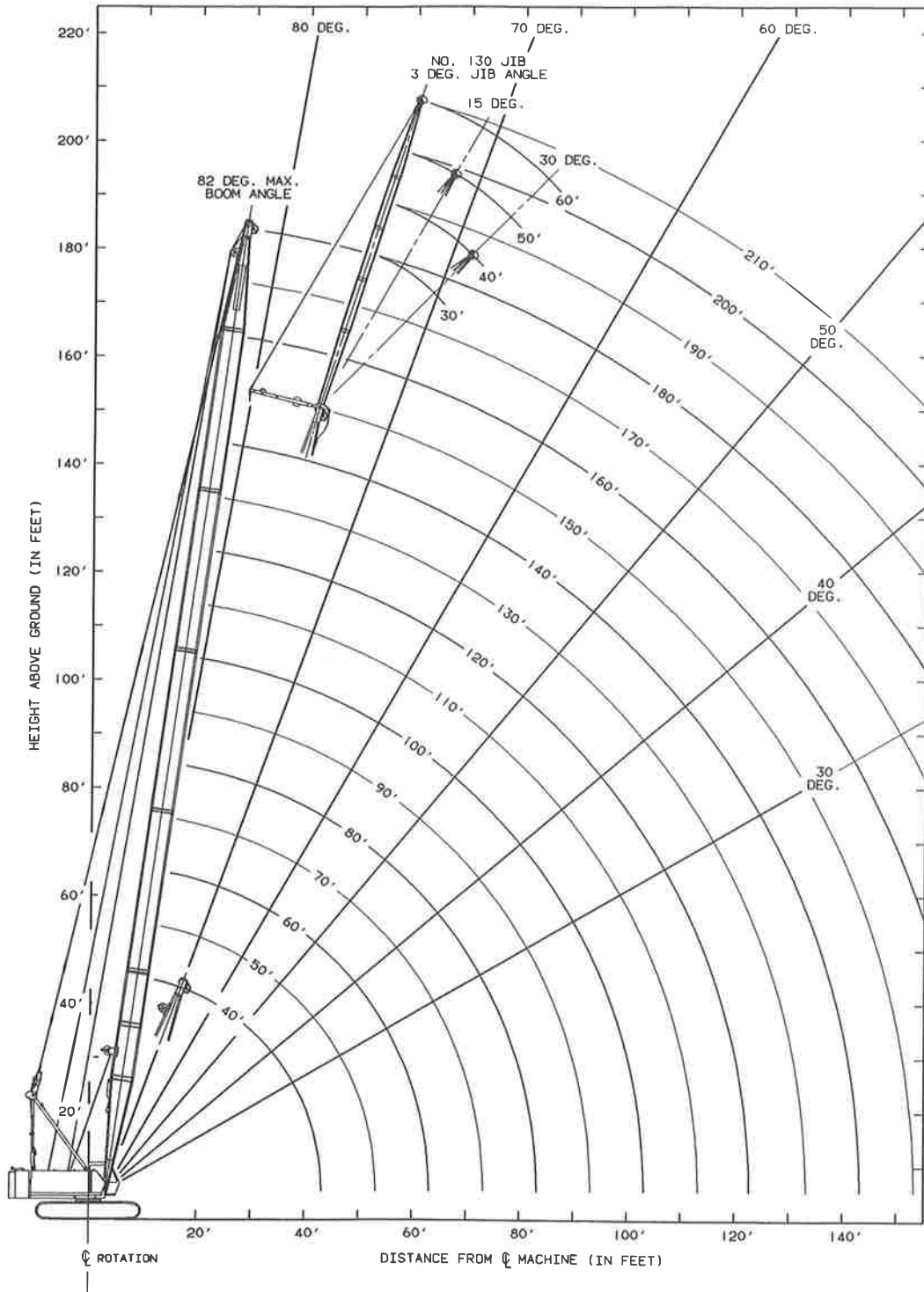
