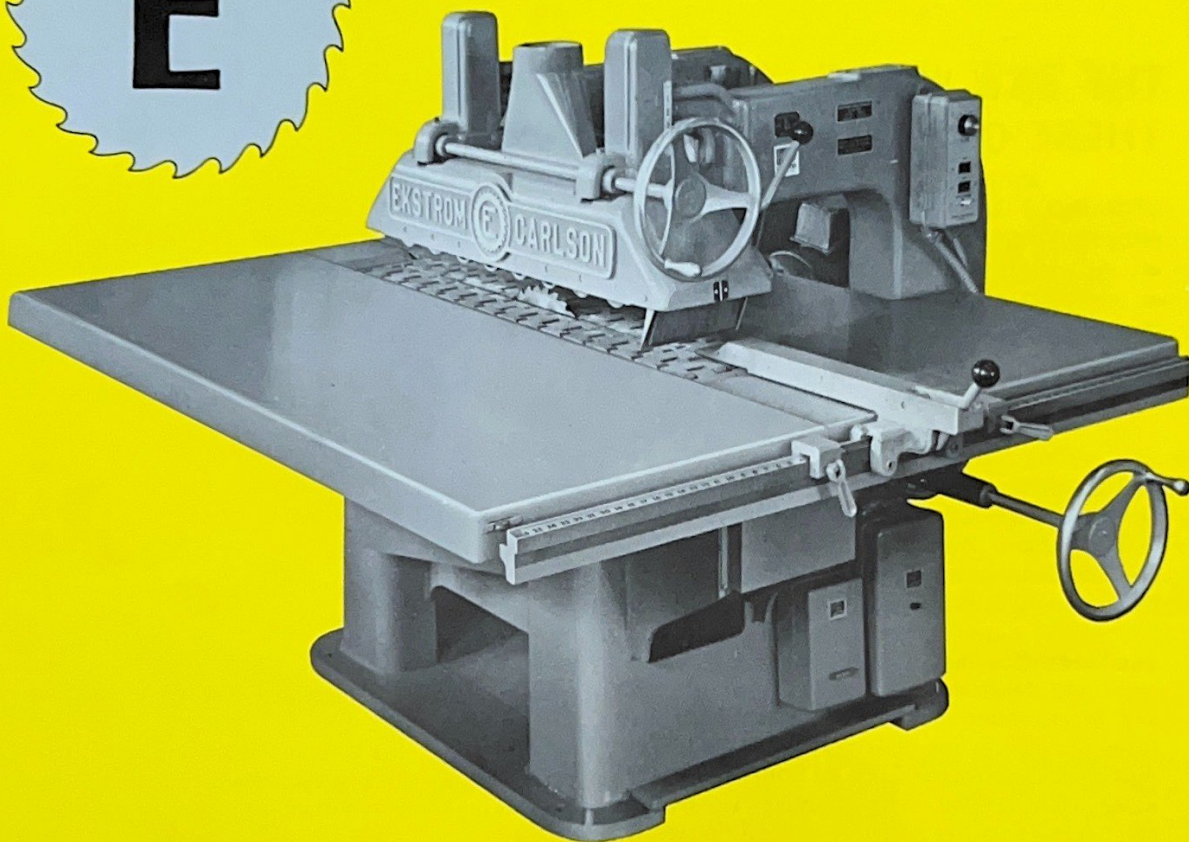


**STAR MACHINERY COMPANY**

4202 W. VALLEY RD.  
RENTON, WA 98055  
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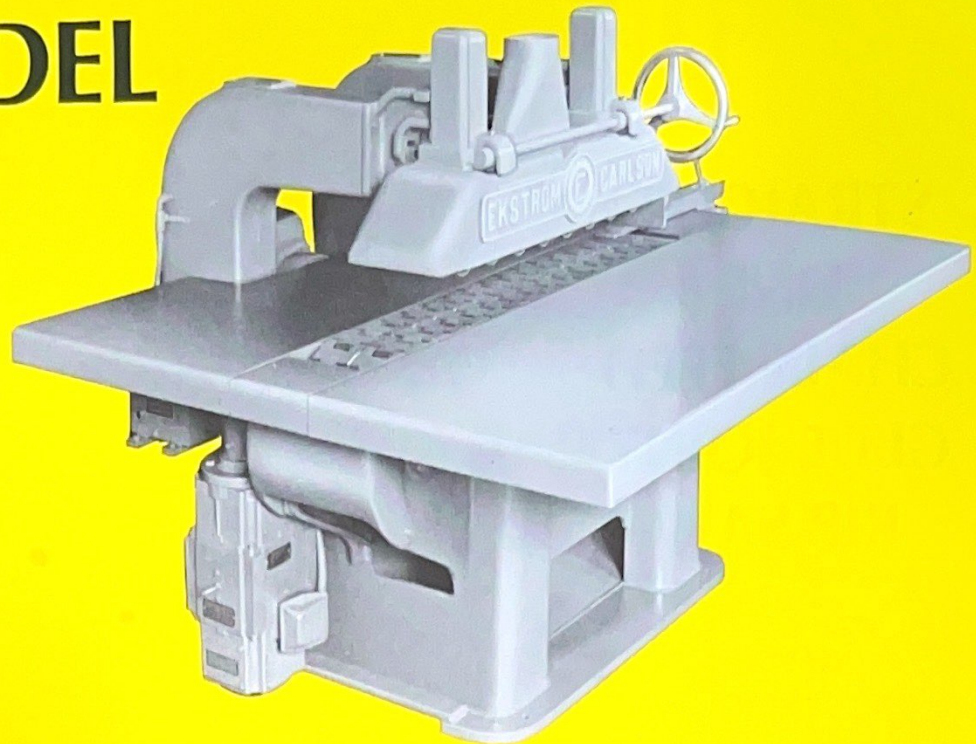
**STRAIGHT  
LINE  
CHAIN FEED  
GLUE JOINT  
RIP SAW**



