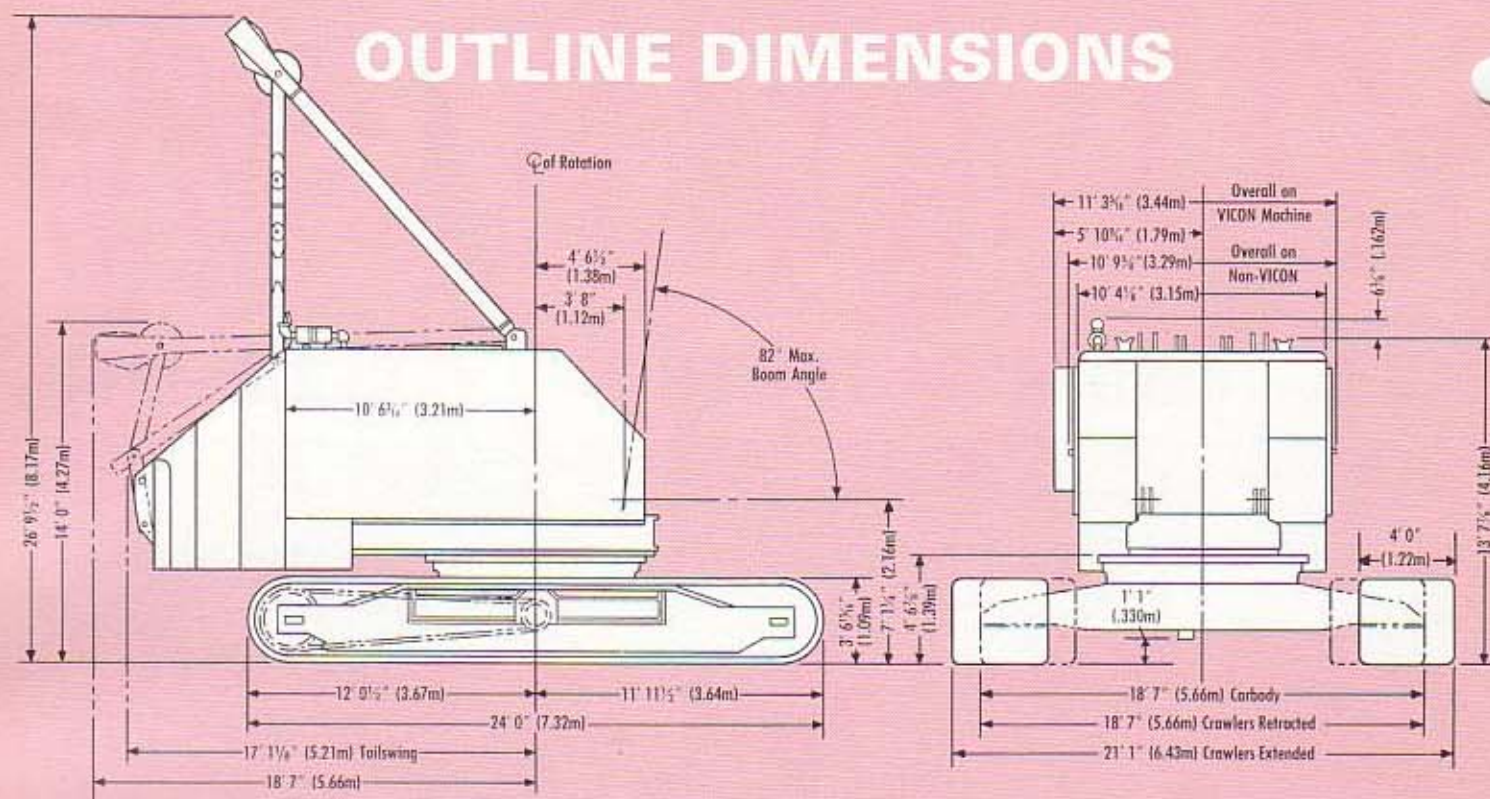


## OUTLINE DIMENSIONS



## SPECIFICATIONS

### WEIGHTS

Pounds\*

**LIFTCRANE**, complete with 60' No. 17 Boom, gantry and backhitch, boom hoist rigging and pendants, hoist wire rope, 15-ton swivel-type hook and weight ball, basic upperworks package, counterweights, 24' long extendible width crawlers, and outside crawler drive chains..... 294,600  
(Add 9,500 pounds for VICON equipped machine)

**UPPERWORKS**, complete with basic machinery, including drums and gantry, but not including front end attachments or counterweights..... 60,900

**CARBODY** with center pin, roller path, and travel mechanism, but without crawlers..... 40,000

**CRAWLERS** with crawler frames, crawler treads, and outside crawler chain (each crawler 31,500)..... 63,000

#### SELF-REMOVING COUNTERWEIGHT (3 piece)

Inner..... 40,100  
Middle..... 35,800  
Outer..... 28,500  
(For other than liftcane with No. 17 Boom, see LIFT CAPACITY data for specific application.)

