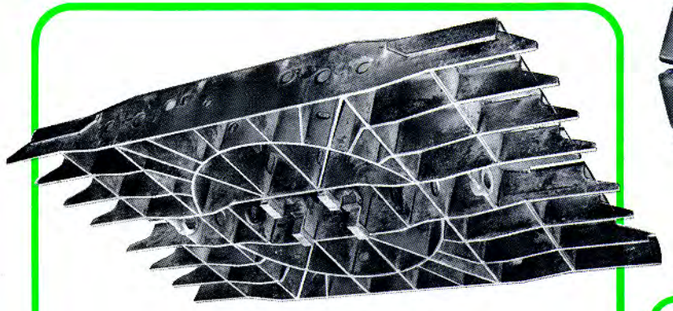
MANITOWOC 4100W

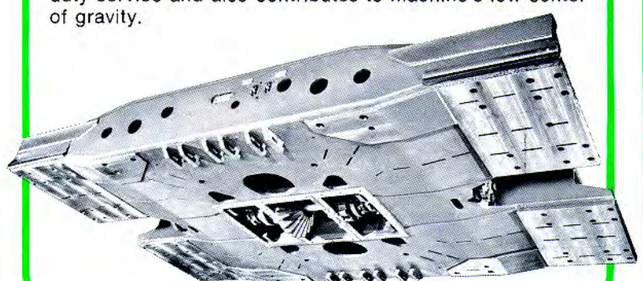
MAXIMUM STABILITY...for rugged liftcrane or duty cycle service!

- **Low center of gravity, low profile, extendible crawlers.**
- **Largest roller path in industry for a machine of this size and capacity.**
- **One-piece, heavy ribbed steel fabricated carbody construction and design distributes load reactions evenly through four large machined carbody wings to crawler side frames . . . with ten times the bearing surface area of most conventional mountings.**

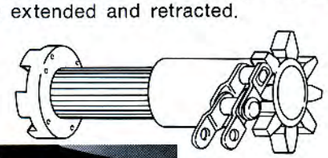


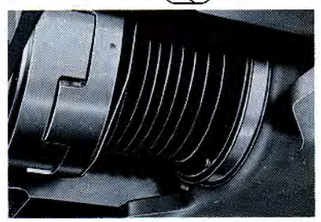
CARBODY OF FABRICATED HEAVY-WEBBED CONSTRUCTION . . . with reinforcing ribs welded at points of greatest stress . . . provides the best carbody strength per weight ratio in the industry. Concentrated rib reinforcement under roller path area transmits loads evenly to carbody wings.

Finished carbody (below) with bottom plate welded on shows four large machined wings which transmit loads from roller path to crawler side frames . . . providing a simple, rugged mounting for machine. This design eliminates axles and bolts which tend to work loose in heavy duty service and also contributes to machine's low center of gravity.

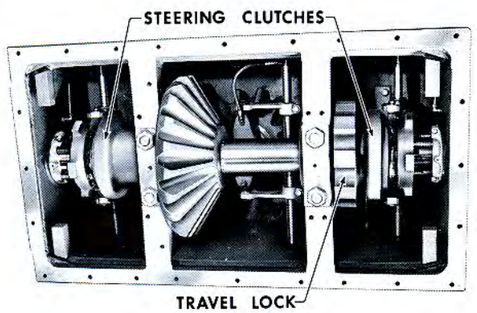


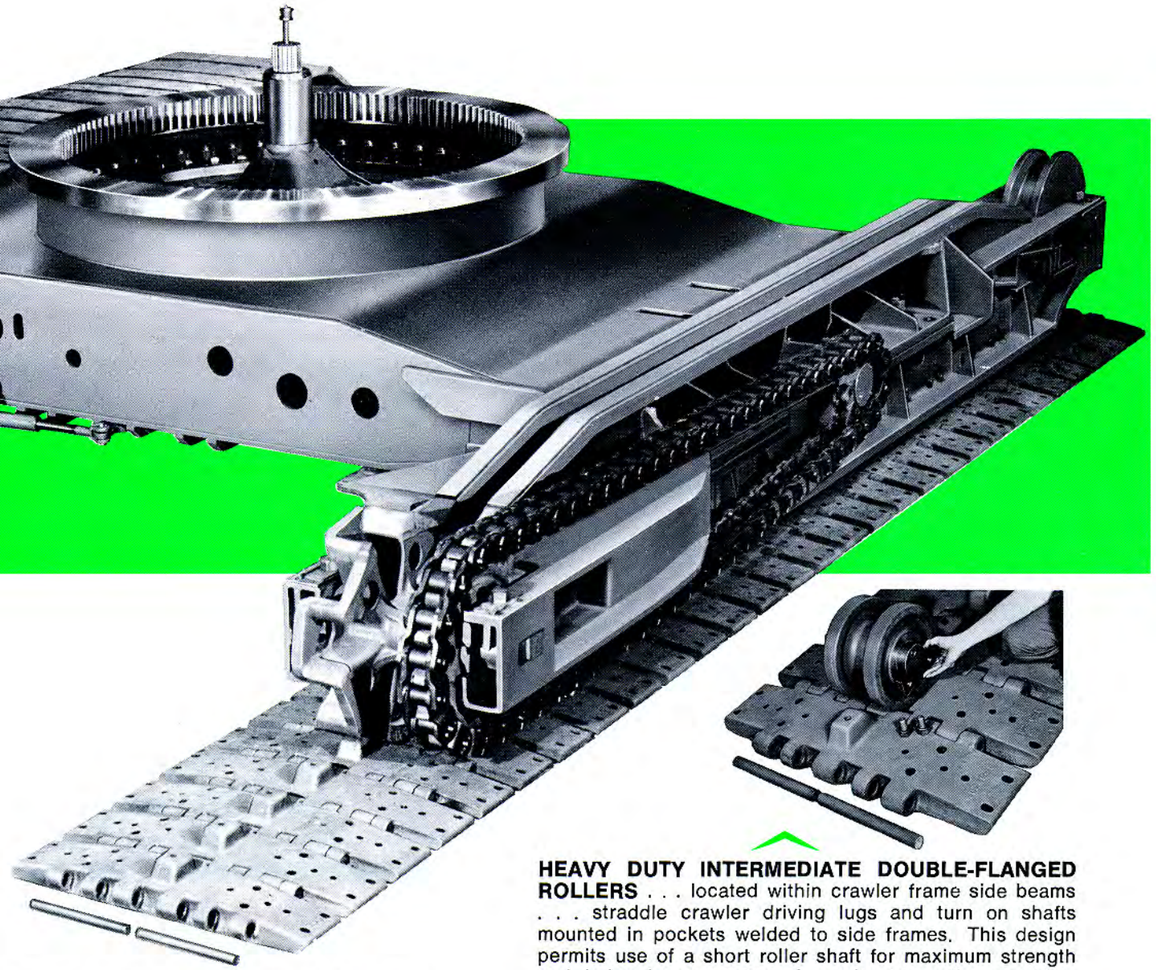
EASY COUPLING JAW CLUTCH . . . is fitted to each end of travel shaft and couples to crawler side frame drive shaft. The side frame shaft is splined and telescopes within a protective bellows as crawlers are extended and retracted.