**Ekstrom, Carlson & Co.**

1400 Railroad Ave., Rockford, Illinois 61110 Phone 815-968-0961

# MODEL E



STRAIGHT LINE  
GLUE JOINT  
CHAIN FEED  
RIP SAW

## THE SAW WITH THESE OUTSTANDING FEATURES . . .

UNDERCUTTING PRINCIPLE FOR RIGIDITY AND SAFETY • INFINITE VARIABLE FEED SPEED AT OPERATOR'S POSITION • INTERCHANGEABLE FEED CHAINS AND RACEWAYS  
• ALUMINUM THROAT INSERT TO PROTECT SAW BLADE AND PREVENT SLIVER JAMS  
• POSITIVE FEED CHAIN AND RACEWAY LUBRICATION • INSTANT ADJUSTMENT FOR STRAIGHT AND HOLLOW JOINT • MAXIMUM SAFETY TO OPERATOR

**STRAIGHT LINE, GLUE JOINT, RIP SAW GIVES HIGHER PRODUCTION, BETTER RESULTS AT LOWER COST . . .**

The Ekstrom, Carlson Model E Rip Saw, in the opinion of experts, is the finest rip saw ever made. In production, in accuracy of cut, in safety, in low maintenance and low initial cost, it outperforms and outlasts all other saws.

The Model E is the result of continued improvement and development of a successful machine and incorporates many new and desirable features. It utilizes the undercutting method. The dual chains control the stock on both sides of the blade while cutting. The exclusive "Controlled Cut" feature assures perfectly straight or slightly hollow cuts as desired.

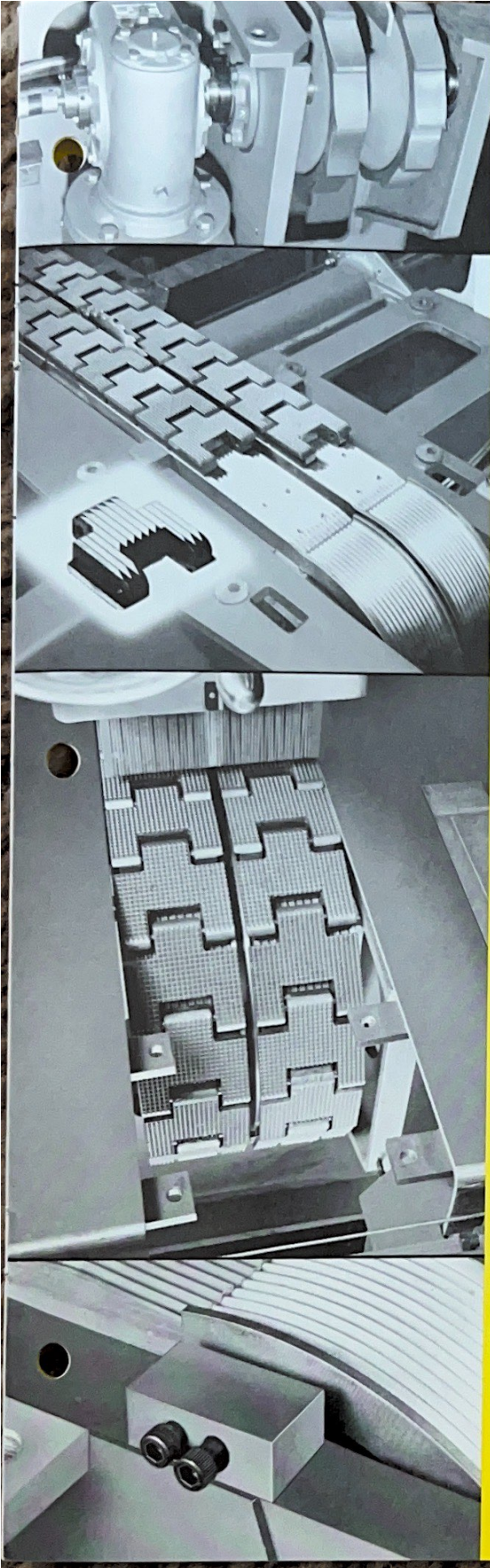
The SCR Variable Speed drive provides any feed

