



**" B Series"  
Initial Pinch Sheet  
Bending Rolls**

# B Series Machines



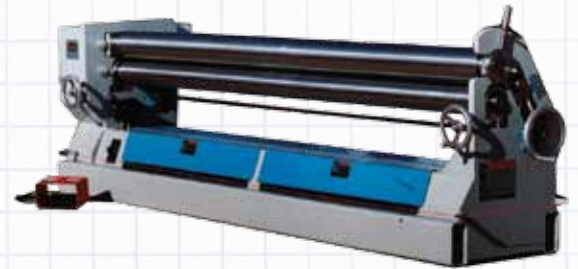
A Group of B-5-60 (10 gauge x 5), the flag ship of the B Series machines waiting packaging and shipment.



B-5 = 2 (24" x 3/8) with optional extended rolls, and bar and angle attachment. This is a compact machine designed specifically for the steel wheel industry. This machine could have many other uses.



B-6-48 (5/16 x 4') with no optional equipment.



B-6-96 (.140 x 8') with variable speed drive.

## Rolling Procedure That produces true round cylinders



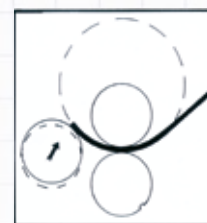
Pinch roll is adjusted to metal thickness. Bending roll is adjusted to pre-bend position. Workpiece is entered from rear of machine and engaged into starting/squaring groove.



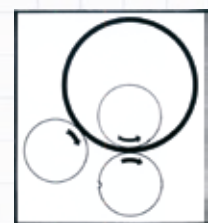
Rolls are rotated to feed work piece into machine a short distance, completing the pre-bend.



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 roll position.



Rolls are rotated and workpiece rolled to completion.



B-6-72 (7/32 x 6') with extended shafts, and bar and angle attachment.



B-5-96 (16 gauge 8') with variable speed drive, electric digital read out, and customer specified green point.



B-1.5-16 power sheet roll (20 gauge x 16") used for filter and silencer manufactures, model makers, labs, and similar applications.



Group of 2.5-36 Manual Sheet Rolls  
Used in Maintenance Shops and Sheet Metal Trades.

### MADE IN THE USA

For two generations the family business of Waldemar Design and Machine 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 Kentucky, USA, or purchased from domestic or worldwide suppliers. Special attention is paid to quality, availability, and durability. Your satisfaction and the performance of our machines is held in highest regard.

-Owners

#### LOCATION AND SERVICE

Our plants in Liberty, Kentucky, house our sales, engineering, manufacturing, R & D, parts, and accounting departments. We are represented in the USA, Canada, Central and South America by independent sales representatives and dealers.



Our location in east central United States puts us in close proximity to all major industrial areas in the eastern United States. Our machines are designed to use many standard off-the-shelf components that are readily available from industrial supply houses or from our stock. Westbrook Engineering Co., Inc. 23501 Mound Road, Warren, MI 48091 Tel: 800.899.8182

#### 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 Liberty, KY, 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 strongly encourages the dealer and/or customer to visit our plant upon completion of the machine to receive free training on the machine's operation and maintenance.



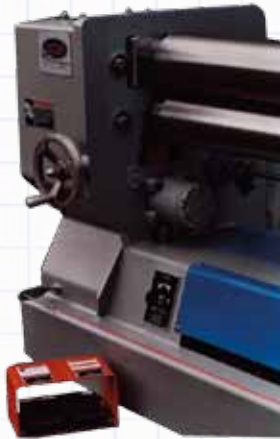
**A**

Heavy duty all gear drive for rolls. Roller chain drive for power bending adjustment.



