

Manitex



TM200

20-ton (18.1 mt) TELESCOPIC CRANE
PRODUCT GUIDE

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 Do not operate a Manitex crane or accessories within 10' (3.04M) of live power lines.



KEY

| | |
|--|--|
| | Operator aids |
| | Cab |
| | Heating / Air conditioning |
| | Controls |
| | Hoist speed |
| | 1 - Main hoist 2 - Auxiliary winch 3 - Recovery winch |
| | Rope length |
| | Rope - standard/optional |
| | Rope diameter |
| | Permissible line pull |
| | Maximum line pull |
| | Slewing / Allowable slewing range |
| | Slewing gears |
| | Slewing brake |
| | A-Frame outriggers |
| | 2-Person man basket |
| | Counterweight |
| | Radio remote controls |

| | |
|--|---------------------------------------|
| | Hook block |
| | Distance from hook to head sheave pin |
| | Hook and ball |
| | Hydraulics |
| | Boom elevation angle |
| | Max. boom length with extension |
| | Boom with extension retracted |
| | Boom angle |
| | Telescoping mode |
| | Working radius |
| | Boom length |
| | Hydraulic actuated boom |
| | Full power mechanical synchronized |
| | Boom head / Hook block |
| | Main boom with auxiliary head |
| | Tip height |



THE TM200 TELESCOPIC CRANE

Maximize Use and Value

The TM200 telescopic crane strikes the perfect balance between the three things customers tell us they care about most in a crane: features, cost and productivity. Competitively priced and packed with standard features designed to save time and money.

- Shift line speed on the fly and minimize rope stacking with its 2-speed burst of speed (combined flow) planetary hoist with grooved drum and negative draft flange.
- Minimize maintenance costs with replaceable, self-lubricating boom slider pads equipped with teflon inserts.
- Get active and real time feedback on load conditions with integrated load-moment indicator system.
- Chassis telemetry provided to operator through LMI display unit.

Other features include:

- 20-ton Capacity @ 5 ft. radius
- 85 ft. 6-Section Combination Sequential & Proportional Boom
- 95 ft max boom tip height
- Anti-two Block internally routed A2B cable with lockout.
- Removable boom rest

USER-FRIENDLY CONTROLS

Dual operator stations are equipped with engine start/stop, foot throttle, signal horn, boom angle indicator, load chart and range diagram.



OUTRIGGER DEPLOYMENT

An audible alarm sounds as outriggers are deployed, and indicator lights verify when they are fully extended.

LOAD MOMENT INDICATOR

The load-moment indicator provides audio/visual warning and locks out the machine when lift limitations are exceeded.