speed from 0 to 280 FPM so that the operator can select any rate of feed desired.

From a standpoint of safety, every possible protective feature has been incorporated so that the operator can concentrate on high production, thus reducing labor cost.

Results are more than expected. The saw produces an edge for a perfect glue joint. There is no jamming. You can save on material and maintenance. By utilizing interchangeable Chains and Races the life of the machine is greatly extended.

Wholehearted acceptance and complete satisfaction has been experienced by present users. You too will enjoy this excellent saw.



## POSITIVE DIRECT DRIVE

The dual sprocket used to drive the feed chains is of one piece and, therefore, both chains are driven as if together without any lag between chains. Stock is fed evenly on both sides of the blade as if the two chains were of one piece. The sprocket is mounted on a large diameter shaft supported between two heavy capacity ball bearings for maximum rigidity. The sprocket has twelve teeth, accurately machined, to provide smooth feed motion.

## FEED CHAIN

The feed chain is composed of hard, close grained, wear resistant, cast iron links and has high tensile strength. Links are of a block type and are machined with multiple vee grooves on the bottom to match the grooves in the raceway. Bidirectional serrations on the top of these links firmly grip the stock. The chain links are connected with hardened steel pins. Short pitch of the chains results in smooth and quiet operation. The chains and races will outperform and outwear corresponding parts on competitive saws. Rubber inserts in chain links and rubber covered pressure rollers are available as an option for special applications where the material is extremely vulnerable to scratching or marring.

## CHAIN RACES

The Chain Races are heavy, solid, non-metallic way bars, 1-1/8 x 4 1/2 x 45 inches long, with V-ways milled into the top surface. The races are mounted directly on machined surfaces on top of the frame. Semi-circular races are attached to the front ends. The eleven V-grooves provide the maximum bearing surface with the least amount of friction, thus reducing wear, providing greater accuracy, and requiring less power. With cast iron chain links operating against non-metallic raceways, long life of both components is assured.

## INTERCHANGEABLE CHAINS AND RACES

Only in the Ekstrom Carlson Model E are the Chains and Races interchangeable. This means that as the Chains and Races wear, they may be changed from side to side. The perfect fit between chain and race is thus maintained. This is an exclusive and important feature. This saves money, too, since you get extended Chain life.

## ADVANTAGES OF DUAL CHAINS

The Model E Glue Joint Rip Saw has two chains, one on each side of the blade running the entire length of the 80" table. The two chains give more positive control since they grip the stock on both sides of the blade, assuring greater accuracy. There is no substitute for carrying the stock past the saw blade in a straight line. This is important for straight line ripping, but more important when a hollow joint is desired, since the cut will be uniform the entire length of the stock. The result is a better glue joint.

## EXCLUSIVE "CONTROLLED CUT"

The Model E Saw uses the most simple and practical method for straight or hollow cutting without putting stress into the stock as other saws do. A simple adjustment takes but a few seconds to make and is conveniently located at the operator's position. Each race has its own adjustment. Since the stock always follows the raceway, the pressure roll is not called upon to control the cut. The entire control is accomplished with these positive, permanent adjustments made from outside the machine, even if running. Control is positive and permanent once set.

# EKSTROM, CARLSON

## A THOUSAND FEED SPEEDS

A SCR Variable Speed Drive of 3 HP is used to drive the feed chains. This exceptionally dependable drive is controlled by solid state components and has been used on thousands of applications requiring smooth, positive power. It provides and maintains feed speeds of 0 to 280 feet per minute and is regulated by a feed speed knob located at the operator's position where he can quickly select the feed speed he desires. The driving power is supplied by direct drive through a reducer gear box to the feed chain sprocket. Past performance proves that there is ample power in the 3 HP DC motor for the heaviest ripping jobs.

