

**“310”
Initial Pinch Sheet
Bending Rolls**

Waldemar Design & Machine LLC

www.wdmrolls.com

606-787-8474



November 2022

310 Series Machines

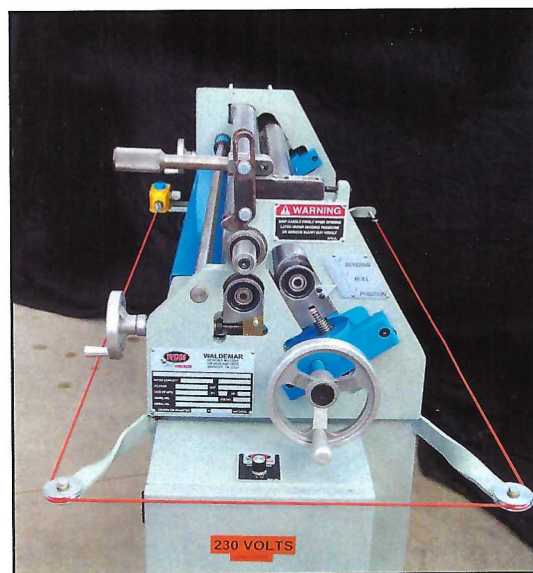
The WDM 310 Series machines are built primarily for the sheet metal industry and small maintenance shops. To keep their cost low, the basic machine has few extras, although it does have the main WDM features of robust fabricated sheet frame and sealed ball bearings on main rolls.

The drive system is of All-Electric design with near instant start, stop, and reverse features. The bending roll can be angled for rolling tapered parts.

The machine is shipped complete and ready to run and only requires the application of power. The machine is then ready to produce accurate cylinders for you. There are many options you can add to enhance the machines. These include: special hardened and polished rolls, digital readouts for roll position, special grooved rolls, starting grooves, bar and angle attachments, and many more. See pages 6 and 7.

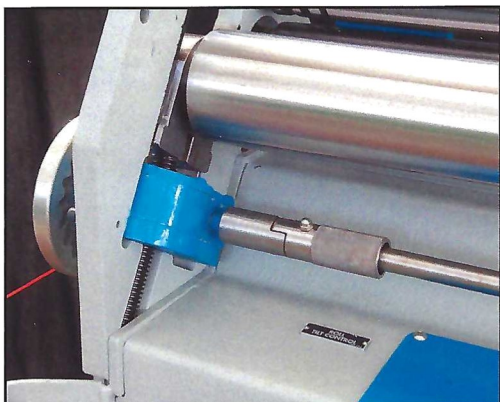


Completed 310-5-60s (10 gauge X 5')