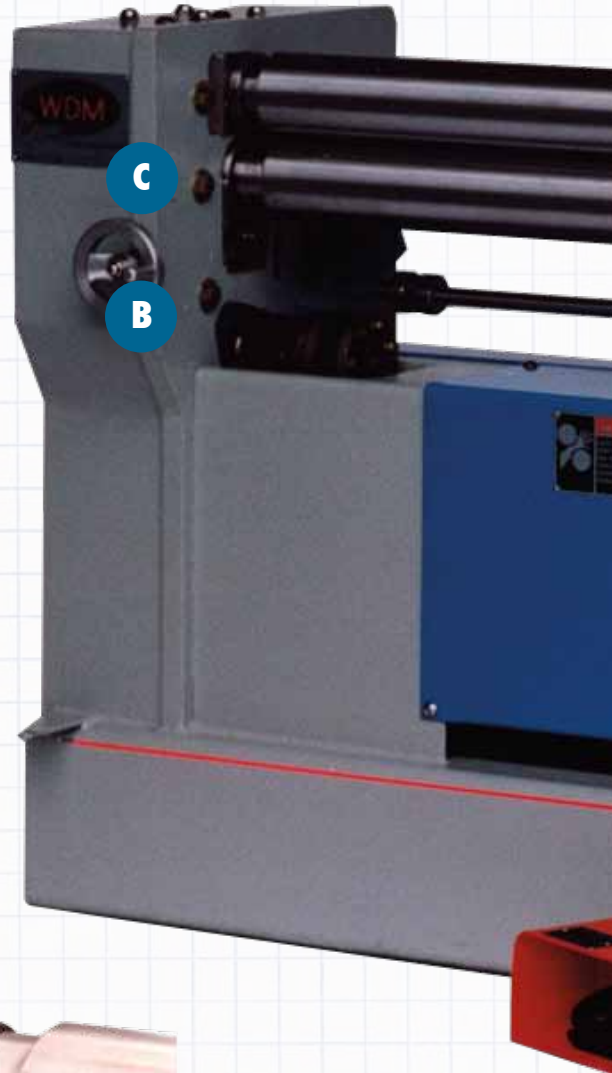
**J**

Optional angle section dies to roll angle in pairs, flat bars on edge, squares, and small round bars. Pipe tubing and many other dies available.



**B**

Shows massive drive housing and arrangement. Series B-6 and B-7



**A**

**C**

**B**



**C**



This is the model B-3.5

Cone attachment mounted on drive end.

# Sheet and Plate Rolls



**Bending Roll**  
Drive disconnect collar with detent position to allow tilting the back roll for rolling cones and similar parts.

I



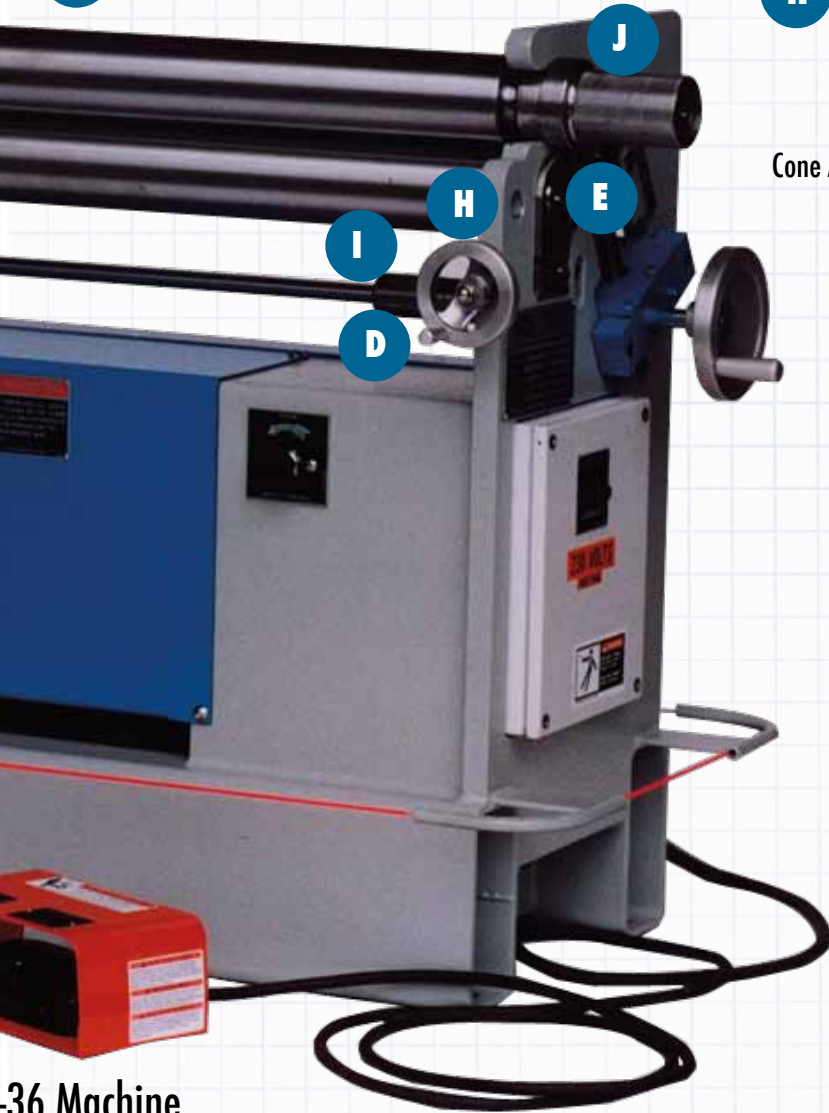
H



G

Cone Attachment mounted on drop end.