#### BOOM NO. 17

Boom Butt (less wire rope and pendants)..... 4,800  
Boom Top (equipped with lower and upper boom point assemblies and basic pendants)..... 8,800

Pounds\*

#### BOOM INSERTS

Insert — 10' (with pendants)..... 1,645  
Insert — 20' (with pendants)..... 2,770  
Insert — 30' (with pendants)..... 3,895

\*Weights are approximate and may vary between machines as a result of design changes and component variations.

### EXTENDIBLE CRAWLERS

**CRAWLER WIDTH** — Extendible from 18' 7" to 21' 1"

**CRAWLER LENGTH** — Over ends..... 24' 0"

**TREAD WIDTH**..... 48"

Number of pads per crawler..... 52

#### INTERMEDIATE ROLLERS

Number per crawler..... 12  
Roller diameter..... 14"  
Roller shaft diameter..... 4 3/8"

**FRONT IDLER DIAMETER**..... 34"

Roller shaft diameter..... 6 1/4"

**DRIVE SPROCKET DIAMETER**..... 35"

**ADJUSTMENT:** Adjustment of the crawler belt tension is accomplished by a jack and shim system.

**CUSHIONED:** A shock absorber is mounted in the crawler belt tension adjustment system.

# MANITOWOC

# 4000 W

## LIFT • RINGER® • TOWER • CLAM • DRAG



specifications



# Manitowoc MODEL 4000W

(FRONT COVER)

## HEAVY LIFTS WITH SHORT BOOM.

During construction of the San Luis Dam near Los Banos, Calif., this Model 4000W VICON® liftcrane is handling huge tunnel liners fabricated from 1¼" steel plate and weighing 74 tons each. Crane is operating with a 90' boom, working at a radius of 26 feet. Extensible crawler system provides two operating positions — "extended" for extra heavy lifts, and "retracted" for greater maneuverability when operating in tight quarters.

**BULKY MITER GATE SECTIONS** for Holt Lock and Dam are handled by a Vicon-equipped Model 4000 crane. The sections, weighing up to 37 tons each, are being placed at a 35' to 40' radius. The crane is operating with a 140' boom.

**BIG LIFTS ARE COMMONPLACE** as world's largest single-shaft turbine generator plant is built at Stryker Creek, Tex. Model 4000W VICON® liftcrane is shown positioning a 44-ton steel beam prior to placing it at top of 175-ft. structure. Other big lifts handled by crane on this project included placement of two heaters weighing 68½ and 63 tons each, and a de-aerator storage tank 12' in diameter, 50' long, and weighing 53 tons.

**CONCRETE PILING FOR SPILLWAY FOUNDATION**, at the Arkansas River Dam No. 2, is set by Model 4000W VICON®. Piling is 20" square by 45' long. Pile driving equipment (mast, hammer, leads, etc.) weighs approximately 40 tons. The 4000W is operating with 120' of boom.