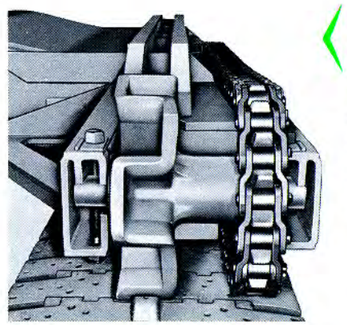
POSITIVE TRAVEL AND STEER MECHANISM . . . enclosed in carbody, receives power from 4100W's upperworks, through an intermediate vertical travel shaft, bronze bearing mounted in the king pin. A spring-loaded combination jaw clutch and steering lock is used on both sides of bevel gear to power either set of tracks. Each jaw clutch has three positions to provide straight travel, gradual turns, or sharp turns. An interlock prevents both clutches from being disengaged at same time. Note the positive mechanical travel lock shown on the right side.





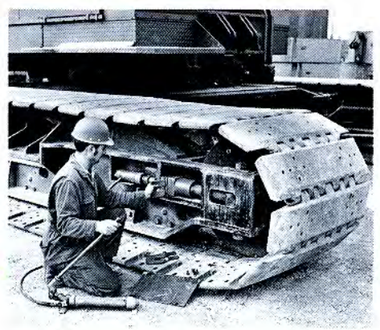
HEAVY DUTY INTERMEDIATE DOUBLE-FLANGED ROLLERS . . . located within crawler frame side beams . . . straddle crawler driving lugs and turn on shafts mounted in pockets welded to side frames. This design permits use of a short roller shaft for maximum strength and helps lower center of gravity for entire machine. A keeper bar holds end of each shaft in its pocket.

CLOSED-BOX DESIGN CAST ALLOY STEEL CRAWLER PADS . . . with large central driving lug and heavy internal ribbing for extra strength . . . especially next to lugs where bearing pressure of rollers is greatest. Bottom edges are tapered upward in "snowshoe" design to prevent digging-in while turning. Closed-box design permits dirt to fall free instead of being carried up onto crawler frames.

