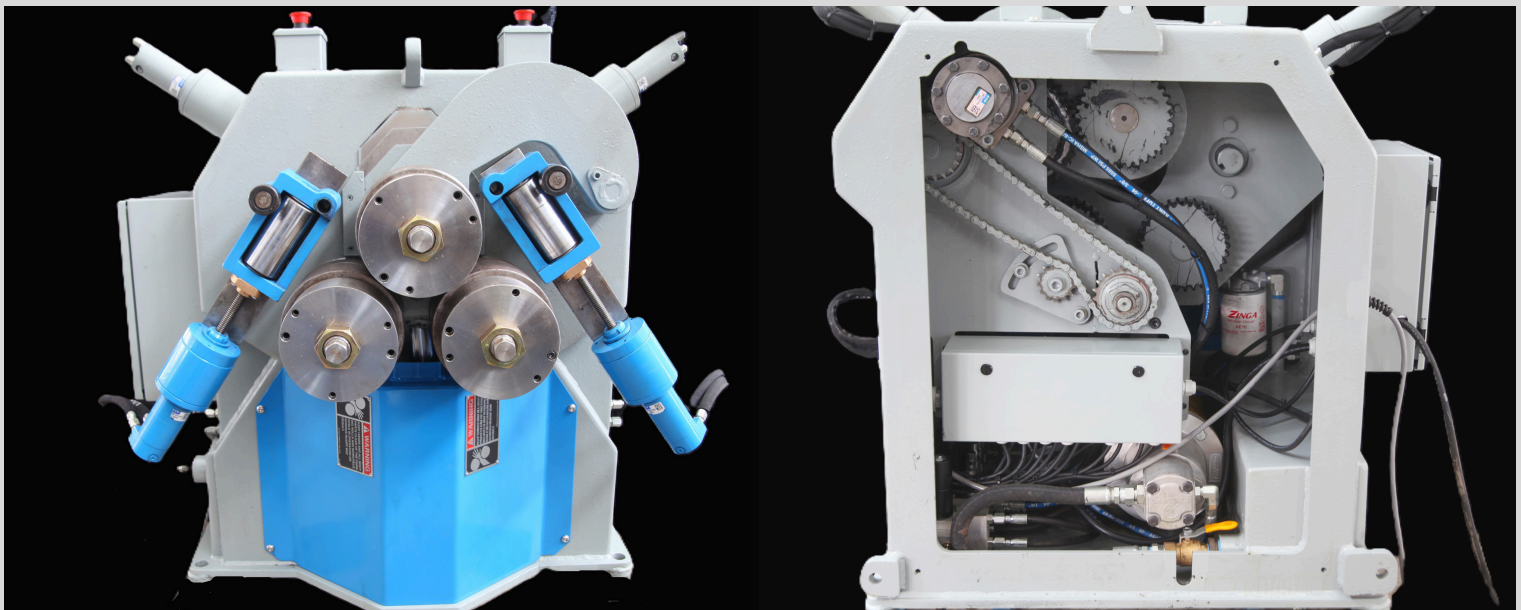
PR SERIES vs. AR SERIES

The PR Series and AR Series are both the same in the fact that they are a 3 roll angle/profile rolls in a pyramid configuration. However on the PR Series you move the top die up and down to change your radius and the two bending rolls are stationary. By only having one set point to worry about it speeds up production and greatly improves repeatability between operators. The PR Series is recommended for large production applications. The AR Series has a stationary top die and movable bending dies. This is great for job shops as it is a more versatile setup.

HEAVY DUTY CONSTRUCTION

FRAME - WDM fabricates the frame from structural steel and plate sections creating a rigid, durable framework for the machine.

ARBORS/SHAFTS - The arbors/shafts are made from flame hardened 1045 carbon steel, and are of ample size to carry bending loads with minimum deflection.



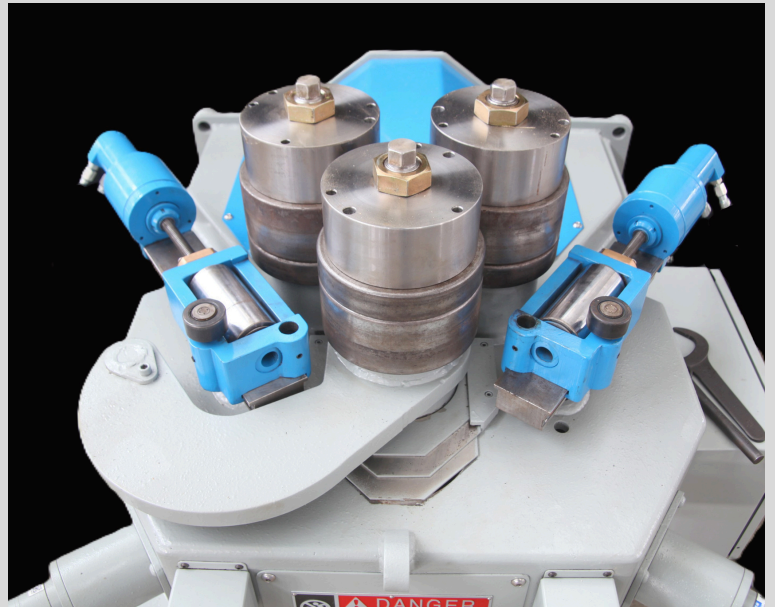
BEARINGS - The bearings are a rolling element type, which results in minimum power loss; and the main bearings are a sealed spherical roller type, which are inherently self-aligning to compensate for shaft and frame deflection.