## EASY TO RAISE AND LOWER

The Pressure Roll housing adjusts smoothly and easily in split dovetailed ways. One half of the dovetail is machined integrally with the Pressure Roll housing, the other half is machined into the arm extensions. A powerful locking screw, lever operated, pulls the halves together thereby clamping the Pressure Roll housing securely. A large convenient hand wheel raises or lowers the housing. Lift Screws are used only for raising and lowering and not for maintaining position. Large, accurate scale shows setting for stock thickness. Power assist can be provided at additional cost.

## EIGHT ROLLS – CONSTANT EVEN PRESSURE

Infeed and outfeed rolls are 3½" diameter, properly sized for smooth feeding. Center rolls are 3-1/8". Cast iron rolls, accurately machined, run on prelubricated, sealed ball bearings. All rolls are spring loaded and have a full inch of yield.

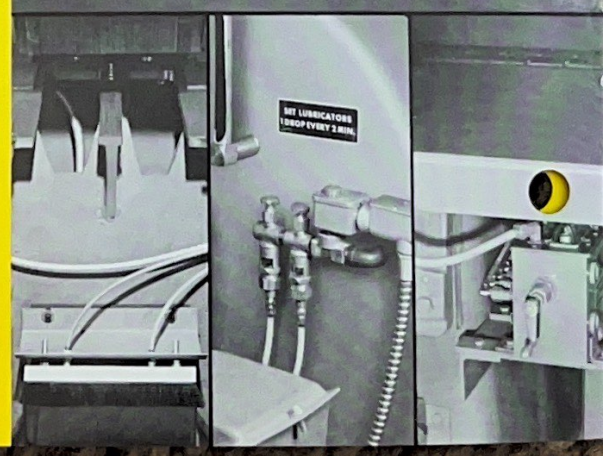
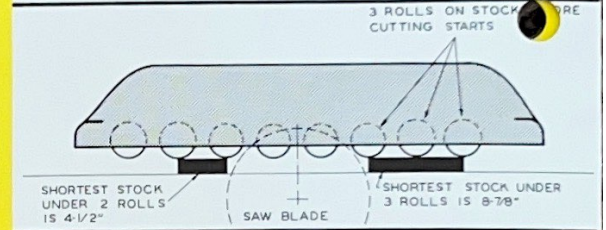
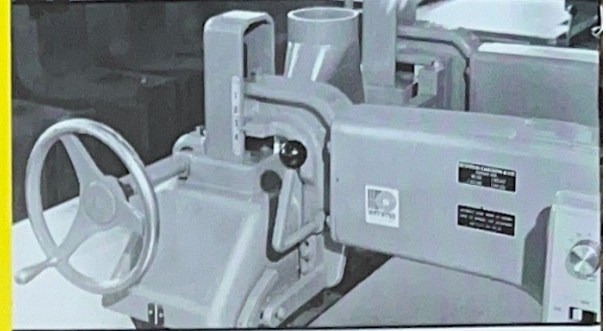
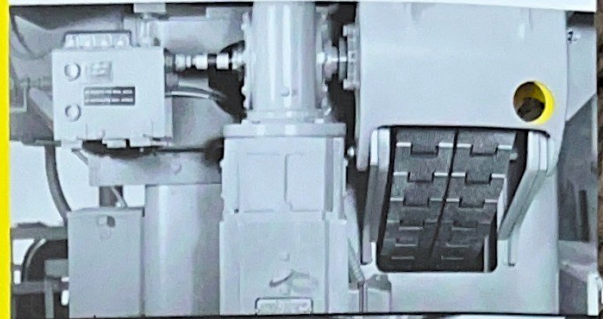
Since the pressure roll housing cannot be shifted by pressure applied to the stock, the accuracy of the cut is not disturbed by shifting pressure rolls. This is a very important feature because only the feed chain is relied upon to carry the stock past the saw blade for a precision glue joint. The first two rolls and the last two rolls are single, one-piece rolls as shown. Four center rolls are divided so that the saw blade can pass between them. Rolls are mounted so that a saw blade can project as much as 3" through the stock without damage to the blade. Pressure roll housing is of cast iron.