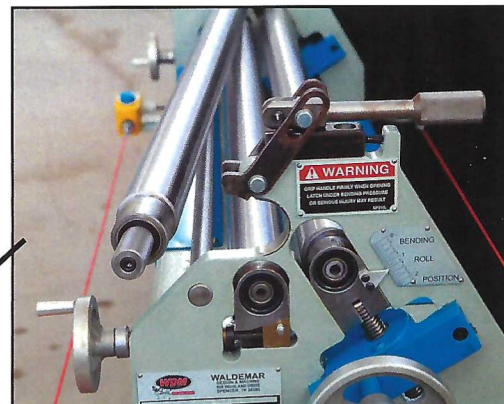


**Completed 310-2.6-48 (20 gauge X 4')
to make ducts for the HVAC industry**

0 Series Sheet and Plate Rolls

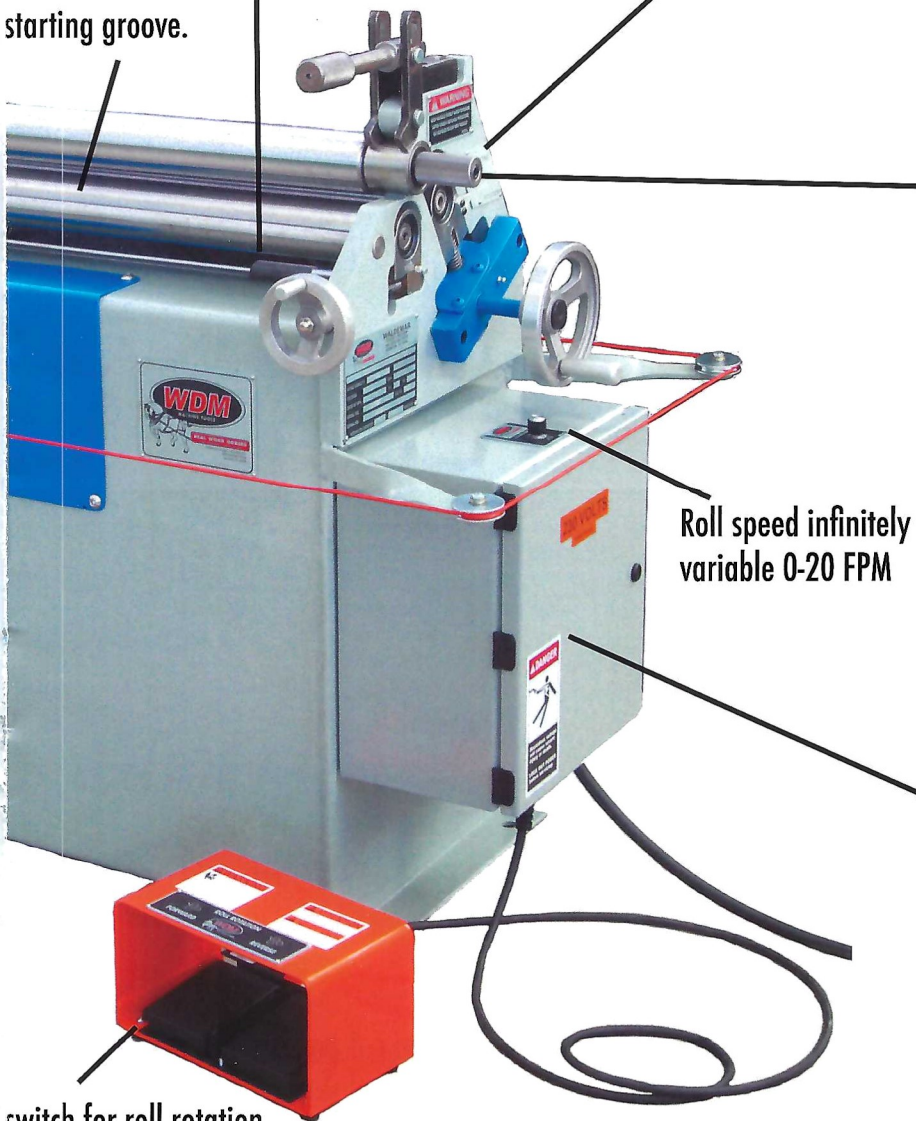


Bending roll actuator gearbox drive disconnect sleeve to allow tilting of the bending roll for rolling cones.



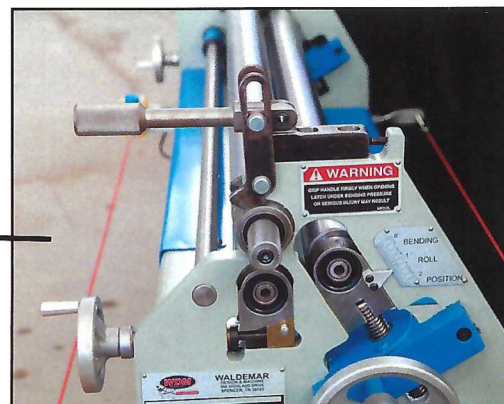
Top roll in the swing-out position to remove completed cylinder.

starting groove.



switch for roll rotation.
reverse.