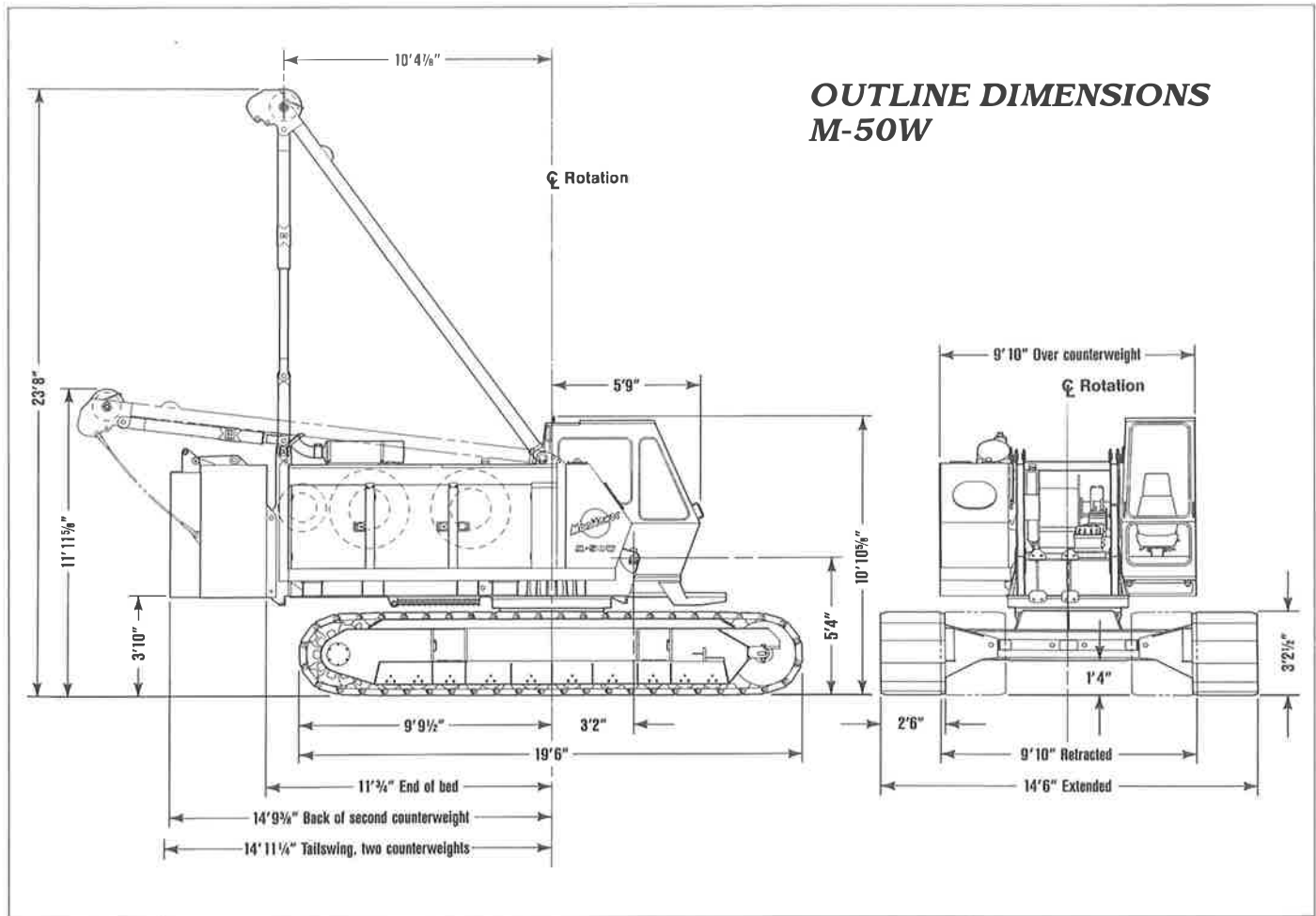