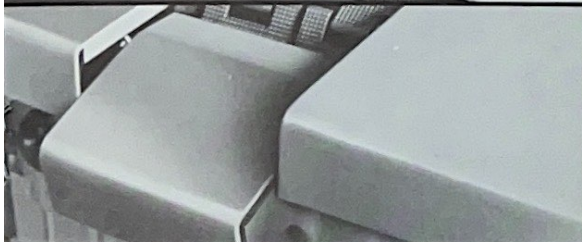
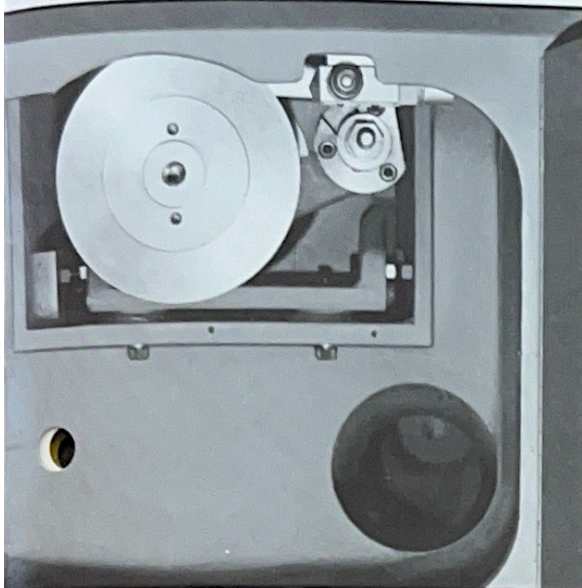
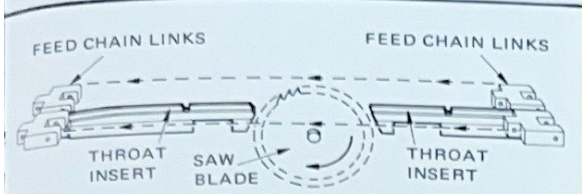
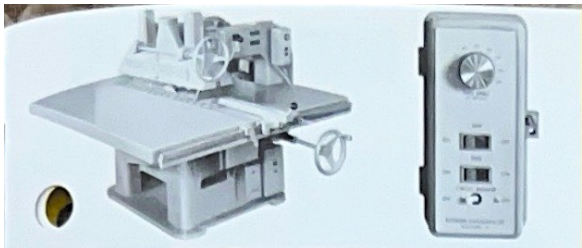
The three front rolls, on the infeed end, will control the stock before cutting starts, three rolls will also be on stock after it passes heel of saw. Shortest stock that will feed through machine under two rolls is 4½" – shortest stock under three rolls is 8-7/8".

## DUAL POSITIVE LUBRICATION SYSTEM

An automatic metered forced feed lubrication system is provided to chains and raceways. In addition, oil is fed to a thick felt pad and brush in the base over which the chains pass, wiping on oil and cleaning the chain V-grooves at the same time. Since the forced feed lubricator is driven by the sprocket shaft, oil is rationed in relation to the chain speed, less at low feed rates, more at higher feed rates. A solenoid valve controls oil feed to saw spindle, feeding only when spindle is running. An opening in the saw base provides access to pad and brush for inspection and maintenance. Sight gauge registers the amount of oil in the reservoir.

## MODEL E RIP SAWS





### CONTROLS ARE CONVENIENT

Controls are within easy reach of the operator as they should be on a well designed machine. This is an important safety feature since it puts the operator at ease and allows him to concentrate on production. 115 Volt "Stop" and "Start" switches for feed and saw motors, variable speed control knob, arbor adjusting wheel and pressure bar adjusting wheel are all located at the operator's normal position.

### THROAT INSERTS HUG BLADE

The saw has patented aluminum throat inserts that are adjustable for use of from 12" to 18" diameter blades. Inserts completely seal, but cannot damage saw blade. They further prevent slivers from jamming between saw blade and chain link. This feature corrects the one objection some users have for "Under the Table Saw Arbors".

### SAFETY FEATURES

Special attention has been given the design of this fine saw and many safety features are incorporated. For instance: all adjustments, except one, are made on the outside of the machine. Feed rolls in pressure housing are completely covered as is the saw blade. Kickback fingers and special rear table give added protection. Study the individual safety features on this page and you will realize how safe the Model E is — how your operators will increase production and why they will prefer this saw to all others.

#### SWITCH IN SAW PIT DOOR

When replacing a saw blade or when adjusting the position of the blade between the chains, the adjustments must be made through the saw pit door. This operation has been made completely fool-proof since as soon as the saw pit door is opened for any reason, a safety switch demobilizes all motors. The saw cannot be put into operation until the door is closed which means that the operator is no longer near the saw blade. Both saw and feed drive motors are so wired that it is impossible to feed stock under rolls unless saw motor is in motion. Dynamic braking of the saw blade and arbor motor is available as an option.

#### KICKBACK FINGERS AVOID DANGER

Fingers are made of steel stampings for strength. They raise and lower automatically while the pressure roll housing is being adjusted to thickness of stock to be run. They cannot jam against the stock gauge or the chain. Fingers are long enough to completely guard stock. Finger section is 8/4" wide to operate on both sides of the blade. A heavy section on each end of kickback finger assembly prevents fingers from flaring or spreading. In addition, a full width sheet metal plate provides protection from slivers.