Roll speed infinitely
variable 0-20 FPM

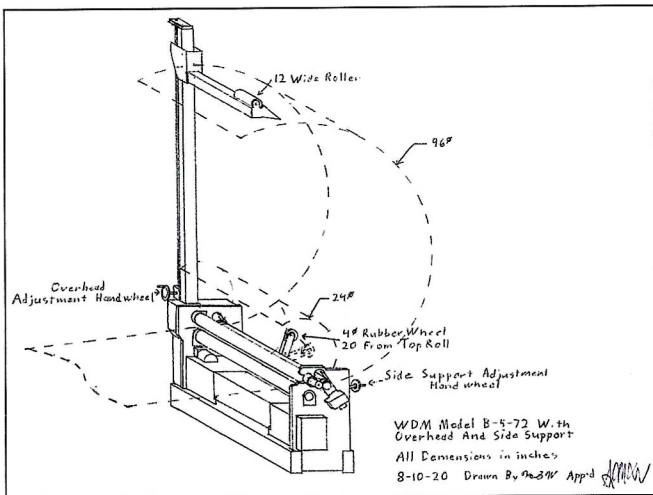


Quick release latch for swing-out top roll. Pointer and rule to show position of bending roll. Wedge and screw arrangement for accurate positioning of pinch roll.



Electrical enclosure with variable frequency drive.
3 phase 230/460 volts
NFPA-79 specifications
24 VDC control circuit
Overload protected

custom design available.....



design concept to.....

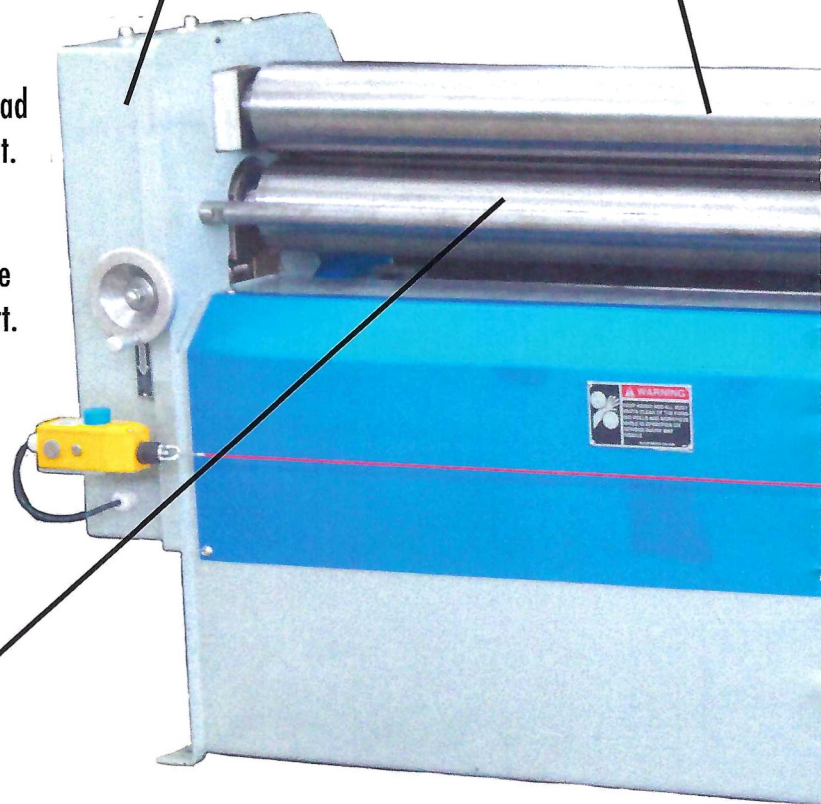


manufactured product



HP, flame case hardened to 55-60RC (650 Brinell) and polished to G32 micro inches finish instead of unhardened 1045.
SG, additional starting groove in lower rolls. (Specify location)

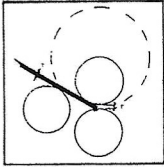
TRD, third roll drive (driven bending roll) includes starting groove in bending roll.



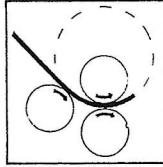
PRO, mechanical DRO to show position of pinch roll (2 pc. not shown)
LC, front, rear and end light cartions (not shown)
CC, custom colors (not shown)
HS, high speed package (specify FPM)

Capacity and Rating Specifications

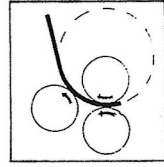
Rolling Procedure that produces true round cylinders



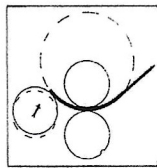
Pinch roll is adjusted to metal thickness. Bending roll is adjusted to pre-bend position. Workpiece is entered from rear of machine and engaged into starting/squaring groove.