DRIVES - Arbors/Shfts are driven by two hydraulic motors and hydraulically equalized.

ROLLING SPEED - Infinitely variable from 0-22FPM

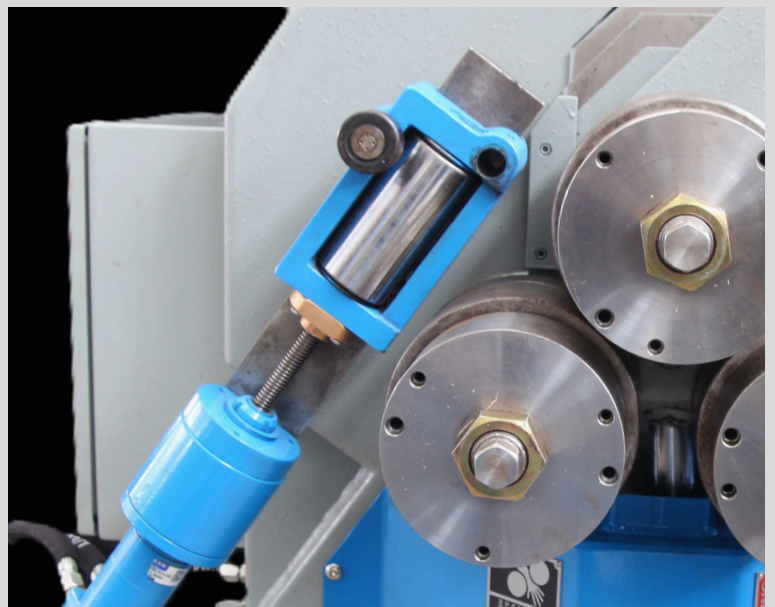
ORIENTATION - All machines up to the PR600 can be operated in either vertical or horizontal positions. Larger machines must be built for one or the other.

STANDARD DIES – Accurately machined and then through hardened for long life. Standard universal dies allow the user to roll angle leg in and leg out, Tees leg in and leg out, flat on flat and on edge, and square bars.



SPECIAL DIES AND ATTACHMENTS – Allow the user to roll round bars, pipe, and tubing in circles or spirals. I-beam can be rolled on flange or edge and channel can be rolled on flange. We have fitted machines to roll: Aluminum extrusions, airfoil shaped pipe, high rasion flat on edge, and half pipe strip to name a few

GUIDE ROLLS – The key to successful angle bending. WDM's guide roll system enables the operator to adjust the guide rolls in all ways necessary to obtain good work pieces. Small machines come standard with manual adjustment and larger machines are hydraulically powered.



CONTROL OPTIONS

PR2.2 – Standard control with joystick for rotation and adjustment and a DRO showing position.

PR2.2G4– Includes everything in the PR2.2 plus controls for 4 way hydraulic guide rolls

PR6.2– Includes everything in the PR2.2G4 plus DRO's for the 4 way hydraulic guide rolls







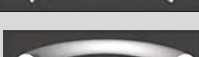











TRAINING AND SERVICE

TRAINING – Initial startup & equipment training can be a vital part of getting the most out of your machine. WDM strongly encourages the dealer and/or customer to visit our plant upon completion of the machine to receive free training on the machine operation and maintenance. If you cannot make it to our facility a WDM rep can come to your location and train all your operators for a fee. Visit WWW.WDMROLLS.COM or call us at (606) 787-8474 for a quote.