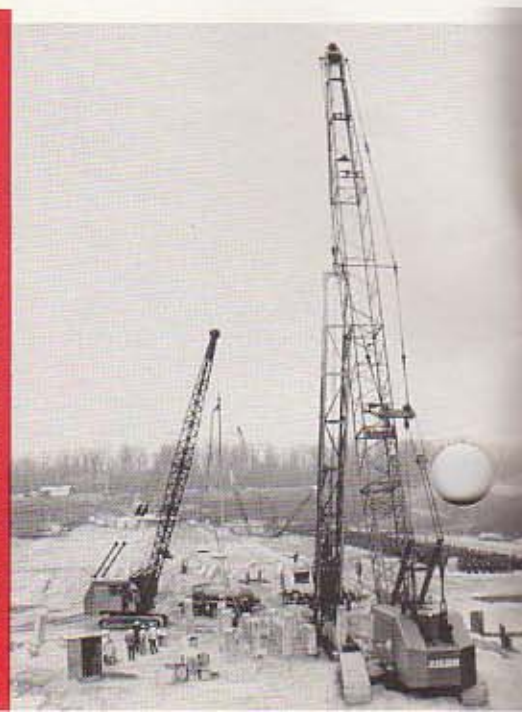
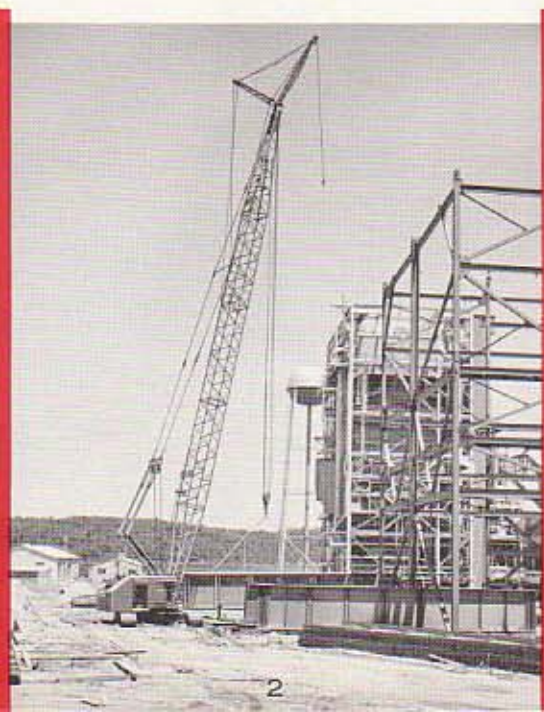
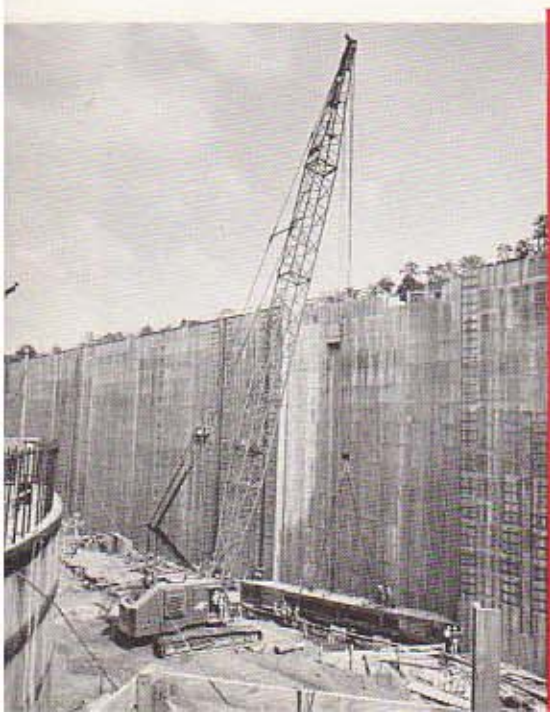
*...ready to make any long reach, big capacity job more profitable*

In the Manitowoc Model 4000W, all the advantages you want and need for profitable crane, dragline and clamshell service are combined. You'll find: *exceptional stability* for king-sized lifts; *boom/jib combinations tailored* to both heavy lift work and to extra high, extra long reach; *accurate control* for spotting loads or buckets; and *good visibility* for tight-quarters operation, or for loading hoppers, trucks, etc.

This machine has already made its mark — and made it well — on building construction, bridge and dam projects, and similar jobs. A few of the "big ones," on which this machine has "earned its keep," are shown here, and on the back cover. Owners agree, here's a combination machine that's capable of handling more work — more kinds of work — more profitably.



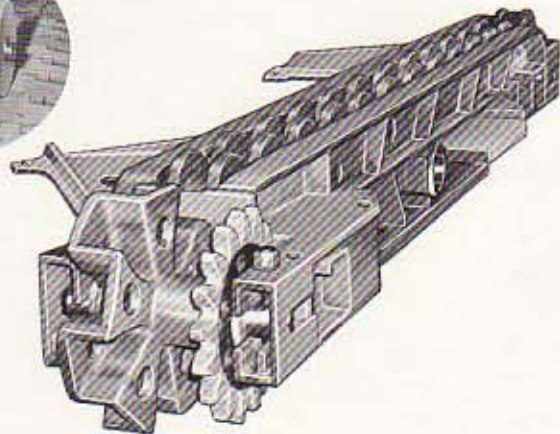
**FAST LOAD HOISTING, FAST BUCKET RETURN.** On the Cannelton Locks and Dam project near Tell City, Ind., a Model 4000 with 160' boom pours concrete for a lock structure. The project foreman says, "One reason this job is ahead of schedule is because of fast load hoisting and bucket return. Our Manitowoc makes a lift from ground level to the dam top, pours 4-yds., and returns for another load in less than 75 sec."