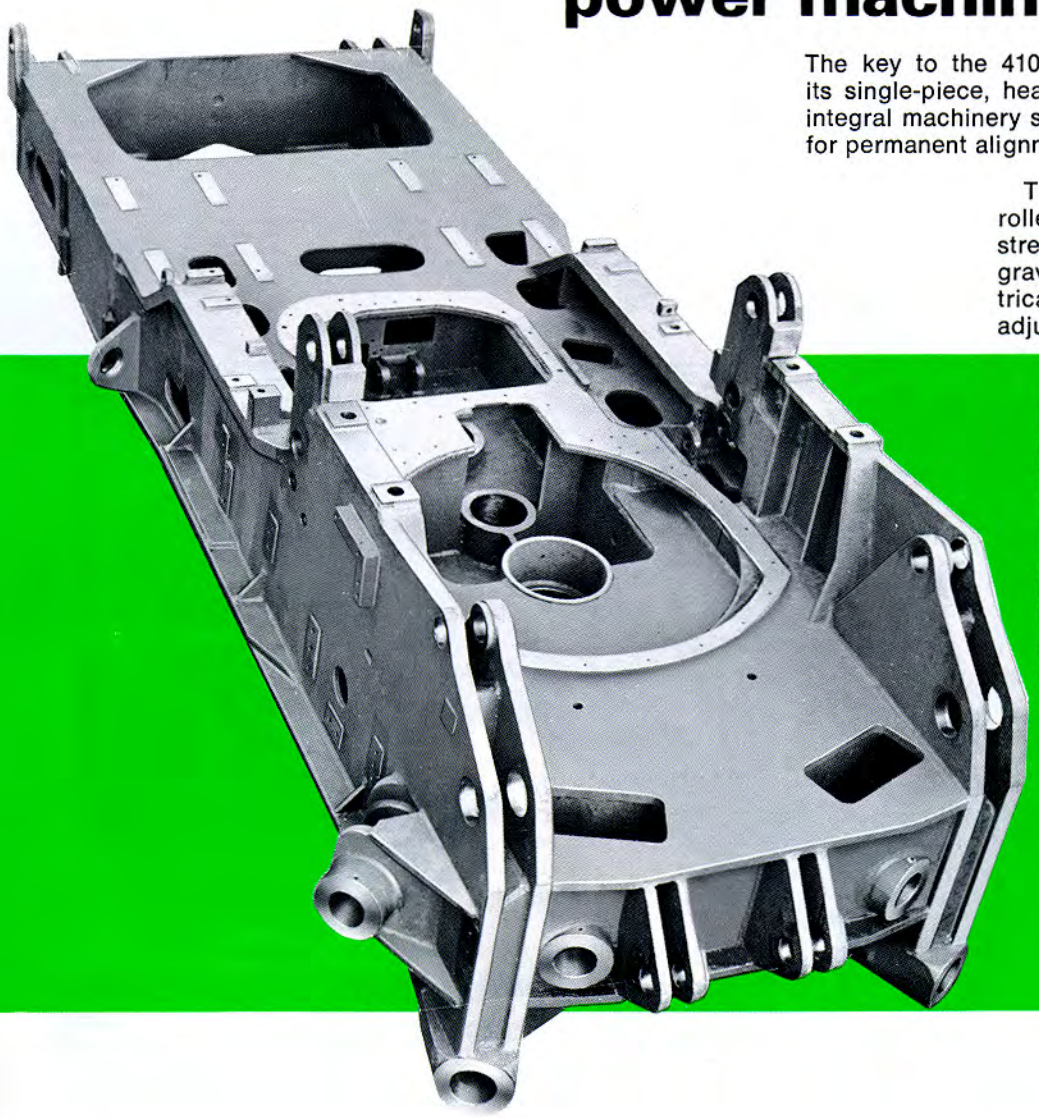


WELL PROTECTED OUTSIDE CRAWLER DRIVE CHAINS . . . always remain on side frame during shipment. Crawler sprocket and tumbler are integral and revolve on a stationary shaft which is supported at both ends . . . requiring no press work for crawler overhaul. This design also assures maximum strength and eliminates splines.

EASILY ADJUSTED TREAD BELTS AND DRIVE CHAINS . . . by hydraulic jack and "U-shaped" shims which hold the shaft in position.

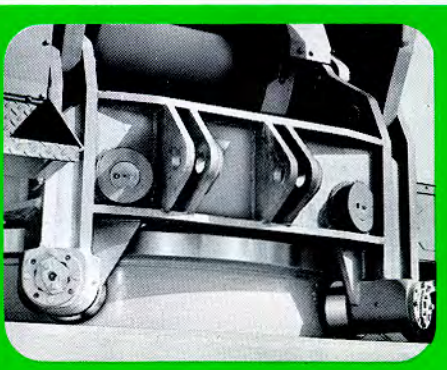


MAXIMUM CAPACITY...in a compact power machinery package!

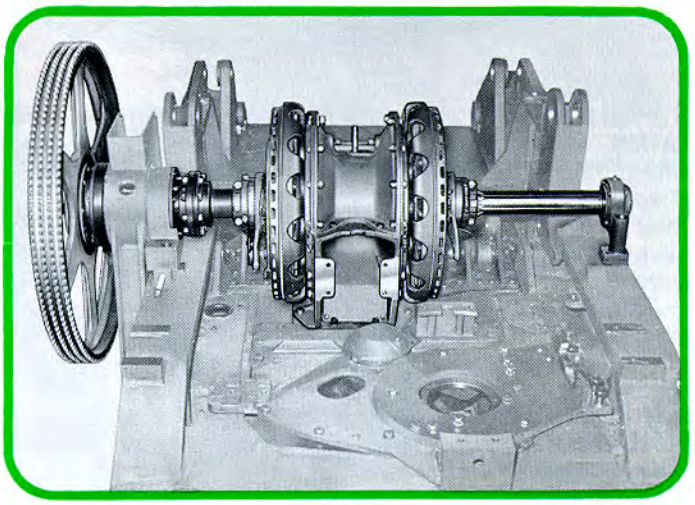


The key to the 4100W's compactness and portability is its single-piece, heavy steel-fabricated rotating bed with integral machinery side frames . . . providing a rigid deck for permanent alignment of all moving parts.

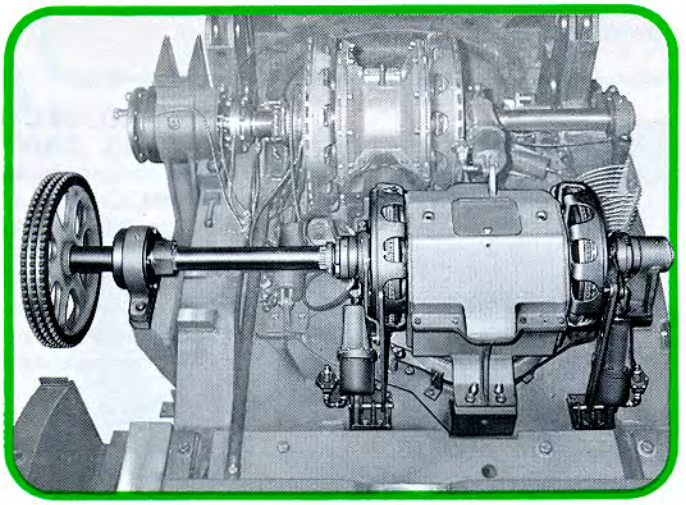
The entire package rotates on house rollers mounted well within frame for strength and to help lower center of gravity. Hook roller shafts are eccentrically mounted to provide easy roller adjustment.