# MANITOWOC M-50W



**60-Ton Liftcrane ■ 15,000-Lb. Clamshell ■ 13,500-Lb. Dragline**



**OUTLINE DIMENSIONS  
M-50W**

## SPECIFICATIONS

### BASIC MACHINE

#### Upperworks

**ROTATING BED:** Fabricated steel rotating bed is mounted on 52½" diameter turntable bearing.

**DRUMS:** Basic machine is equipped with two full-width drums. Drums are 18" wide and 16½" diameter. Each drum is antifriction mounted on a separate shaft and is driven independently by a fixed-displacement hydraulic motor through a reduction gear. Internal-expanding drum clutches are spring set, air released. External-contracting drum brakes are air applied, spring released. Parking brakes are spring set, air released.

**BOOM HOIST:** Rear-mounted independent two-drum boom hoist is powered by a fixed-displacement hydraulic motor coupled to a planetary reduction, and is equipped with ratchet and pawl.

**SWING SYSTEM:** Front-mounted independent swing is powered by a fixed-displacement hydraulic motor coupled to an internal brake and planetary reduction. Includes gear-segment type swing lock.

**OPERATOR'S STATION:** Fully enclosed and insulated steel module mounted to the left front corner of rotating bed. Module is equipped with sliding door, large safety glass windows on all sides and roof. Electric signal horn, cab space heater, upper front windshield wiper, dome light, and air circulating fan are standard equipment.

#### Lowerworks

**CARBODY:** Single-piece steel fabricated carbody incorporates wide wings that facilitate removal from pockets in crawler frames. Crawlers hydraulically extend to 14' 6" and hydraulically retract to 9' 10".

**CRAWLERS:** Crawler assemblies are 19' 6" long reinforced steel fabrications with 30" closed treads and sealed "low-maintenance" rollers. Each crawler is powered independently by a variable-displacement hydraulic motor driving through a planetary reduction. Crawlers provide counter-rotation capability.

**ENGINE/TRANSMISSION:** Cummins 6 CT 8.3 diesel engine rated at 210 HP at 2200 RPM provides independent power for all machine operations through the multi-hydraulic-pump transmission. Power system also includes engine block heater (120V), high silencing muffler, hydraulic oil cooler, radiator, and fan.

**CONTROLS:** Modulating electric-over-hydraulic controls provide infinite function speed response directly proportional to control movement. Selector switch permits hoisting drums to be operated in power-down (liftcrane), free-fall (excavator), or clamshell mode.

## PERFORMANCE DATA

| Wire Rope Specifications |       |                           |                   |               |  |
|--------------------------|-------|---------------------------|-------------------|---------------|--|
| Application              | Dia.  | Description               | Breaking Strength | Weight        | Max. Operating Length                      |
| Lift                     | 3/4"  | 6 x 25 EIPS Regular Lay   | 58,800 Lbs.       | 1.04 Lbs./Ft. | 617' Hoist<br>617' Whip<br>252' Auxiliary* |
| Clam                     | 3/4"  | 6 x 25 EIPS Regular Lay   | 58,800 Lbs.       | 1.04 Lbs./Ft. | 230' Closing<br>180' Holding               |
| Drag                     | 3/4"  | 6 x 25 EIPS Lang Lay      | 58,800 Lbs.       | 1.04 Lbs./Ft. | 185' Hoist<br>100' Drag                    |
| Boom Hoist               | 9/16" | 6 x 26 EIPS Alternate Lay | 33,600 Lbs.       | 0.61 Lbs./Ft. | 480'                                       |

\*Optional drum mounted on rear drum shaft for 3-drum applications. 15,000-lb. line pull.

| Line Pull Vs. Line Speed* — Line Pull Infinitely Variable From 0 to 15,000 Lbs. |            |                      |                       |
|---|------------|----------------------|-----------------------|
| Line Pull   | Line Speed | Divert 1 Travel Pump | Divert 2 Travel Pumps |
| 0 Lbs.  | 245 FPM    | 382 FPM              | 520 FPM               |
| 5,000 Lbs.  | 242 FPM    | 376 FPM              | 510 FPM               |
| 10,000 Lbs.   | 238 FPM    | 370 FPM              | 396 FPM               |
| 15,000 Lbs.   | 234 FPM    | 264 FPM              | 264 FPM               |

\*Chart data based on 1 1/2" diameter smooth drum, 5th layer.