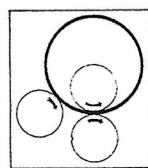
Rolls are rotated to feed work piece into machine a short distance, completing the pre-bend



Rolls are rotated in opposite direction and workpiece is removed.



Workpiece is turned and re-entered from opposite (front) side of machine. Bending roll is adjusted upwards to finish bend position.



Rolls are rotated and workpiece rolled to completion.

NOTES:
Capacity is based on 40,000 p.s.i. yield strength material. These machines are available in many special configurations. Please inquire for price and availability and to verify dimensions and specifications.

We reserve the right to make changes in design and specifications without obligation or notification.

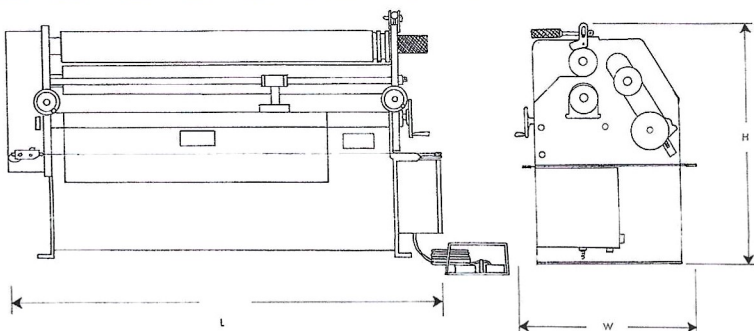
WARNING:
We have incorporated safety features into this machine. It is the responsibility of the owner/employer to provide point-of-operation guards or operating procedures necessary to adequately protect operator and ensure that it is only operated by qualified personnel in a safe manner.

WARRANTY

Waldemar Design & Machine warrants its products to be free from defects in material and workmanship for a period of one year from 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's plant in Spencer, TN, from any point in the 48 contiguous states.

Waldemar shall not be liable for installation and removal expense, loss of time, manufacturing costs, labor, material, loss of profits, or consequential damages direct or indirect, because of defective products. There is no other warranty, express or implied.



TRAINING

Waldemar Design & Machine offers free training in our plant or training in your facility by a WDM technician. Contact us for a quote.

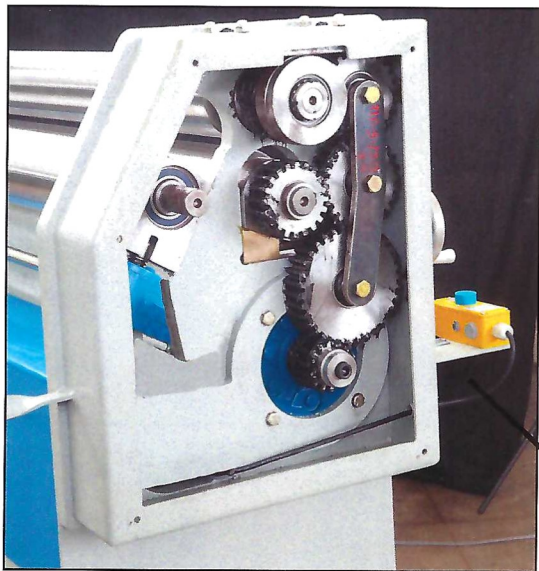
MODEL	4X TOP ROLL DIA. RATED CAPACITY	TOP ROLL ϕ	ROTATION HP	OPTIONAL PBA HP	APPROX.			WEIGHT
					L	W	H	
310-26-24	13 GA./0.09 X 24	2.6	1	1	42	26	37	500
310-3-24	10 GA./0.13 X 24	3	1	1	44	29	40	600
310-35-24	7 GA./0.18 X 24	3.5	1.5	1	44	29	40	600
310-4-24	1/4/0.25 X 24	4	1.5	1	44	30	43	1300
310-5-24	3/8/0.375 X 24	5	5	3	73	29	43	2200
310-26-36	16 GA./0.06 X 36	2.6	1	1	54	26	37	600
310-3-36	14 GA./0.08 X 36	3	1	1	56	29	40	800
310-35-36	12 GA./0.10 X 36	3.5	1.5	1	56	29	40	900
310-4-36	10 GA./0.13 X 36	4	1.5	1	56	30	43	1400
310-5-36	7 GA./0.18 X 36	5	2	1.5	57	32	43	1900
310-6-36	0.38 X 36	6	5	3	65	37	45	2300
310-26-48	20 GA./0.04 X 48	2.6	1	1	66	26	37	700
310-3-48	18 GA./0.05 X 48	3	1	1	68	29	40	1000
310-35-48	14 GA./0.07 X 48	3.5	1.5	1	68	29	40	1100
310-4-48	12 GA./0.10 X 48	4	1.5	1	68	30	43	1600
310-5-48	8 GA./0.16 X 48	5	2	1.5	69	32	43	2200
310-6-48	0.31 X 48	6	5	3	77	37	45	2500
310-3-60	19 GA./0.04 X 60	3	1	1	80	29	40	1300
310-35-60	16 GA./0.06 X 60	3.5	1.5	1	80	29	40	1400
310-4-60	14 GA./0.07 X 60	4	1.5	1	80	30	43	1800
310-5-60	10 GA./0.13 X 60	5	2	1.5	81	32	43	2400
310-6-60	0.25 X 60	6	5	3	89	37	45	2800
310-35-72	20 GA./0.04 X 72	3.5	1.5	1	92	29	40	1600
310-4-72	16 GA./0.06 X 72	4	1.5	1	92	30	43	2000
310-5-72	12 GA./0.10 X 72	5	2	1.5	93	32	43	2700
310-6-72	0.22 X 72	6	5	3	101	37	45	3100
310-4-96	20 GA./0.04 X 96	4	1.5	1	122	30	43	2300
310-5-96	16 GA./0.06 X 96	5	2	1.5	123	32	43	3200
310-6-96	0.14 X 96	6	5	3	125	37	45	3700
310-5-120	18 GA./0.05 X 120	5	2	1.5	147	32	43	3700
310-6-120	0.09 X 120	6	5	3	149	37	45	4200
310-6-144	0.06 X 144	6	5	3	173	37	45	4800