Heavy duty worn gear screw jack arrangement for positioning bending rolls. Alloy steel guide block holds SKF sealed sycpherical roller bearings.



J

E

H

I

D

F



G

Drop end view of B machine shows location of electrical box, pinch roll adjusting hand wheel, and position scale. Notice the alloy steel bearing case and wedge screw arrangement for accurate positioning of the pinch roll.

B-36 Machine



D

Show roll tilt sleeve in lock position.



E

Show roll tilt sleeve in lock position.

# CAPACITY AND RATING SPECIFICATIONS

## STANDARD FEATURES

- 1045 Steel rolls machined to 63 micro inches
- Total hydraulic operation
- Instant start-stop-reverse
- Roll speed infinitely variable 0 to 22 FPM
- 2 Roll drive
- 3 Phase 230/460 Volts
- Electrics to NFPA-79 specifications
- 120 Volt Circuit
- Safety interlock on electrical cabinet
- Overload protected
- TEFC motor
- Quiet hydraulic system
- Haze gray epoxy and blue enamel finish (V.O.C. compliant)
- Sealed spherical roller bearings on all main points
- Hydraulically actuated drop-end
- Accurately machined, compact, streamlined, all welded steel frame
- Manufactured in Casey County, Kentucky, USA

## STANDARD OPTIONS

- Hardened and polished rolls 28-32 Rc. (4140 HT)
- Hardened and polished rolls 55-60 Rc. (1045 flame hardened)
- Other alloys and finishes are available , inquire
- Squaring grooves in lower rolls
- Circular grooves in rolls for rolling rods or sheets with wire edges 3/8, 1/2, and 5/8
- Other special circular grooves for extrusions etc...
- Forward & reverse guarded foot pedal for roll rotation
- Cone attachment
- Third roll drive
- Heavy duty cone attachment
- DRO for roll position instead of dial pointer indicator (**Series 421**)
- Same as above on both ends of rolls (**Series 422**)
- DRO with 2-preset stops for roll position indicators and control (**Series 423**)
- Same as above with an additional DRO to show position of outboard end of roll (**Series 424**) useful for cone rolling
- DRO length indicator to show length rolled to facilitate forming of flat-radius-flat, ect. type workpiece (**Series L**)
- Same as above with 2 presets (**Series LP**)
- Same as above with 6 presets (**Series LP6**)
- Electric roving pendant control to replace manual valves on machine housing
- Moveable console electric control to replace manual valves on machine housing