SERVICE – Our U.S. warehouse is full of OEM parts needed to service your equipment. We also have service technicians available that can travel to your location and service your machine if you are experiencing a problem, or we recommend taking a preventive approach and having a Yearly PM done in which the machine will be gone over thoroughly to ensure a smooth operation. For more details or to schedule a PM. WWW.WDMROLLS.COM or give us a call at (606) 787-8474

MACHINE SPECS AND CAPACITIES

Model	PR150	PR200	PR300	PR400	PR500	PR600
Standard HP	2	5	7.5	15	20	30
Roll Diameter (in)	4.88	7.38	9.2	12.75	15.5	18.5
Weight Approx. (lbs.)	1,000	2,000	3,000	6,500	9,000	13,000
Bending Pressure (US Tons)	9	15	30	50	65	100
Main Shaft Dia. (in)	1.75	2.5	3	4.5	5	6
Lower Roll Spread (in)	5.9	9	11	15.3	18.6	22.2
FPM Rolling Speed	0-22	0-22	0-22	0-22	0-24	0-24
Machine L x W x H (in)	24 x 24 x 36	36 x 28 x 40	38 x 40 x 50	48 x 50 x 58	48 x 60 x 80	48 x 68 x 80
Section Modulus (symmetrical)	0.21	0.54	1.29	3.06	4.91	8.8
 Angle Leg Out Minimum ID (in.)	1.5" x 1.5" x 1/4" 18" ID	2" x 2" x 3/8" 24" ID	3" x 3" x 3/8" 36" ID	4" x 4" x 1/2" 48" ID	5" x 5" x 1/2" 60" ID	6" x 6" x 5/8" 72" ID
 Angle Leg In Minimum ID (in.)	1.5" x 1.5" x 1/8" 18" ID 1.25" x 1.25" x 1/4" 19" ID	2" x 2" x 1/4" 30" ID 1.75" x 1.75" x 5/16" 26" ID	2.5" x 2.5" x 3/8" 38" ID 3" x 3" x 1/4" 45" ID	4" x 4" x 5/8" 60" ID 3.5" x 3.5" x 1/2" 53" ID	4" x 4" x 1/2" 60" ID	6" x 6" x 3/8" 90" ID 5" x 5" x 5/8" 75" ID
 Flat on Flat Minimum ID (in.)	3/8" x 4 - 6.5 ID 1/2" x 3" - 6.5 ID	1/2" x 6" - 10 ID 3/4" x 3.5" - 10 ID	7/8" x 6" - 12" ID 1" x 4" - 12 ID	1-1/8" x 8" - 17 ID 1-3/8" x 6" - 17 ID	1-3/8" x 10 - 20 ID 1-1/2" x 8 - 20 ID	1-5/8" x 12" - 24 ID 2" x 8" - 24 ID
 Flat on Edge Minimum ID (in.)	1/4" x 2 - 20 ID 3/8" x 1.75 - 18 ID	1/2" x 2.5" - 25 ID 3/4" x 2" - 20 ID	5/8" x 3.5" - 35 ID 3/4" x 3" - 30 ID	3/4" x 4.5" - 45 ID 1" x 4" - 40 ID	3/4" x 6" - 60 ID 1" x 5" - 50 ID	1" x 7" - 70 ID 1.5" x 6" - 60 ID
 Square Bar Minimum ID (in.)	1" 10" ID	1.5" 15" ID	2" 20" ID	2.5" 25" ID	3" 30" ID	3.5" 35" ID
 Tee Leg In Minimum ID (in.)	ST1.5x3.75 15" ID	ST2x4.75 - 20" ID WT2x6.5 - 20" ID	ST3x8.6 - 30 ID WT3x12.5 - 30 ID	ST4x11.5 - 40 ID WT4x29 - 40 ID	ST5x17.5 - 50 ID WT5x38.5 - 50 ID	ST6x25 - 60 ID WT6x53 - 60 ID
 Tee Leg Out Minimum ID (in.)	ST1.5x3.75 15" ID	ST2x4.75 - 20" ID WT2x6.5 - 20" ID	ST3x8.6 - 30 ID WT3x12.5 - 30 ID	ST4x11.5 - 40 ID WT4x29 - 40 ID	ST5x17.5 - 50 ID WT5x38.5 - 50 ID	ST6x25 - 60 ID WT6x53 - 60 ID
 Round Bar * Minimum ID (in.)	1.25" 15" ID	1.75" 20" ID	2.25" 27" ID	2.5" 30" ID	3.5" 42" ID	4.5" 54" ID
 Sch. 40 Pipe * Minimum ID (in.)	1" 14" ID	2" 28" ID	2.5" 35" ID	4" 56" ID	4" 56" ID	6" 84" ID
 Sch. 80 Pipe * Minimum ID (in.)	1" 14" ID	1.5" 21" ID	2.5" 35" ID	3.5" 49" ID	4" 56" ID	5" 70" ID
 Sch. 120 Pipe * Minimum ID (in.)	N/A	N/A	2" 28" ID	3" 42" ID	3" 42" ID	4" 56" ID
 Round Tube * Minimum ID (in.)	1.75" x 0.08" 26" ID	2.5" x 0.11" 38" ID	3.5" x 0.13" 53" ID	5" x 0.25" 75" ID	6" x 0.18" 90" ID	7" x 0.19" 105" ID
 Square Tube * Minimum ID (in.)	1.25" x 0.135" 30" ID	1.75" x 0.12" 42" ID	2.5" x 0.188" 60" ID	3.5" x 0.25" 84" ID	4" x 0.25" 96" ID	5" x 0.313" 120" ID
 Rectangular Tube* HW Minimum ID (in.)	1.5" x 1" x 0.12" 24" ID	2.5" x 1.5" x 0.08" 40" ID	3" x 1.5" x 0.25" 48" ID	4" x 2" x 0.25" 64" ID	5" x 3" x 1/4" 80" ID	6" x 3" x 5/16" 96" ID
 Channel Flange Out * Minimum ID (in.)	C3 x 4.1# 20" ID	C4 x 7.25# 20" ID	C6 x 13# 26" ID	C8 x 18.75# 30" ID	C10 x 30# 36" ID	C12 x 30# 38" ID
 Channel Flange In * Minimum ID (in.)	C3 x 4.1# 24" ID	C4 x 7.25# 25" ID	C6 x 13# 33" ID	C8 x 18.75# 38" ID	C10 x 30# 45" ID	C12 x 30# 48" ID
I-Beam on Flange * Minimum ID (in.)	N/A	S4 x 7.7# 24" ID	S6 x 17.2# 32" ID	S8 x 23# - 38" ID W8 x 18# - 48" ID	S10 x 35# - 44 ID W10 x 26# - 52 ID	S12 x 50# - 50 ID W12 x 35# - 58 ID
I-Beam on Web ** Minimum ID (in.)	N/A	N/A	N/A	S4 x 9.5# 92" ID	S5 x 10# 115" ID	S6 x 17.2# - 140 ID W6 x 16# - 140 ID