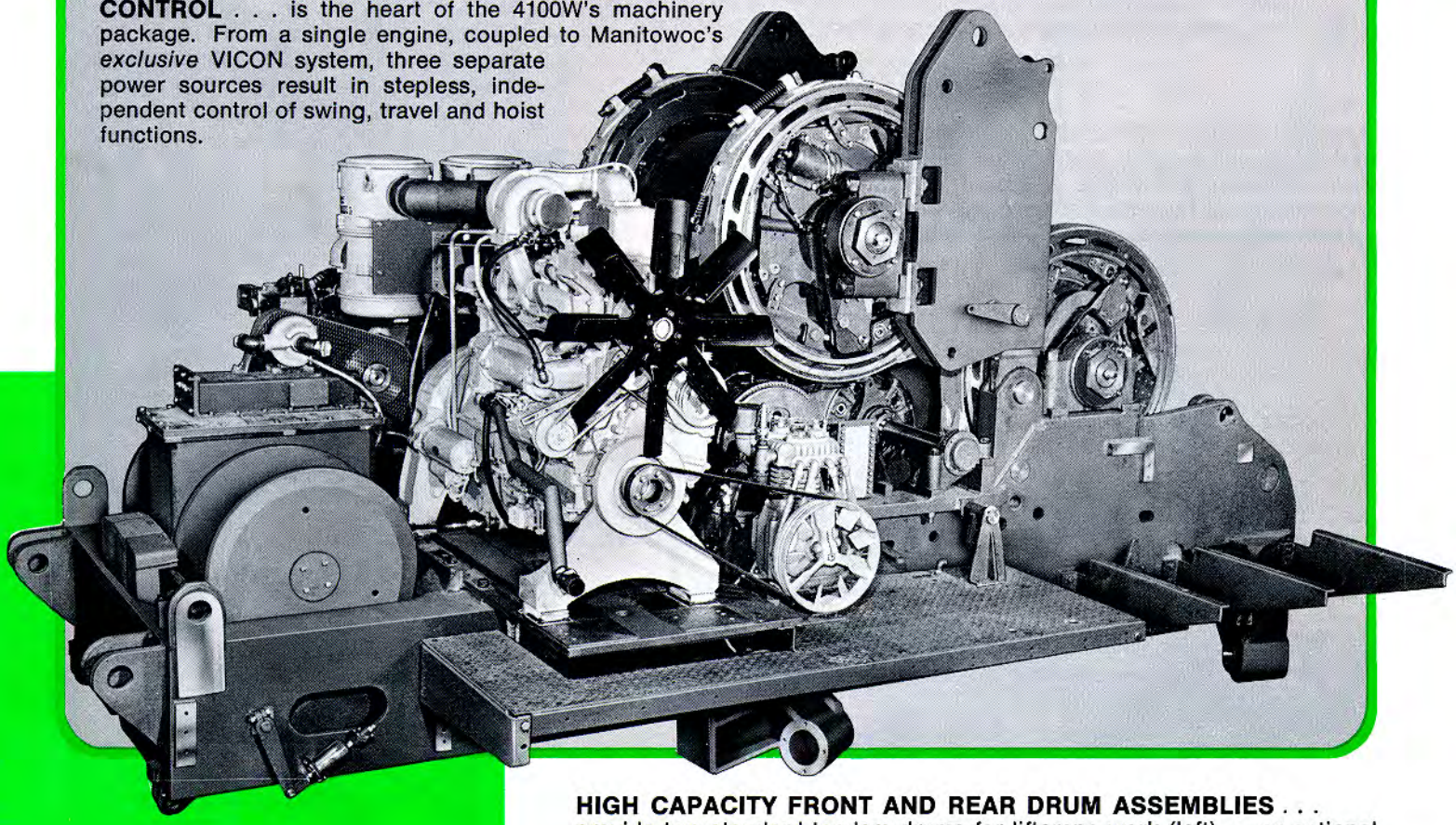
INDEPENDENT HORIZONTAL TRAVEL SHAFT . . . equipped with single-disc clutches which power force-fed oil-lubricated bevel gears for forward or reverse travel. Travel machinery is powered by front converter of single-engine VICON system.



INDEPENDENT HORIZONTAL SWING SHAFT . . . equipped with double-disc clutches and machinery is powered by rear converter of VICON system. Friction swing brake is air-controlled from operator's station.

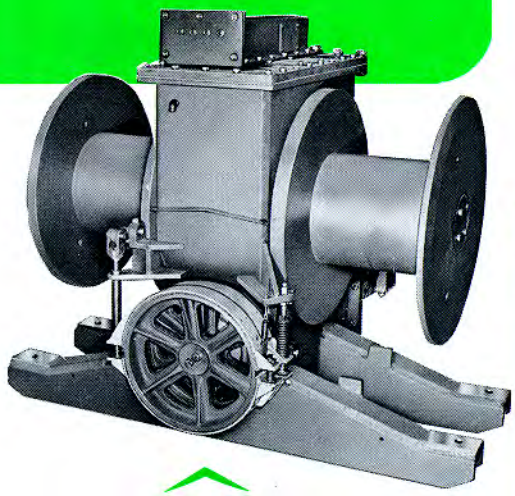


VICON® . . . TRUE, VARIABLE INDEPENDENT CONTROL . . . is the heart of the 4100W's machinery package. From a single engine, coupled to Manitowoc's *exclusive* VICON system, three separate power sources result in stepless, independent control of swing, travel and hoist functions.