**ELEVATED CAB PAYS OFF** in loading of bulk materials aboard freighter. Crane, equipped with 80' boom, 6-yd. clamshell bucket and VICON® power transmission system, swings 120° to 180° when loading . . . cycles as fast as 25 seconds for a full pass. Elevated cab puts the operator above the work area. Increased visibility enables him to handle more materials per hour with less effort.



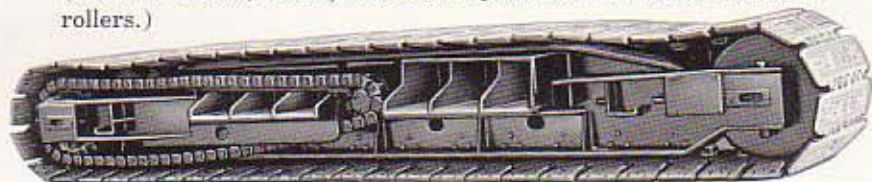




## 12 double-flanged idler rollers

closely spaced within each crawler frame, distribute loads evenly on the tread belts. Centering lugs on the treads match the roller flanges . . . keep treads square and reduce buckling. Big diameter ( $4\frac{3}{8}$ " ) idler roller shafts are mounted in integral pockets within the crawler frames for long-lasting alignment.

A tread guide extends across the top of the crawler frames, providing continuous tread support. Wear of hinge and tread pins is minimized because the crawler pads cannot sag or dip excessively. (Crawler frame, above, is turned upside down to illustrate idler rollers.)



## Fast, simple crawler removal with outside chain drive

Crawler drive chains are mounted outside the crawler side frames . . . allow for quick disassembly on between-job moves. Neither the crawler drive chain or tread belt is separated during removal. To remove each crawler assembly as a unit, you simply unbolt the carbody from the crawler frames (there are 10 retaining bolts on each side), and disconnect the jaw-type horizontal travel shaft coupling. Use the hoist line to pull the complete crawler assembly free of the carbody.

## Crawler pads and drive tumblers are self-cleaning

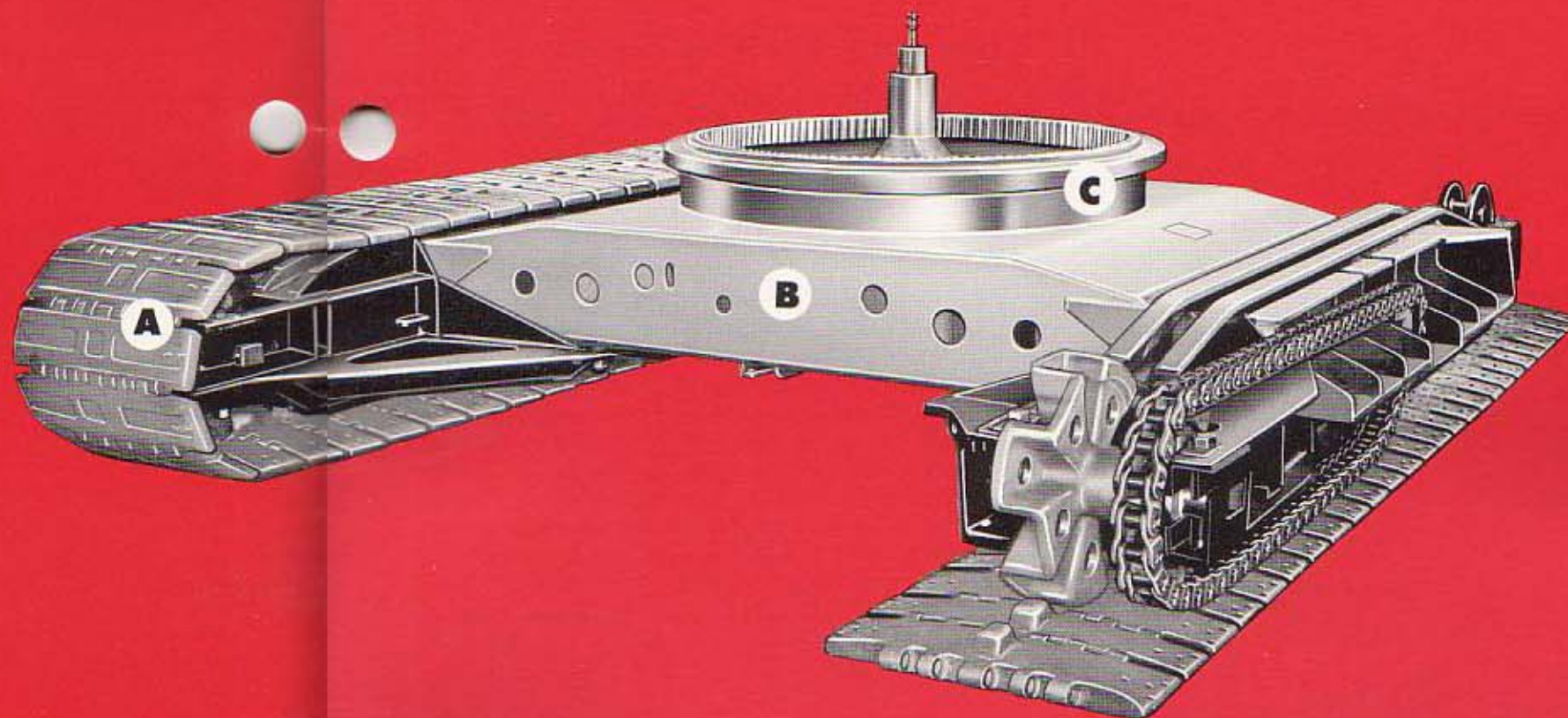
Box-section crawler pads are heat-treated alloy steel castings, internally bridged for extra strength. Tread tops are beveled so dirt spills off . . . have tapered edges to prevent "digging in" on turns. Big hinge flexes on  $1\frac{3}{4}$ " diameter hinge pin. Rounded lug edges prevent snubbing or binding.