Model	Rated Capacity	Nominated Roll Dia.	Horsepower	Size L x W x H	Approximate Weight	Bar on Edge	Optional Capacity Angle
K-5-4	.164 x 4	5	3	82 x 23 x 35	1,627		
K-6-4	5/16 x 4	6	5	84 x 28 x 38	2,358	1-1/2 x 3/4	1-1/4 x 1-1/4 x 3/16
K-7-4	3/8 x 4	7	5	84 x 28 x 38	3,142	2 x 3/4	1-1/2 x 1-1/2 x 3/4
K-8-4	1/2 x 4	8	7.5	95 x 31 x 40	4,128	2-1/2 x 1	2 x 2 x 1/4
K-9-4	5/8 x 4	9	10	95 x 31 x 40	5,252	2-1/2 x 1	2-1/2 x 2-1/2 x 3/8
K-10-4	23/32 x 4	10	10	98 x 33 x 46	7,387	3 x 3	3 x 3 x 3/8
K-11-4	7/8 x 4	11	15	98 x 33 x 46	9,137	3 x 1-1/4	3-1/2 x 3-1/2 x 1/2
K-12-4	1-1/16 x 4	12	20	100 x 35 x 50	10,570	3-1/2 x 1-1/2	4 x 4 x 1/2
K-13-4	1-1/4 x 4	13	25	100 x 35 x 50	12,465	4 x 1-1/2	4 x 4 x 1/2
K-14-4	1-7/16 x 4	14	40	108 x 60 x 66	15,588	4-1/2 x 1-3/4	4 x 4 x 1/2
K-15-4	1-5/8 x 4	15	50	108 x 60 x 66	18,300	5 x 2-1/2	4 x 4 x 1/2
K-16-4	1-3/4 x 4	16	50	111 x 64 x 68	20,078	5 x 2-1/2	5 x 5 x 1/2*
K-17-4	2 x 4	17	60	111 x 64 x 68	23,052	5 x 3	5 x 5 x 1/2*
K-18-4	2-1/4 x 4	18	60	123 x 72 x 78	25,835	6 x 2-1/2	6 x 6 x 3/4*
K-19-4	2-1/2 x 4	19	75	123 x 72 x 78	28,952	6 x 3	6 x 6 x 3/4*
K-5-5	.135 x 5	5	3	94 x 23 x 35	1,902		
K-6-5	1/4 x 5	6	5	96 x 28 x 38	2,757	1-1/2 x 3/4	1-1/4 x 1-1/4 x 3/16
K-7-5	5/16 x 5	7	5	96 x 28 x 38	3,672	2 x 3/4	1-1/2 x 1-1/2 x 3/4
K-8-5	3/8 x 5	8	7.5	107 x 31 x 40	4,825	2-1/2 x 1	2 x 2 1/4
K-9-5	1/2 x 5	9	10	107 x 31 x 40	6,137	2-1/2 x 1	2-1/2 x 2-1/2 3/8
K-10-5	5/8 x 5	10	10	110 x 33 x 46	8,463	3 x 1	3 x 3 x 3/8
K-11-5	28/32 x 5	11	15	110 x 33 x 46	10,468	3 x 1-1/4	3-1/2 x 3-1/2 x 1/2
K-12-5	7/8 x 5	12	20	112 x 35 x 50	12,112	3-1/2 x 1-1/2	4 x 4 x 1/2
K-13-5	1-1/16 x 5	13	25	112 x 35 x 50	14,283	4 x 1-1/2	4 x 4 x 1/2
K-14-5	1-1/4 x 5	14	40	120 x 60 x 66	17,565	4-1/2 x 1-3/4	4 x 4 x 1/2
K-15-5	1-7/16 x 5	15	50	120 x 60 x 66	20,818	5 x 2-1/2	4 x 4 x 1/2
K-16-5	1-5/8 x 5	16	50	123 x 64 x 68	22,828	5 x 2-1/2	5 x 5 x 1/2*
K-17-5	1-3/4 x 5	17	60	123 x 64 x 68	26,215	5 x 3	5 x 5 x 1/2*
K-18-5	2 x 5	18	60	135 x 72 x 78	29,380	6 x 2-1/2	5 x 6 x 3/4*
K-19-5	2-3/16 x 5	19	75	135 x 72 x 78	32,923	6 x 3	6 x 6 x 3/4*
K-5-6	.104 x 6	5	3	106 x 24 x 35	2,177		
K-6-6	7/32 x 6	6	5	108 x 28 x 38	3,155	1-1/2 x 3/4	1-1/4 x 1-1/4 x 3/16
K-7-6	9/32 x 6	7	5	108 x 28 x 38	4,200	2 x 3/4	1-1/2 x 1-1/2 x 3/4
K-8-6	3/8 x 6	8	7.5	119 x 31 x 40	5,522	2-1/2 x 1	2 x 2 x 1/4
K-9-6	7/16 x 6	9	10	119 x 31 x 40	7,022	2-1/2 x 1	2-1/2 x 2-1/2 x 3/8
K-10-6	9/16 x 6	10	10	122 x 33 x 46	9,540	3 x 1	3 x 3 x 3/8
K-11-6	11/16 x 6	11	15	122 x 33 x 46	11,802	3 x 1-1/4	3-1/2 x 3-1/2 x 1/2
K-12-6	13/16 x 6	12	20	124 x 35 x 50	13,653	3-1/2 x 1-1/2	4 x 4 x 1/2
K-13-6	1 x 6	13	25	124 x 35 x 50	16,100	4 x 1-1/2	4 x 4 x 1/2
K-14-6	1-1/8 x 6	14	40	132 x 60 x 66	19,682	4-1/2 x 1-3/4	4 x 4 x 1/2
K-15-6	1-1/4 x 6	15	50	132 x 60 x 66	23,335	5 x 2-1/2	4 x 4 x 1/2
K-16-6	1-3/8 x 6	16	50	135 x 64 x 68	25,582	5 x 2-1/2	5 x 5 x 1/2*
K-17-6	1-1/2 x 6	17	60	135 x 64 x 68	29,378	5 x 3	5 x 5 x 1/2*
K-18-6	1-5/8 x 6	18	60	147 x 72 x 78	32,922	6 x 2-1/2	6 x 6 x 3/4*
K-19-6	1-3/4 x 6	19	75	147 x 72 x 78	36,897	6 x 3	6 x 6 x 3/4*