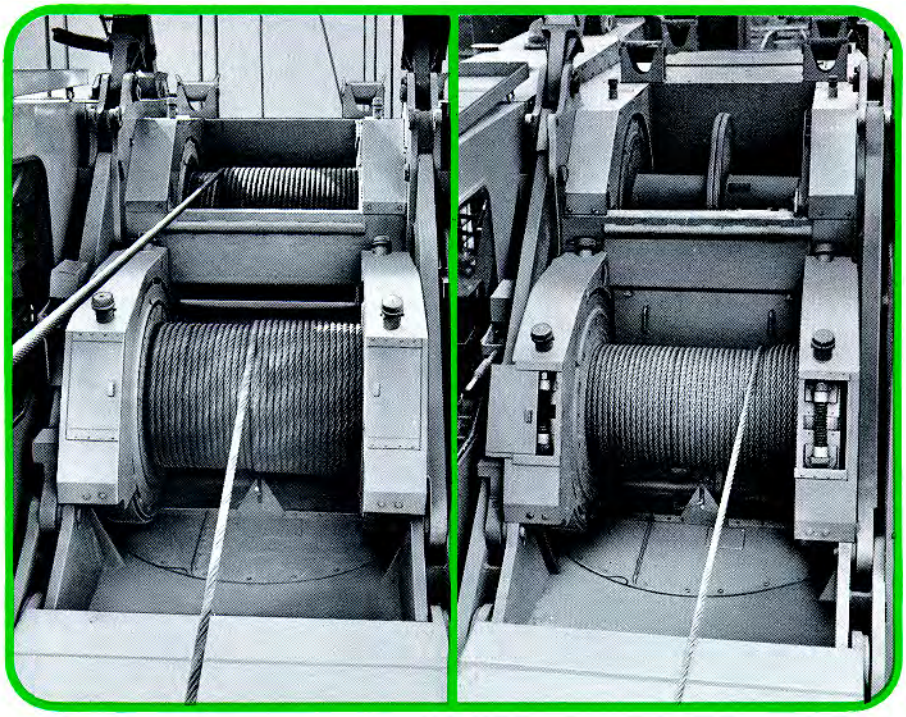


HIGH CAPACITY FRONT AND REAR DRUM ASSEMBLIES . . . provide two standard tandem drums for liftcrane work (left) . . . or optional split rear drum arrangement provides three drums for special applications (right). Drum shafts of heat-treated, alloy steel are mounted on antifriction bearings and each main drum is equipped with a single clutch and double brakes . . . fully enclosed . . . with interchangeable main drum clutches and drum brakes.

External contracting band-type brakes are actuated by Manitowoc's exclusive toggle arrangement which provides maximum brake pressure at drum with minimum foot pedal pressure by operator.



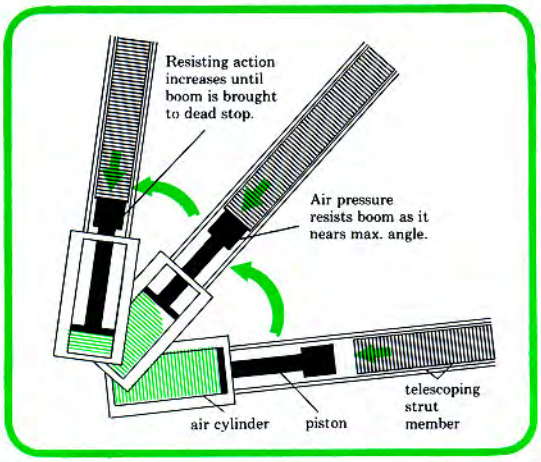
DUAL-DRUM BOOM HOIST . . . mounted near the rear of the rotating bed, provides equal line pull on both sides of the boom-hoist rigging and is positioned for optimum lifting geometry. Power is provided by a hydraulic motor that drives through a spur-gear reduction to the boom-hoist drum shaft. The spring-applied, air-released parking brake and manually actuated auxiliary brake are both controlled from the operator's station. Installed from the under side of the rotating bed and held in place by four bolts, the boom hoist is easily removable for servicing.



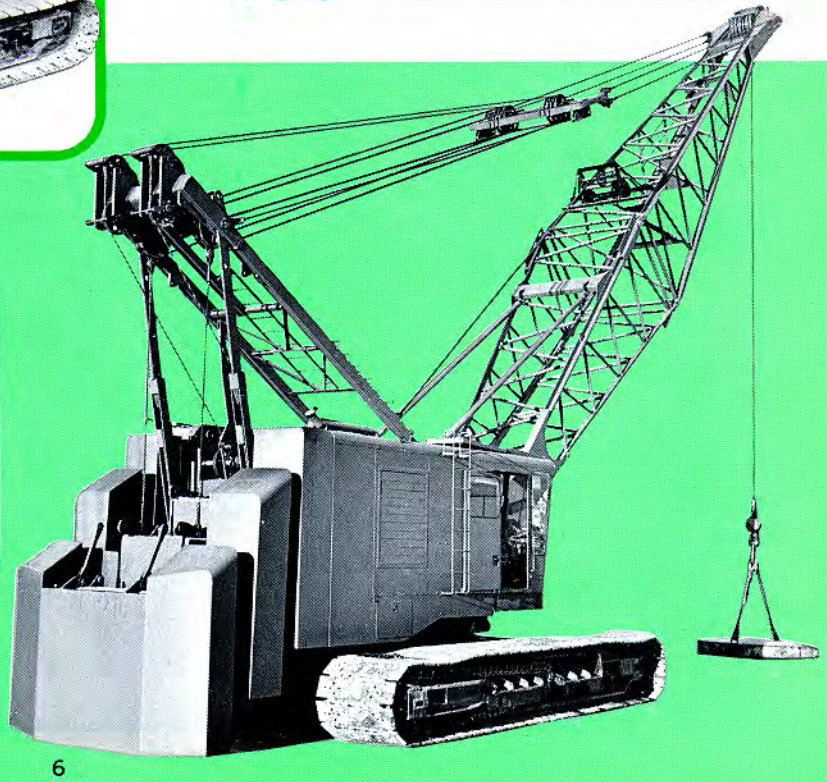
MAXIMUM OPERATOR COMFORT AND VISIBILITY . . . is readily apparent in the 4100W's fully insulated operator station which is designed and assembled as a separate module, isolating operator from machinery compartment noise.