EXTENDED SHAFT CAPACITY

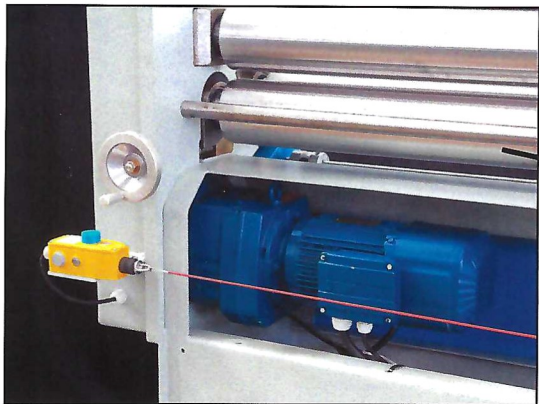
MODEL	3105	3106	OPTIONS REQUIRED
ANGLE LEG IN	1-1/4 X 1/4	1-1/2 X 1/4	ES, SD, GRA, ATA
ANGLE LEG OUT	1-1/4 X 1/4	1-1/2 X 1/4	ES, SD, GRA
SQUARE BAR	1-1/8	1-1/4	ES, SD
FLAT ON FLAT	1/2 X 4	1/2 X 6	ES, SD
FLAT ON EDGE	3/4 X 1-1/2	3/8 X 2-1/4	ES, SD
	1/2 X 1-3/4		
PIPE	1-1/4 SCHEDULE 80	1-1/2 SCHEDULE 40	ES, PRD
ROUND BAR	1-3/8	1-3/8	ES, PRD

Cone rolling capacity 1/2 of plate capacity (1/2 of the width or 1/2 of the thickness)

Standard Features of WDM 31



Heavy duty all-gear drive for roll rotation 2-roll drive.



Safety cable switch.
Helical gear motor with electric holding brake for roll drive.
Total electric operation. Near instant start-stop-reverse.
NEMA premium efficient motors. Gearbox lubed for life



Assembly line style setup.
Manufactured in USA.

1045 steel rolls machined to T63 micro inches finish. These rolls are crowned to compensate for deflection. Hardness B86 (170 Brinell)

Accurately machined, compact, streamline, all welded steel frame.

Sealed ball bearings on all main points.

Pinch roll

Safety cable around perimeter of machine.