**SWING SPEED:** 3.5 RPM.

**TRAVEL SPEED:** 1.0 MPH.

**GRADEABILITY:** 30%.

**BOOM HOIST SPEED:** 180' boom, 0° to 82° — 1 minute, 14 seconds.

### LIFTCRANE ATTACHMENT

**BASIC BOOM:** The liftcrane is equipped with 40' No. 45A basic boom consisting of 21' butt and 19' top with four 20" diameter antifriction-bearing-mounted steel sheaves. Includes rope guides, boom hoist wire rope, boom angle indicator, and hook and weight ball.

Gantry with telescopic backhitch and power operated back-hitch pins.

Telescopic air-cushioned boom stop.

Automatic boom stop.

**COUNTERWEIGHT:** Two-piece removable counterweight, total 26,700 lbs., with power-operated pins and with counterweight-handling pendants.

### OPTIONAL EQUIPMENT

#### BOOM AND JIB:

- 10' No. 45A Boom insert with pendants
- 20' No. 45A Boom insert with pendants
- 30' No. 45A Boom insert with pendants
- 30' No. 130 Jib with mounting parts
- 10' Jib insert with pendants

### ATTACHMENTS:

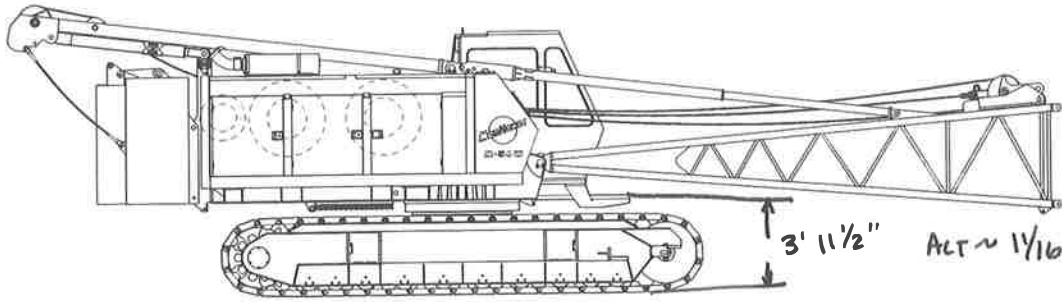
- Manitowoc 60-ton four-sheave load block
- Single-sheave upper boom point (whipline)
- Pendant links for load-moment sensor pin
- Dragline fairlead
- Tagline, Rud-O-Matic No. 1248, two barrel
- Liftcrane lagging, 18" diameter, grooved for 3/4" diameter rope — front/rear
- Clamshell/dragline lagging, 18" diameter, grooved for 3/4" diameter rope — front/rear
- Lift/clam/drag wire rope, 3/4" diameter, 6x25 EIPS
- Machine preparation for X-SPANDER®
- X-SPANDER attachment
- Other attachments on request