LOW CLEARANCE FOLDING GANTRY . . . is a heavy plate fabrication with parallel box section legs. Back hitch is three-piece telescoping link-type anchored to rear of rotating bed. Back hitch legs telescope when gantry is being lowered.

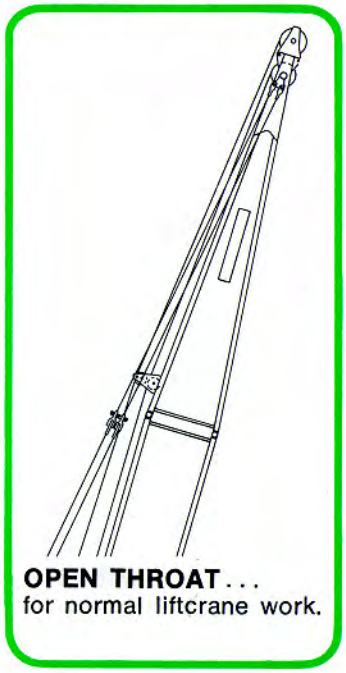
AIR-CUSHIONED TELESCOPIC BOOM STOP . . . is standard equipment.



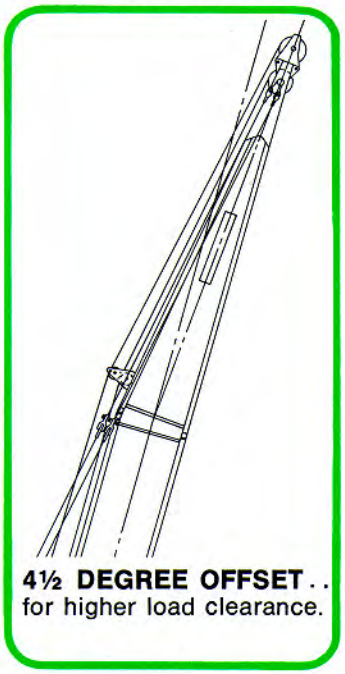
SELF-REMOVING COUNTERWEIGHT . . . expedites strip-down for shipment. 4100W's gantry is used for counterweight self-removal operation. Counterweight handling pendants are attached . . . load line hooked to a counter-balancing weight . . . counterweight pins removed . . . and counterweight lowered to ground, clear of machine, by means of boom hoist tackle.



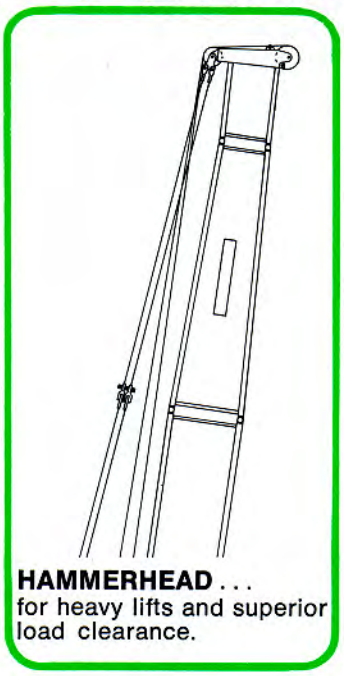
BOOM TOPS TO MEET PROJECT REQUIREMENTS. . . PLUS high capacity jib that's adaptable to every boom top.



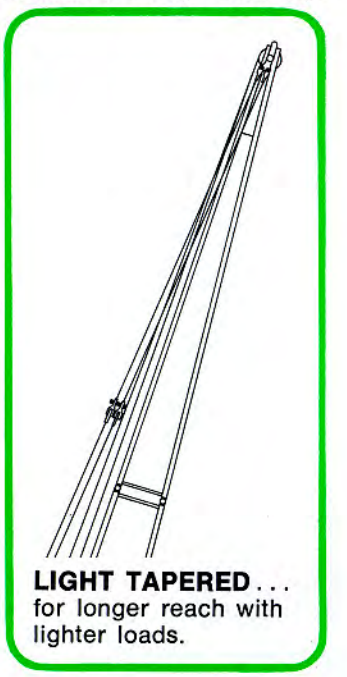
OPEN THROAT. . .
for normal liftcrane work.



4½ DEGREE OFFSET. .
for higher load clearance.