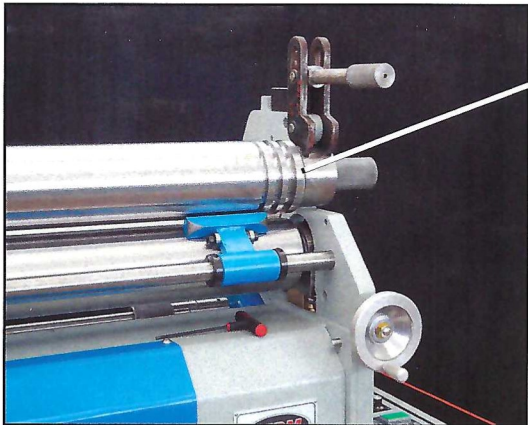
Haze grey epoxy and blue enamel finish.
(V.O.C. compliant)

Model 310-2.6-48

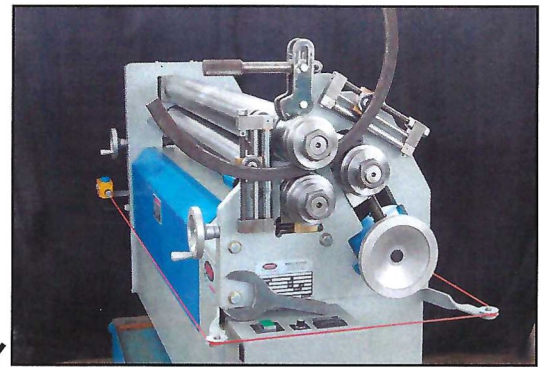


Guarded foot
Forward and

Options

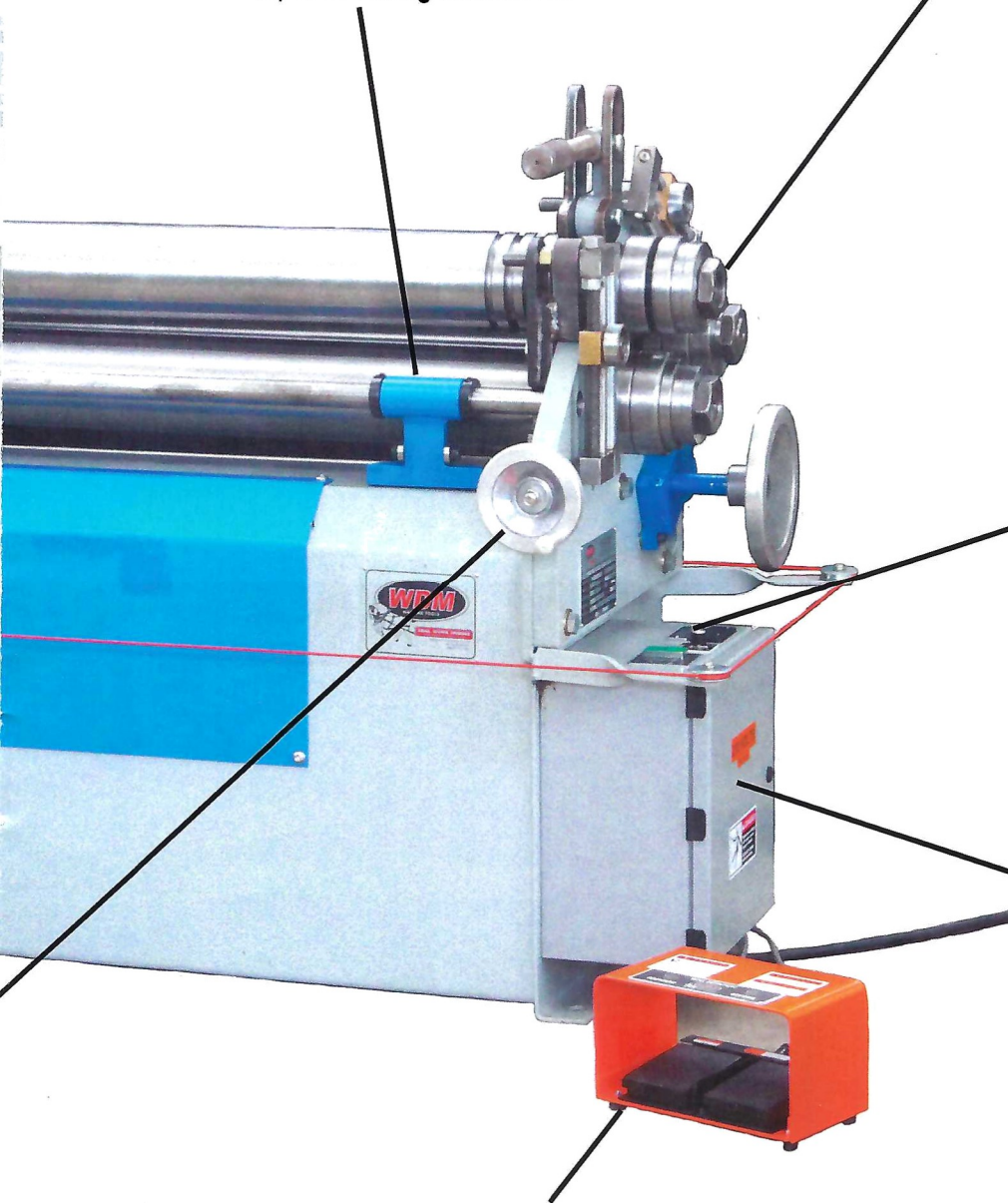


CG, circular grooves in top roll for rolling rods or sheets with wired edges.
 Size 3/8, 1/2, and 5/8 round.
 Other sizes and shapes available upon request.



ES, extended shaft, SD section dies
GRA, guide roll, ATA, antitwist attachment for rolling angles and flats.
PRD, profile dies, for rolling tubes, pipe and sections (5" = 3.5 wide, 6" = 4.0 wide) (specify groove size) (5" and 6" models only)

CA, cone rolling attachment



DRO, digital readout to show position of bending roll instead of rule and pointer



PBA, power bending adjustment powered by a helical gear motor instead of manual crank



RP, roving pendant control (not shown)
RC, rolling console control (not shown)

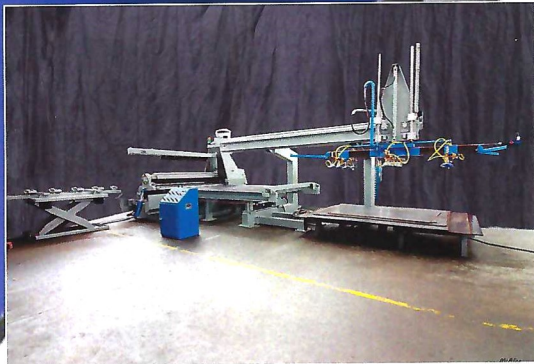