Model	Rated Capacity	Capacity 12x Top Roll Dia	Nominal Top Roll Diameter	Horse-power	Size L x W x H	Approximate Weight	Bar on Edge	Capacity Angle
K-5-8	.060 x 8	.140 x 8	5	3	130 x 23 x 35	2,727		
K-6-8	.140 x 8	3/16 x 8	6	5	132 x 28 x 38	3,948	1-1/2 x 3/4	1-1/4 x 1-1/4 x 3/16
K-7-8	3/16 x 8	1/4 x 8	7	5	132 x 28 x 38	5,258	2 x 3/4	1-1/2 x 1-1/2 x 1/4
K-8-8	1/4 x 8	5/16 x 8	8	7.5	143 x 31 x 40	6,915	2- 1/2 x 1	2 x 2 x 1/4
K-9-8	5/16 x 8	13/32 x 8	9	10	143 x 31 x 40	8,795	2- 1/2 x 1	2-1/2 x 2-1/2 x 3/8
K-10-8	13/32 x 8	33/64 x 8	10	10	146 x 33 x 46	11,695	3 x 1	3 x 3 x 3/8
K-11-8	33/64 x 8	5/8 x 8	11	15	146 x 33 x 46	14,468	3 x 1-1/4	3-1/2 x 3-1/2 x 1/2
K-12-8	5/8 x 8	47/64 x 8	12	20	148 x 35 x 50	16,735	3- 1/2 x 1- 1/2	4 x 4 x 1/2
K-13-8	47/64 x 8	55/64 x 8	13	25	148 x 35 x 50	19,737	4 x 1- 1/2	4 x 4 x 1/2
K-14-8	55/64 x 8	63/64 x 8	14	40	156 x 60 x 66	22,983	4-1/2 x 1-3/4	4 x 4 x 1/2
K-15-8	63/64 x 8	1-7/64 x 8	15	50	156 x 60 x 66	27,255	5 x 2- 1/2	4 x 4 x 1/2
K-16-8	1-7/64 x 8	1-7/64 x 8	16	50	159 x 64 x 68	29,868	5 x 2- 1/2	5 x 5 x 1/2*
K-17-8	1-17/64 x 8	1-27/64 x 8	17	60	159 x 64 x 68	34,308	5 x 3	5 x 5 x 1/2*
K-18-8	1-27/64 x 8	1-37/64 x 8	18	60	171 x 72 x 78	38,450	6 x 3-1/2	6 x 6 x 3/4*
K-19-8	1-37/64 x 8	1-47/64 x 8	19	75	171 x 72 x 78	43,097	6 x 3	6 x 6 x 3/4*
K-5-10	.048 x 10	.094 x 10	5	3	154 x 23 x 35	3,275		
K-6-10	.094 x 10	.125 x 10	6	5	156 x 28 x 38	4,745	1-1/2 x 3/4	1-1/4 x 1-1/4 x 3/16
K-7-10	.125 x 10	11/64 x 10	7	5	156 x 28 x 38	6,317	2 x 3/4	1-1/2 x 1-1/2 x 1/4
K-8-10	11/64 x 10	15/64 x 10	8	7.5	167 x 31 x 40	8,592	2- 1/2 x 1	2 x 2 1/4
K-9-10	15/64 x 10	5/16 x 10	9	10	167 x 31 x 40	10,565	2- 1/2 x 1	2-1/2 x 2-1/2 3/8
K-10-10	5/16 x 10	25/64 x 10	10	10	170 x 33 x 46	13,852	3 x 1	3 x 3 x 3/8
K-11-10	25/64 x 10	1/2 x 10	11	15	183 x 46 x 46	17,137	3 x 1-1/4	3-1/2 x 3-1/2 x 1/2
K-12-10	1/2 x 10	19/32 x 10	12	20	172 x 35 x 50	19,817	3-1/2 x 1-1/2	4 x 4 x 1/2
K-13-10	19/32 x 10	11/16 x 10	13	25	172 x 35 x 50	23,370	4 x 1-1/2	4 x 4 x 1/2
K-14-10	11/16 x 10	51/64 x 10	14	40	180 x 60 x 66	28,150	4-1/2 x 1-3/4	4 x 4 x 1/2
K-15-10	51/64 x 10	57/64 x 10	15	50	180 x 60 x 66	33,403.	5 x 2-1/2	4 x 4 x 1/2
K-16-10	57/64 x 10	1-1/32 x 10	16	50	183 x 64 x 68	36,585	5 x 2-1/2	5 x 5 x 1/2*