#### REAR TABLE SWINGS DOWN

Another safety feature. The rear table swings backward and down to automatically release slivers, loose knots, and edgings that otherwise would wedge between chain and table edge. This protects the off bearer.

#### FREE FLOATING STOCK GAUGE

The free-floating type Stock Gauge is carefully machined. It is counter-balanced and rolls over the table on three grease-packed sealed ball bearings. The locking lever clamps the gauge rigidly at any position with only a slight forward pressure. Adjustable stops are furnished for each side of the gauge for accurate repetitive cutting. Indicators and scales show width and height of stock to be ripped.

# EKSTROM, CARLSON

## MODEL E RIP SAWS

### RIGID, HEAVY ARBOR RUNS ON PRELOADED BEARINGS

The saw arbor, the arbor bearings, and the arbor housing in the Model E are all extra large, heavy and rigid to assure smooth running and vibrationless performance. The entire assembly is mounted inside the saw frame for maximum rigidity. Arbor is of 2-11/16" diameter steel and at saw end is 2". No driving pins are used allowing the blade to be indexed to a true running position.

BEARINGS are precision type, deep groove, single row. To obtain true, precision glue joints it is necessary that the arbor have no end play. The Model E is the only saw of its kind in which the bearings are preloaded to eliminate all end play resulting in a better, more accurate cut.

Entire arbor assembly can be raised and lowered by means of convenient hand wheel at operator's end of machine to allow for a difference of 4" in saw blade diameter.

### SIMPLE, POSITIVE ADJUSTMENTS LINE UP SAW WITH CHAIN

The motor end of arbor assembly is mounted on hollow adjusting screws "B", which allow blade to be squared with chain surface. Assembly is also adjustable to set blade perfectly parallel with travel of stock "A". Thus the blade will always run true and free, using less power and making a better, more accurate finished glue joint. Both of these adjustments are made from the outside of the machine. The arbor assembly can also be adjusted from side to side as indicated by arrow C in photo to right. This centers blade accurately between feed chains. The adjustment is made by lock nuts that protrude through opening in saw pit.

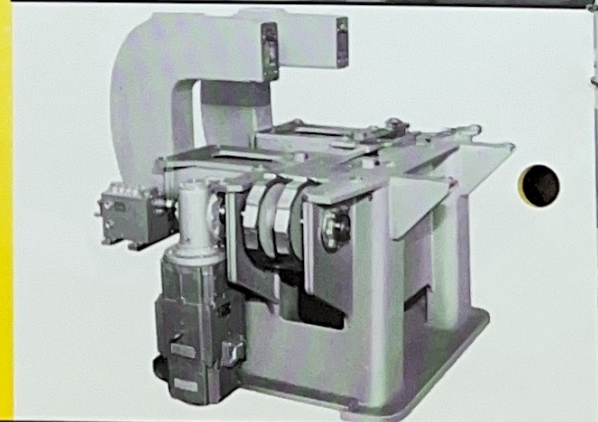
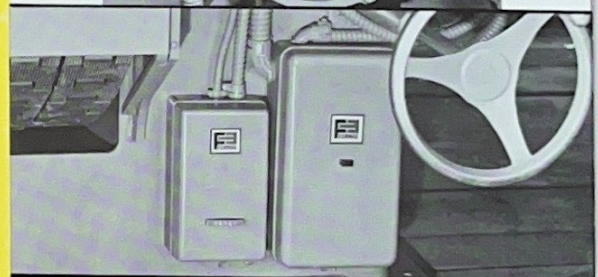
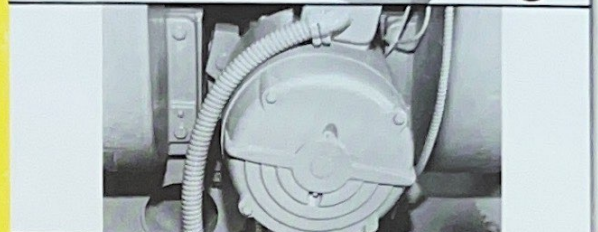
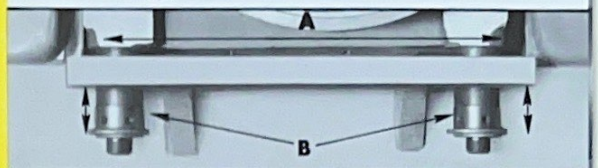
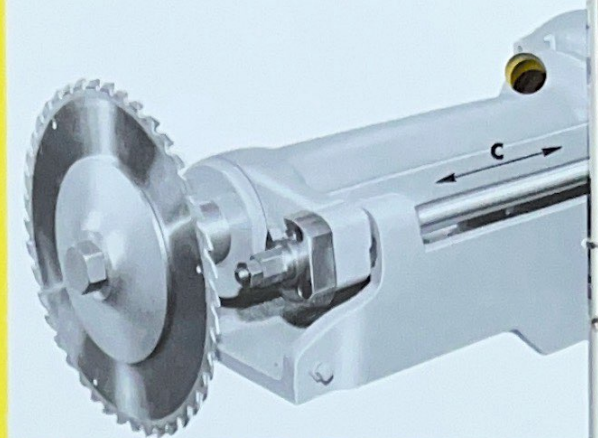
### POWERFUL MOTORS