WARRANTY

Waldemar Design & Machine L.L.C. warrants its products to be free from defects in material and workmanship for a period of one year from the date of manufacture. Waldemar's obligation is to replace, free of charge, any defective part of any product that its inspection shows to be defective, including the lowest priced round-trip transportation to Waldemar from any point in the 48 contiguous states. Waldemar shall not be liable for installation and removal expense, loss of time, manufacturing costs, labor, materials, loss of profits, or consequential damages direct or indirect, because of defective products. There is no other warranty, expressed or implied.

CONTACT US



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[YouTube.COM/@WDMROLLS](https://www.youtube.com/@WDMROLLS)



OUR STORY

In the late 1960's this enterprise began in a 24 x 28 foot concrete block farm shop in the heart of Lancaster County, Pennsylvania. The principal machine tool was a 180 amp stick welder which was used to build other shop tools and agriculture equipment using old automotive parts, etc. Cheaper land prices for building a shop took it to Lebanon, Pennsylvania, in 1975, where it branched out to manufacturing sawmill equipment, RV frames, wood stoves, solid waste containers, and custom work which included large duct work for industrial processes and silencers. A plate-bending roll was needed, so a machine was built instead of paying a high price for a ready-made one. After a model was displayed at AWS trade show in Philadelphia, PA, several machines were built and sold each year to see how they perform. In the 1980's a financial crisis caused a complete start-over at which time a move was made to Liberty, KY with the intention of focusing on roll bending machines using the Waldemar Design & Machine L.L.C. name. The demand was much larger than anticipated. In 2015 the business was moved to Spencer, TN. Since our culture values relatively small, family-centered businesses, this standard plate-bending roll line, WDM L.L.C. has been run by 3 generations of family and is now owned by a family friend. Well over 1,500 roll-bending machines have been built by WDM for use in food processing facilities, medical fields, agriculture, transportation, mining, and many other industries. Since WDM started designing and manufacturing plate and angle rolling machines for industries both small and large in 1989, we have focused on maintaining the quality, durability, and availability of our machines by exercising serious craftsmanship and integrity.

OTHER SERIES WDM MACHINES



**PR300 WITH
3in PIPE DIES
AND A SPIRAL
ATTACHMENT**



**AR-14 - 4roll angle
roll equipped with:
high speed 80FPM
drive, infeed guide
for squaring parts,
and light curtains.**



**4 ARX-10 - 4roll
angle roll with
hydraulic actuated
top roll opening.
Used for rolling C
Channel**



**SSR-44 - 4roll
machine used
to form and roll
wheels for farm
equipment**



**AR-41 with
modified arbors,
dies, and
lengthened
guide roll in/out
travel**



**FA-7 - Flanging
machine. This
machine is used
to make firepit
inserts**