### BASIC MACHINE OPTIONS:

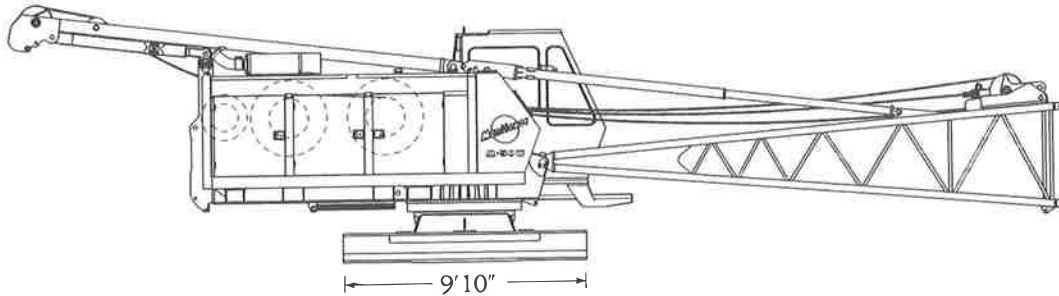
- 36" Treads in place of 30" treads
- Split drum shaft assembly in place of single drum shaft
- Drum rotation indicators (2)
- Windshield wiper, lower front window
- Windshield wiper, roof window
- Ether starting aid
- Alcohol injector in air line
- Fire extinguisher
- Air conditioner in operator's cab
- Hydraulic third drum on front of rotating bed, 9,700 lb. line pull
- Special paint — machinery enamel in color other than Manitowoc standard
- Block-up limit control for load or auxiliary line
- Bail limit control for hoist drums

**SHIPPING DATA** — All dimensions Length x Width x Height

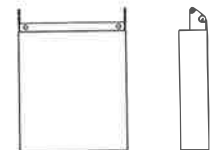
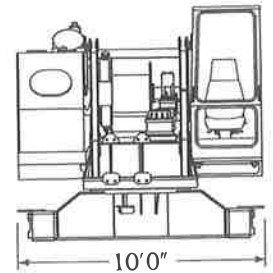
M-50W



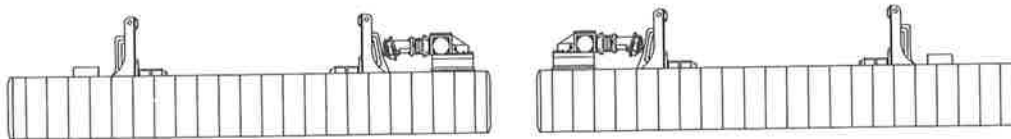
Complete liftcrane less boom top: 98,595 Lbs. 42'9" x 9'10" x 11'11"



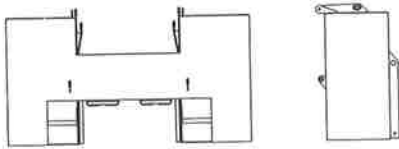
Basic machine with boom butt & gantry: 45,380 Lbs. 42'9" x 9'10" x 10'8"



Outer counterweight: 5,500 Lbs.  
4'5" x 1'3" x 5'10"



Crawler frames: Each 13,065 Lbs. 19'6" x 5'6" x 3'3"



Inner counterweight: 21,200 Lbs.  
9'10" x 3'2" x 5'6"



Boom top: 1,510 Lbs. 20'11" x 4'4" x 4'9"

| Unit                                     | Weight (Lbs.) | Dimensions (L x W x H)      |
|--|---------------|-----------------------------|
| 10' Boom insert                          | 515           | 10'6" x 4'4" x 4'7"         |
| 20' Boom insert                          | 895           | 20'6" x 4'4" x 4'7"         |
| 30' Boom insert                          | 1,185         | 30'6" x 4'4" x 4'7"         |
| 30' Basic jib                            | 1,540         | Pack inside 30' boom insert |
| 10' Jib insert                           | 190           | Pack inside 30' boom insert |
| 60-Ton hook block with steel sheaves     | 1,575         | 5'0" x 2'0" x 1'9"          |
| Pendant box                              | 1,675         | 5'0" x 4'10" x 2'3"         |
| Miscellaneous box, including weight ball | 2,895         | 7'6" x 2'10" x 2'4"         |

**Manitowoc M-Series**  
...the new generation of  
liftcrane performance!

**MANITOWOC ENGINEERING CO.**

Division of The Manitowoc Company, Inc.