PD, power disconnect
SV, special voltage and phase (specify)

Waldemar Design and Machine LLC, is a multi-generation family business that has been designing and manufacturing metal forming machines for industry small and large. We build these machines in a simple setting exercising serious craftsmanship and integrity. Many of the high quality components are manufactured in our shops in Tennessee and Kentucky, USA, or purchased from domestic or world wide suppliers. Special attention is paid to quality, availability, and durability.

Your satisfaction and the performance of our machines is held in highest regard.

—Owners

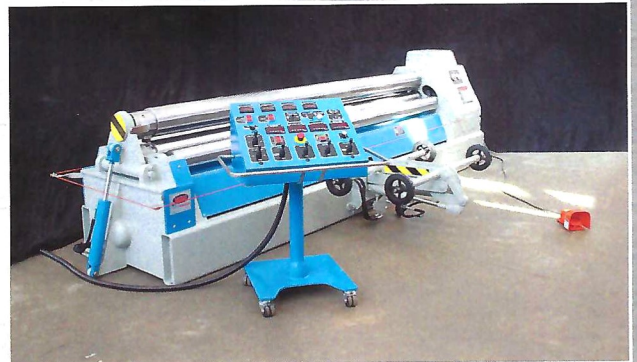
Other machines by WDM



403-13-8 rolling cell to form propane tanks



SRR-44 for rolling steel wheels for farm machinery



403-7-10 with rolling console and side supports



PB10 pyramid bender to roll flatbar



**WALDEMAR DESIGN
& MACHINE LLC**

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