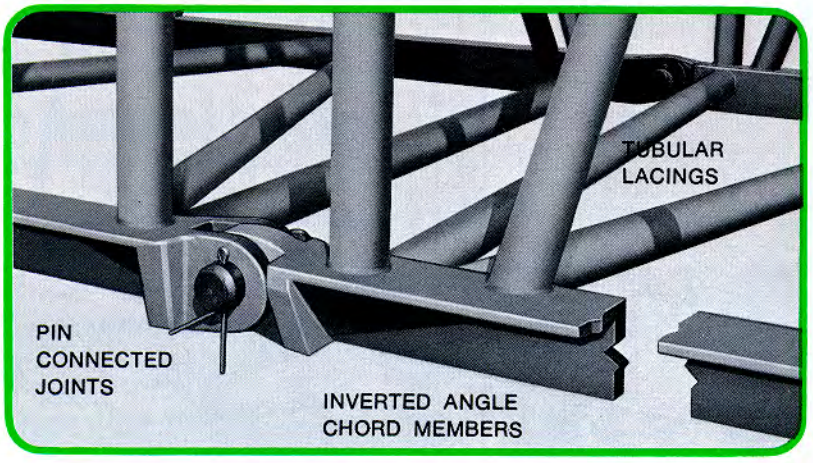


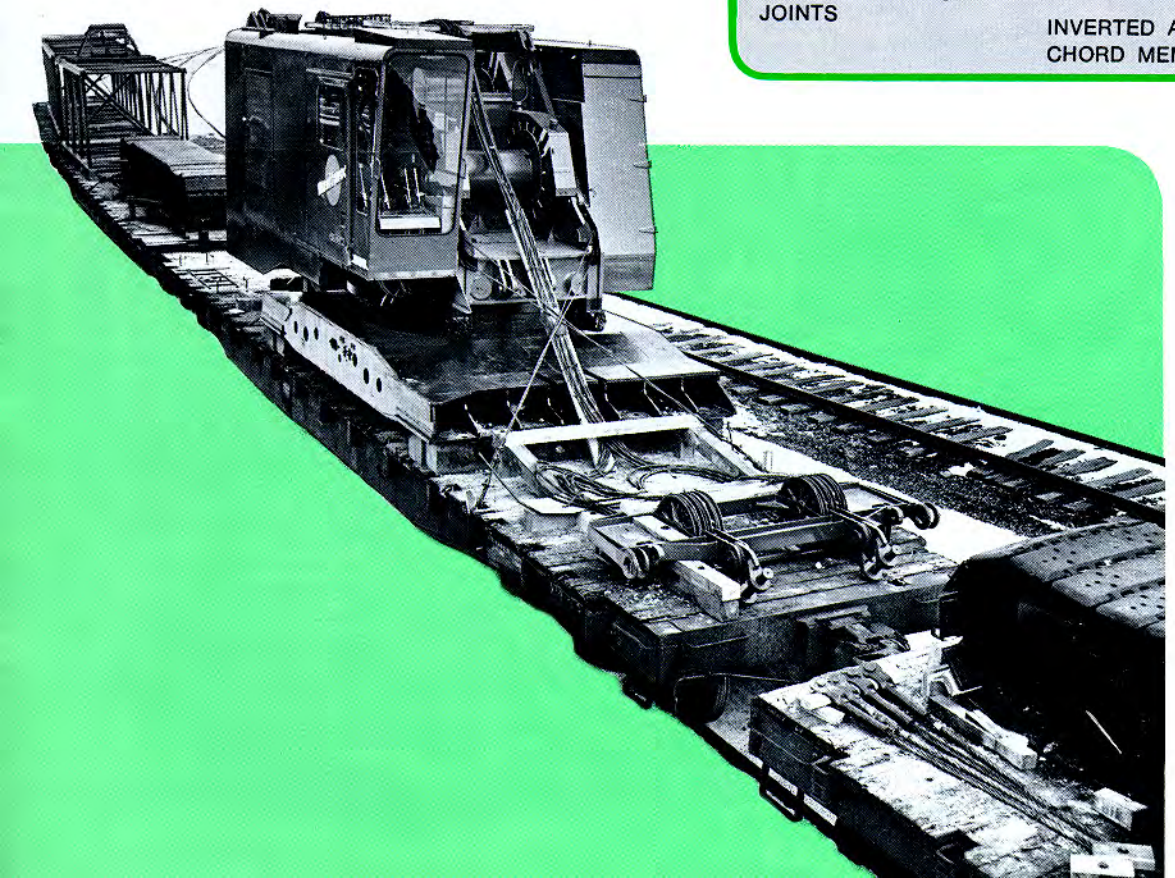
HAMMERHEAD. . .
for heavy lifts and superior load clearance.



LIGHT TAPERED. . .
for longer reach with lighter loads.