500 South 16th St. ■ Manitowoc, WI 54221-0070

Telephone: 414-684-6621 ■ Telefax: 414-683-6277

# MANITOWOC ENGINEERING CO.

Division of The Manitowoc Company, Inc. Manitowoc, Wisconsin 54220



## DRUM AND LAGGING CHART

## M-50W

TABLE 1: TANDEM DRUMS - 16" (406 mm) WIDE DRUMS (FOR S/N 510001 AND 510002)

| APPLICATION      | DRUM  | PART NUMBER | DIAMETER         | WIDTH        | TYPE OF DRUM OR LAGGING | WIRE ROPE SIZE |
|------------------|-------|-------------|------------------|--------------|-------------------------|----------------|
| <u>LIFTCRANE</u> |       |             |                  |              |                         |                |
| HOIST WHIP       | FRONT | 420831      | 17-1/4" (438 mm) | 16" (406 mm) | GROOVED DRUM            | 3/4" (19 mm)   |
|                  | REAR  | 420831      | 17-1/4" (438 mm) | 16" (406 mm) | GROOVED DRUM            | 3/4" (19 mm)   |
| <u>CLAMSHELL</u> |       |             |                  |              |                         |                |
| CLOSING HOLDING  | FRONT | 420831      | 17-1/4" (438 mm) | 16" (406 mm) | GROOVED DRUM            | 3/4" (19 mm)   |
|                  | REAR  | 420831      | 17-1/4" (438 mm) | 16" (406 mm) | GROOVED DRUM            | 3/4" (19 mm)   |
| <u>DRAGLINE</u>  |       |             |                  |              |                         |                |
| DRAG HOIST       | FRONT | 420831      | 17-1/4" (438 mm) | 16" (406 mm) | GROOVED DRUM            | 3/4" (19 mm)   |
|                  | REAR  | 420831      | 17-1/4" (438 mm) | 16" (406 mm) | GROOVED DRUM            | 3/4" (19 mm)   |

TABLE 2: TANDEM DRUMS - 16" (406 mm) WIDE DRUMS

| APPLICATION      | DRUM  | PART NUMBER | DIAMETER           | WIDTH        | TYPE OF DRUM OR LAGGING | WIRE ROPE SIZE |
|------------------|-------|-------------|--------------------|--------------|-------------------------|----------------|
| <u>LIFTCRANE</u> |       |             |                    |              |                         |                |
| HOIST WHIP       | FRONT | 420845      | 15-15/16" (405 mm) | 16" (406 mm) | BARE DRUM               | 3/4" (19 mm)   |
|                  | REAR  | 420845      | 15-15/16" (405 mm) | 16" (406 mm) | BARE DRUM               | 3/4" (19 mm)   |
| <u>CLAMSHELL</u> |       |             |                    |              |                         |                |
| CLOSING HOLDING  | FRONT | 502337      | 17-7/16" (443 mm)  | 16" (406 mm) | GROOVED                 | 3/4" (19 mm)   |
|                  | REAR  | 502337      | 17-7/16" (443 mm)  | 16" (406 mm) | GROOVED                 | 3/4" (19 mm)   |
| <u>DRAGLINE</u>  |       |             |                    |              |                         |                |
| DRAG HOIST       | FRONT | 502337      | 17-7/16" (443 mm)  | 16" (406 mm) | GROOVED                 | 3/4" (19 mm)   |
|                  | REAR  | 502337      | 17-7/16" (443 mm)  | 16" (406 mm) | GROOVED                 | 3/4" (19 mm)   |

NOTE: LEBUS LAGGING NO. 502336 GROOVED FOR 3/4" (19 mm) DIA. ROPE IS OPTIONAL FOR LIFTCRANE APPLICATION AND MAY BE ADDED TO DRUM NO. 420845.