K-17-10	1-1/32 x 10	1-5/32 x 10	17	60	183 x 64 x 68	42,025	5 x 2-1/2	5 x 5 x 1/2*
K-18-10	1-5/32 x 10	1-9/32 x 10	18	60	195 x 72 x 78	47,095	6 x 2-1/2	5 x 6 x 3/4*
K-19-10	1-9/32 x 10	1-13/32 x 10	19	75	195 x 72 x 78	52,785	6 x 3	6 x 6 x 3/4*
K-5-12	.035 x 12	.062 x 12	5	3	178 x 23 x 35	3,823		
K-6-12	.062 x 12	.094 x 12	6	5	180 x 28 x 38	5,540	1-1/2 x 3/4	1-1/4 x 1-1/4 x 3/16
K-7-12	.094 x 12	.140 x 12	7	5	180 x 28 x 38	7,373	2 x 3/4	1-1/2 x 1-1/2 x 1/4
K-8-12	.125 x 12	11/64 x 12	8	7.5	191 x 31 x 40	9,697	2-1/2 x 1	2 x 2 x 1/4
K-9-12	11/64 x 12	15/64 x 12	9	10	191 x 31 x 40	12,335	2-1/2 x 1	2-1/2 x 2-1/2 x 3/8
K-10-12	15/64 x 12	9/32 x 12	10	10	194 x 33 x 46	16,003	3 x 1	3 x 3 x 3/8
K-11-12	9/32 x 12	3/8 x 12	11	15	194 x 33 x 46	19,800	3 x 1-1/4	3-1/2 x 3-1/2 x 1/2
K-12-12	3/8 x 12	7/16 x 12	12	20	196 x 35 x 50	22,897	3-1/2 x 1-1/2	4 x 4 x 1/2
K-13-12	7/16 x 12	35/64 x 12	13	25	196 x 35 x 50	27,003	4 x 1-1/2	4 x 4 x 1/2
K-14-2	35/64 x 12	5/8 x 12	14	40	204 x 60 x 66	32,385	4-1/2 x 1-3/4	4 x 4 x 1/2
K-15-12	5/8 x 12	3/4 x 12	15	50	204 x 60 x 66	38,435	5 x 2-1/2	4 x 4 x 1/2
K-16-2	3/4 x 12	13/16 x 12	16	50	207 x 64 x 68	42,087	5 x 2-1/2	5 x 5 x 1/2*
K-17-12	13/16 x 12	15/16 x 12	17	60	207 x 64 x 68	48,356	5 x 3	5 x 5 x 1/2*
K-18-12	15/16 x 12	1 x 12	18	60	219 x 72 x 78	54,178	6 x 2-1/2	6 x 6 x 3/4*
K-19-12	1 x 12	1-1/8 x 12	19	75	219 x 72 x 78	60,730	6 x 3	6 x 6 x 3/4*

- Automatic cycle PLC controlled for high production (Series 425-4)
- Independent roll rotation and roll adjustment speed control (standard on larger machines K-12 and above)
- Side supports
- Overhead supports, feed tables, automatic feeders
- manual and automatic ejectors
- Special electricians
- Special customer-supplied paint

#### NON-STANDARD OPTIONS

- Chromed rolls
- Special extra smooth rolls
- Special grooves in rolls
- High-speed version

### 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 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 Liberty, KY 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, express or implied.

#### TRAINING

Waldemar Design & Machine L. L. C. 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.

#### 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.