Drive tumblers, sprockets, and idler tumblers have alternate open sides to shed dirt. Cast as integral units, the drive tumblers and sprockets turn on stationary shafts. Since the short, large diameter shafts are supported at each end, they carry no overhung load or torque . . . cannot twist or bend out of accurate alignment.



## Quick, easy jack adjustment for crawler treads and chain drive

Tread belt and crawler drive chain tension is regulated by placing horseshoe shaped shims between the crawler frame cradle and idler tumbler and drive sprocket adjustment shaft. A jack is used to apply pressure on the shaft in order to create the leeway needed to remove or add adjustment shims. A hard rubber "doughnut", housed in a plunger behind the end idler roller shaft, acts as a shock absorber . . . protects shims from damage.



# Long, wide-spread crawler base . . .

*designed for crane-type front end work with exceptionally low center of gravity*

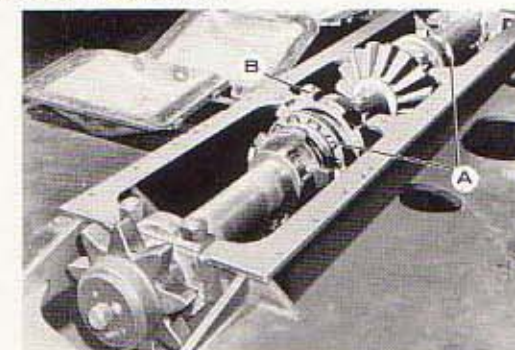
A solid working base and exceptionally high capacities are provided by the Model 4000W lower works. Long crawlers with extra-wide treads (A) give you a solid working base and exceptionally high capacities over the side or end. The massive carbody (B), a one-piece reinforced weldment with integral wings, is bolted directly on the crawler frames. Each of the four carbody wings has over

900 sq. in. of support area distributing machine weight evenly onto the crawler frames.

Bolted to the carbody is a 108" diameter combination roller path and ring gear (C) with machine-cut teeth. This one-piece hardened alloy steel casting effectively disperses "loading" . . . contributes to smoother swing cycles.

Air actuated crawler controls provide quick steering response . . . positive locking of treads. Jaw clutches for steering (A) are air controlled. Crawlers can be disengaged independently for gradual turns, or locked for sharp turns (in either direction, with cab in any position). It is impossible to disengage one steering clutch unless the opposite one is fully engaged.

A "positive-action" air-operated digging lock (B) permits free travel in either direction; locks against travel in both directions; or locks against travel in one direction while permitting travel in the other. An air-controlled band type brake on the slide pinion shaft serves as an operating brake while traveling.



Travel mechanism — underside view.