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## DRUM AND LAGGING CHART M-50W

TABLE 3: TANDEM DRUMS - SPLIT REAR DRUMS OPTIONAL (FOR S/N 510072 AND 510496)

| APPLICATION          | DRUM   | PART NUMBER | DIAMETER           | WIDTH           | TYPE OF DRUM OR LAGGING | WIRE ROPE SIZE |
|----------------------|--------|-------------|--------------------|-----------------|-------------------------|----------------|
| <u>LIFTCRANE</u>     |        |             |                    |                 |                         |                |
| HOIST                | FRONT  | 420846      | 15-15/16" (405 mm) | 18" (457 mm)    | BARE DRUM               | 3/4" (19 mm)   |
| WHIP                 | R REAR | 420846      | 15-15/16" (405 mm) | 18" (457 mm)    | BARE DRUM               | 3/4" (19 mm)   |
| AUXILIARY (OPTIONAL) | L REAR | 420849      | 15-15/16" (405 mm) | 6-1/4" (159 mm) | BARE DRUM               | 3/4" (19 mm)   |
| <u>CLAMSHELL</u>     |        |             |                    |                 |                         |                |
| CLOSING              | FRONT  | 170107      | 18" (457 mm)       | 18" (457 mm)    | GROOVED                 | 3/4" (19 mm)   |
| HOLDING              | R REAR | 170107      | 18" (457 mm)       | 18" (457 mm)    | GROOVED                 | 3/4" (19 mm)   |
| AUXILIARY (OPTIONAL) | L REAR | 420849      | 15-15/16" (405 mm) | 6-1/4" (159 mm) | BARE DRUM               | 3/4" (19 mm)   |
| <u>DRAGLINE</u>      |        |             |                    |                 |                         |                |
| DRAG                 | FRONT  | 170107      | 18" (457 mm)       | 18" (457 mm)    | GROOVED                 | 3/4" (19 mm)   |
| HOIST                | R REAR | 170107      | 18" (457 mm)       | 18" (457 mm)    | GROOVED                 | 3/4" (19 mm)   |
| AUXILIARY (OPTIONAL) | L REAR | 420849      | 15-15/16" (405 mm) | 6-1/4" (159 mm) | BARE DRUM               | 3/4" (19 mm)   |

NOTE: LEBUS LAGGING NO. 170106 GROOVED FOR 3/4" (19 mm) DIA. ROPE IS OPTIONAL FOR LIFTCRANE APPLICATION AND MAY BE ADDED TO DRUM NO. 420846.

TABLE 4: TANDEM DRUMS - SPLIT REAR DRUMS OPTIONAL

| APPLICATION          | DRUM   | PART NUMBER | DIAMETER         | WIDTH           | TYPE OF DRUM OR LAGGING | WIRE ROPE SIZE |
|----------------------|--------|-------------|------------------|-----------------|-------------------------|----------------|
| <u>LIFTCRANE</u>     |        |             |                  |                 |                         |                |
| HOIST                | FRONT  | 169561      | 16-1/2" (419 mm) | 18" (457 mm)    | BARE DRUM               | 3/4" (19 mm)   |
| WHIP                 | R REAR | 169561      | 16-1/2" (419 mm) | 18" (457 mm)    | BARE DRUM               | 3/4" (19 mm)   |
| AUXILIARY (OPTIONAL) | L REAR | 169577      | 16-1/2" (419 mm) | 6-1/4" (159 mm) | BARE DRUM               | 3/4" (19 mm)   |
| <u>CLAMSHELL</u>     |        |             |                  |                 |                         |                |
| CLOSING              | FRONT  | 502339      | 18" (457 mm)     | 18" (457 mm)    | GROOVED                 | 3/4" (19 mm)   |
| HOLDING              | R REAR | 502339      | 18" (457 mm)     | 18" (457 mm)    | GROOVED                 | 3/4" (19 mm)   |
| AUXILIARY (OPTIONAL) | L REAR | 169577      | 16-1/2" (419 mm) | 6-1/4" (159 mm) | BARE DRUM               | 3/4" (19 mm)   |
| <u>DRAGLINE</u>      |        |             |                  |                 |                         |                |
| DRAG                 | FRONT  | 502339      | 18" (457 mm)     | 18" (457 mm)    | GROOVED                 | 3/4" (19 mm)   |
| HOIST                | R REAR | 502339      | 18" (457 mm)     | 18" (457 mm)    | GROOVED                 | 3/4" (19 mm)   |
| AUXILIARY (OPTIONAL) | L REAR | 169577      | 16-1/2" (419 mm) | 6-1/4" (159 mm) | BARE DRUM               | 3/4" (19 mm)   |