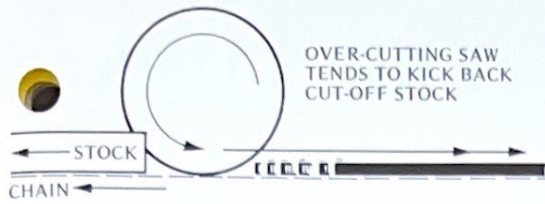
Saw motor is of the shaftless type with round frame, mounted directly on the saw arbor. 15, 20 or 30 HP are available; motors are 230-460 or 575 volts, 60 cycle, 3 phase, 2-pole with a full load speed of 3450 RPM. These motors excel in better balance, greater power and longer life.

MOTOR CONTROLS — All magnetic switch controls, and under voltage and overload relays, are in a panel attached to outside of machine, in a convenient and accessible location. Pushbuttons are 115 volt.

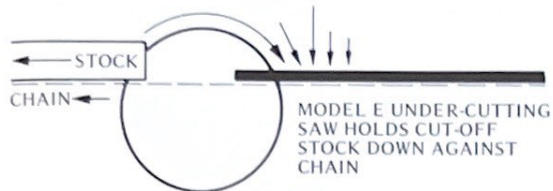
### MASSIVE WELDED BASE — HEAVY CAST IRON ARMS

Saw frame is a heavy steel weldment of 1/2" and 3/4" plate, cross-membered, gusseted, and extremely rigid. It is normalized before machining to prevent distortion. It is the toughest and most indestructible machine base that can be built for this application. Base has a 6" ID dust suction pipe opening which prevents sawdust from accumulating inside the base. Weight of the complete machine is centered precisely over an area of 41-5/8" x 47 1/2" so that machine is stable and solid. It need not be fastened to the floor. ARM PADS are rigidly reinforced, accurately machined and positioned, and then doweled. They cannot shift out of alignment. PRESSURE ROLL HOUSING ARMS are heavy, cored and ribbed castings. They are aligned and attached to frame on machined pads, then doweled in place to prevent shifting, and locked with heavy screws. This assures permanent accuracy. SAW TABLE is heavy gauge polished steel plate. All corners are rounded. The left hand table can be readily removed without disturbing any adjustments. This allows getting machine through narrow doorways and elevators when installing.