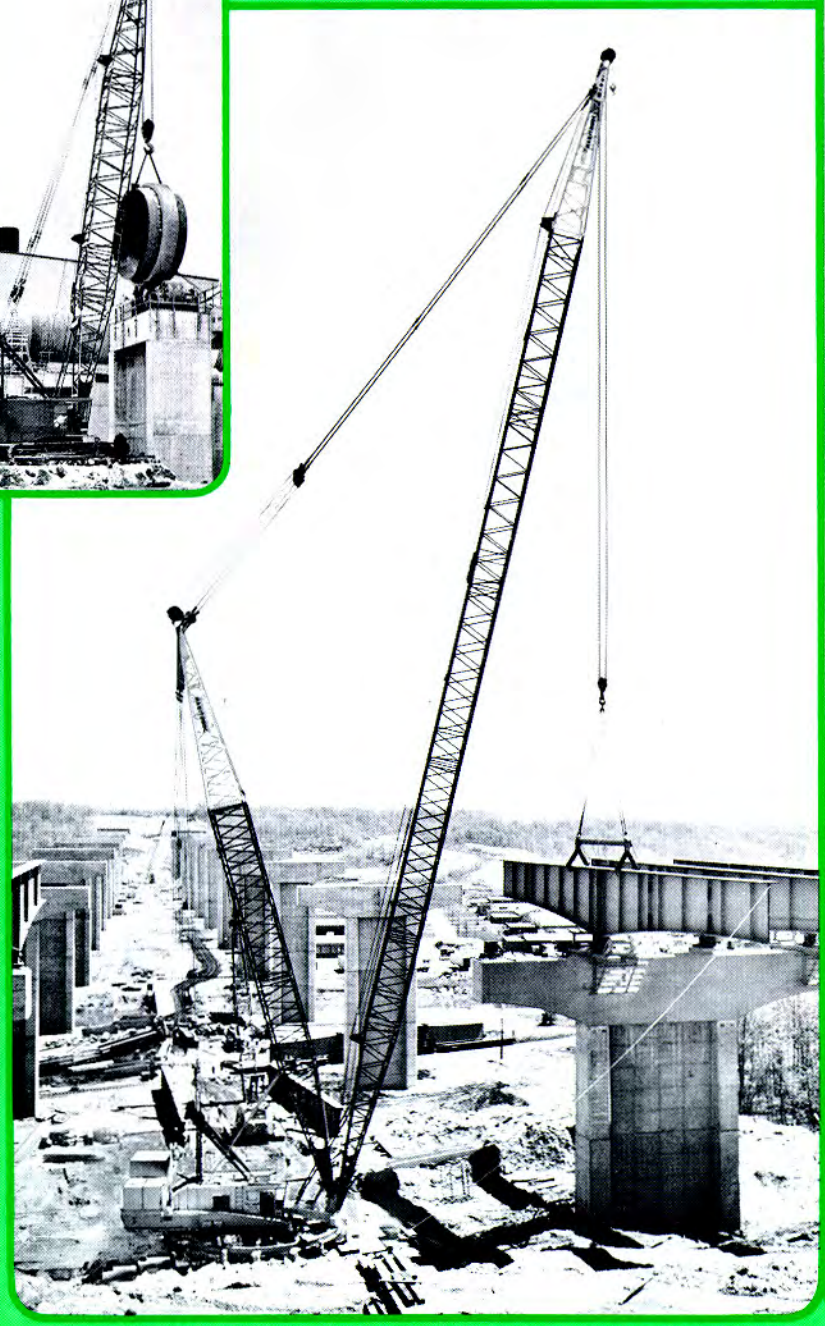
RUGGED, INVERTED ANGLE BOOM CONSTRUCTION . . . with tubular lacings and pin-connected boom sections. Each lacing is welded completely around its circumference to the angular chord's flat surface for a superior joint . . . adding up to a more rugged boom for lifting loads or for handling during shipping.

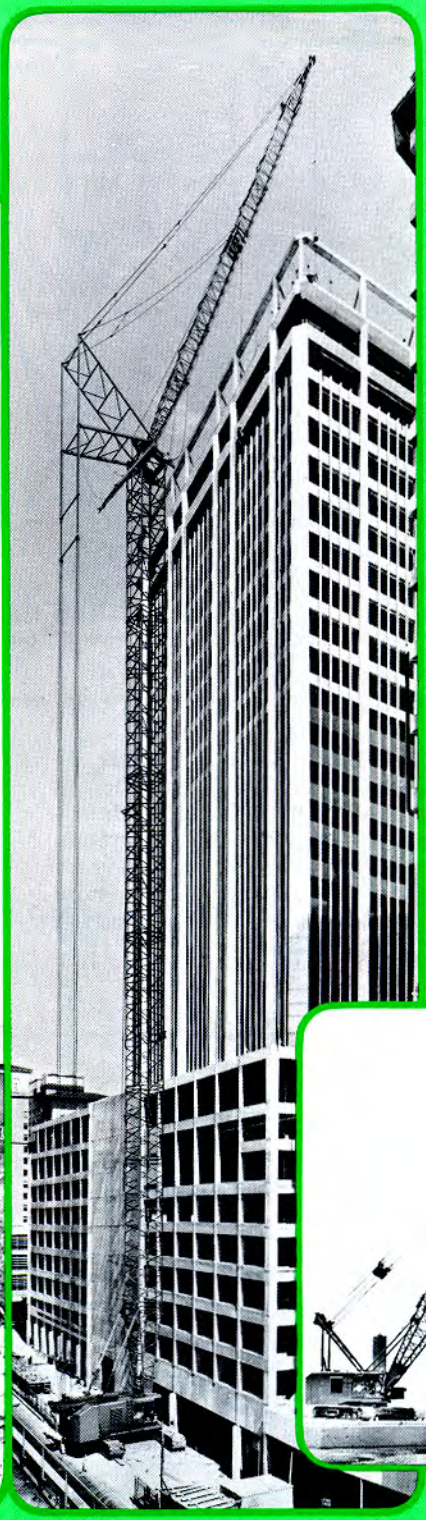




HIGHEST CAPACITY CRANE AVAILABLE THAT WILL MEET RAIL SHIPPING REQUIREMENTS WITH CARBODY AND ROTATING BED FULLY ASSEMBLED
. . . the 4100W is unloaded and put to work with minimum effort and time.

WORLD'S MOST VERSATILE...





LIFT / RINGER® / TOWER / CLAM / DRAG...with SAME CRANE!

Because of a program of continuing improvements, Manitowoc Engineering Co. reserves the right to change this description at any time, without notice.

Manitowoc

MANITOWOC ENGINEERING CO.
(A division of The Manitowoc Company, Inc.)
Manitowoc, Wisconsin 54221

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