NOTE: LEBUS LAGGING NO. 502338 GROOVED FOR 3/4" (19 mm) DIA. ROPE IS OPTIONAL FOR LIFTCRANE APPLICATION AND MAY BE ADDED TO DRUM NO. 169561.

-20165

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## AUXILIARY DRUM SPECIFICATIONS — M-50W, M-65W, M-80W

FRONT MOUNTED AUXILIARY DRUM  
9,700 LB. (4 400 kg) LINE PULL

| MAXIMUM SPOOLING AND LINE PULL CAPACITIES                              |                           |        |                   |       |
|--|---------------------------|--------|-------------------|-------|
| 1/2" (13 mm) WIRE ROPE   |                           |        |                   |       |
| LAYER  | MAXIMUM SPOOLING CAPACITY |        | MAXIMUM LINE PULL |       |
|  | FT.                       | METERS | LBS.              | kg    |
| 1  | 56                        | 17     | 7,600             | 3 450 |
| 2  | 127                       | 39     | 7,600             | 3 450 |
| 3  | 204                       | 62     | 7,600             | 3 450 |
| 4  | 288                       | 88     | 7,600             | 3 450 |
| 5  | 378                       | 115    | 7,300             | 3 310 |
| 8' (2m) IS DEDUCTED FROM MAXIMUM SPOOLING CAPACITIES FOR 3 DEAD WRAPS. |                           |        |                   |       |
| 9/16" (14 mm) WIRE ROPE  |                           |        |                   |       |
| LAYER  | MAXIMUM SPOOLING CAPACITY |        | MAXIMUM LINE PULL |       |
|  | FT.                       | METERS | LBS.              | kg    |
| 1  | 50                        | 15     | 9,700             | 4 400 |
| 2  | 115                       | 35     | 8,875             | 4 030 |
| 3  | 187                       | 57     | 8,170             | 3 710 |
| 4  | 264                       | 80     | 7,565             | 3 430 |
| 8' (2m) IS DEDUCTED FROM MAXIMUM SPOOLING CAPACITIES FOR 3 DEAD WRAPS. |                           |        |                   |       |

| WIRE ROPE SPECIFICATIONS   |  |
|--|--|
| 1/2" (13 mm) - 6 X 25 FILLER WIRE, EXTRA IMPROVED PLOW STEEL, REGULAR LAY, IWRC.<br>MINIMUM BREAKING STRENGTH 26,600 LBS. (12 070 kg).<br>MAXIMUM LOAD = 7,600 LBS. PER LINE (3 450 kg).<br>APPROX. WEIGHT = .46 LBS. PER FT. (.68 kg/m).  |  |
| 9/16" (14 mm) - 6 X 25 FILLER WIRE, EXTRA IMPROVED PLOW STEEL, REGULAR LAY, IWRC.<br>MINIMUM BREAKING STRENGTH 33,600 LBS. (15 240 kg).<br>MAXIMUM LOAD = 9,700 LBS. PER LINE (4 400 kg).<br>APPROX. WEIGHT = .59 LBS. PER FT. (.88 kg/m). |  |

DRUM SPECIFICATIONS: DRUM NO. 716971 - 9-3/4" (248 mm) BARE DRUM DIAMETER, 13-5/8" (346 mm) WIDTH, AND 15" (381 mm) DIAMETER FLANGE.