OVER-CUTTING SAW  
TENDS TO KICK BACK  
CUT-OFF STOCK



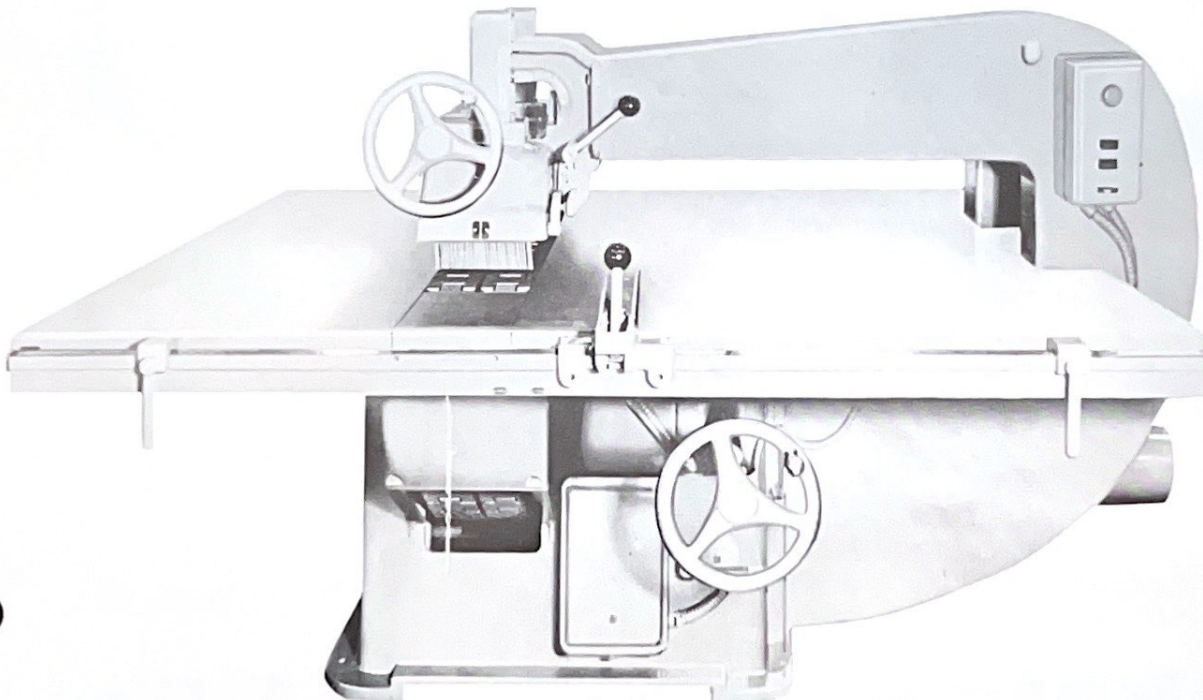
MODEL E UNDER-CUTTING  
SAW HOLDS CUT-OFF  
STOCK DOWN AGAINST  
CHAIN

## THE BIG ADVANTAGE OF THE UNDERCUTTING SAW

Tests conducted by the Forest Products Laboratory of Madison, Wisconsin, recommend that the saw blade protrude about  $\frac{1}{2}$ " through the stock for best results. This is only possible with an undercutting saw. This is the most practical and the most productive method. From the standpoint of safety, there is another BIG advantage that makes the saw practically accident-proof. As illustrated to the left, an overcutting saw, with counterclockwise rotation, tends to pick up the cut-off stock, especially if it is a sliver that falls on its side, with the tendency to forcefully kick it back toward the operator. There is no protection against this. With this saw, however, with its downward cutting blade and its safer clockwise rotation, the teeth tend to hold the ripped-off stock down against the chain. In addition, the entire gullet of the saw is free to discharge its shavings and dust and thus less power is required and the saw runs free and cool.

## MODEL E WIDE ARM

The Ekstrom, Carlson Model E Wide Arm Rip Saw has a full 48" capacity on both sides of the blade and a rip fence for the accurate sizing of 4' x 8', or larger, panels of all types of materials. The chain and pressure roll principle carries full size panels, in single or multiple thicknesses, through the saw in a parallel straight line producing panels with a high degree of squareness. Infinitely variable feed speeds of 0 to 280 feet per minute permits selection of correct feed for all varieties of material. An adjustable, removable soft metal throat insert eliminates sliver jams and protects the saw blade. The stock gauge is free floating and of "feather touch" operating design. Available in 20 HP saw motor only.



# EKSTROM, CARLSON

## MODEL E RIP SAWS

SPECIFICATIONS	MODEL E RIP SAW	MODEL E WIDE ARM
Maximum thickness of stock	4 1/2"	4 1/2"
To cut through 4" stock requires saw blade	18"	18"
To cut through stock 1" requires saw blade	12"	12"
Distance from blade to arm	25 3/4"	48 1/4"
Rips to right with gauge	25 1/2"	48"
Rips to left with gauge	25 1/2"	25 1/2"
Distance from blade to right edge of table	33"	48 1/2"
Distance from blade to left edge of table	33"	33"
Overall size of table	66 x 80"	87 x 80"
Shortest stock under two rolls	4 1/2"	4 1/2"
Shortest stock under three rolls	8 7/8"	8 7/8"
Roll diameters		
2 infeed and 2 outfeed	3 1/2"	3 1/2"
Center	3 1/8"	3 1/8"
Spindle size through saw blade	2"	2"
Rates of feed infinitely variable	0 to 280 FPM	0 to 280 FPM
Floor space required	74 1/2" wide x 87 3/4" long	74 1/2" wide x 87 3/4" long
Diameter of dust pipe opening in base	6"	6"
Size of dust pipe opening in pressure bar housing	6"	6"
Table height	34 1/4"	34 1/4"
Weight	4970 lbs.	5840 lbs.
Weight, crated for domestic shipment	5270 lbs.	6290 lbs.
Weight, crated for export shipment	6220 lbs.	7280 lbs.
Volume, boxed for export	334 cu. ft.	350 cu. ft.

Ekstrom, Carlson sound enclosures are available as an optional extra feature for these saws. Enclosures are supported by a steel frame with removable panels for easy access to machine.

### WARRANTY

Ekstrom, Carlson fully warrants the machine against defective materials and workmanship for a period of one year from date of shipment. Any parts found to be defective upon our inspection will be furnished, no charge, F.O.B. Rockford, Illinois. Warranty void if machine has been subjected to neglect, accident, damage, misuse or improper operation.

# Ekstrom, Carlson & Co.

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10/73-7.5M-DD

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