INCREASE PROFITABILITY

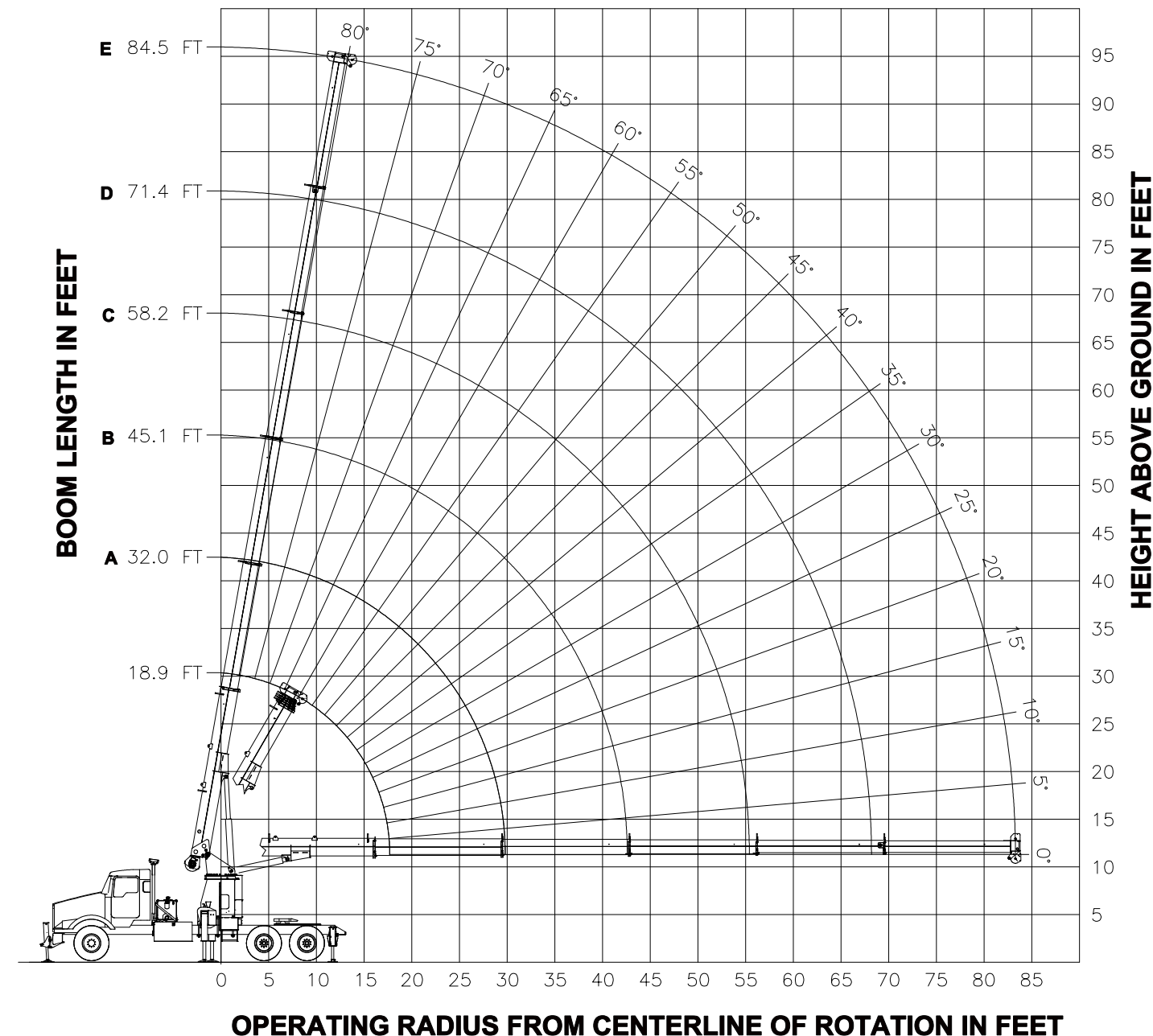
The versatile TM200, designed to be used with a commercial truck tractor, helps both owners and operators make the most of their investment.

- Travel to and between jobs at highway speed.
- Ride in comfort with a carrier suspension designed for highway driving.
- Get repairs done quickly and by qualified technicians at commercial truck centers.



BOOM DIAGRAM

RANGE DIAGRAM - FULL EXTENDED OUTRIGGER CONFIGURATION -



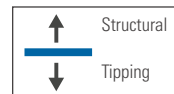
Data published herein is intended as a guide only. Crane operations is subject to machine specific load charts and information.

LOAD CHART: Main Boom & Jib

6-section Boom 18.9 ft - 85 ft



| Full Extended Outrigger Configuration - LMI CODE 1 | | | | | | | | | | | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------|
| 18.9 ft. | | 32 ft. (A) | | 45.1 ft. (B) | | 58.2 ft. (C) | | 71.4 ft. (D) | | 84.5 ft. (E) | | |
| Load radius ∠° | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | Load Capacity (lbs.) | |
| 5 | 72 | 40,000 | | | | | | | | | | |
| 8 | 62 | 25,300 | 74 | 18,700 | | | | | | | | |
| 10 | 54 | 21,300 | 70.5 | 18,000 | 77 | 12,600 | | | | | | |
| 12 | 45 | 18,200 | 66.5 | 17,100 | 74 | 12,600 | 78 | 10,000 | | | | |
| 14 | 35 | 16,000 | 62 | 15,000 | 71.5 | 12,600 | 76 | 10,000 | | | | |
| 16 | 21 | 14,300 | 58 | 13,500 | 69 | 12,600 | 74 | 10,000 | 78 | 9,900 | | |
| 20 | | | 49 | 11,000 | 63 | 10,300 | 70 | 9,300 | 75 | 8,000 | 77 | 4,600 |
| 25 | | | 35 | 8,900 | 55.5 | 8,300 | 65 | 7,600 | 70.5 | 6,600 | 74 | 4,600 |
| 30 | | | | | 47 | 6,800 | 59 | 6,200 | 66 | 5,600 | 71 | 4,300 |
| 35 | | | | | 37 | 5,330 | 53 | 5,200 | 61.5 | 4,700 | 67 | 3,900 |
| 40 | | | | | 23 | 3,880 | 46 | 4,100 | 57 | 4,000 | 63 | 3,600 |
| 45 | | | | | | | 39 | 3,560 | 51.5 | 3,400 | 59 | 3,100 |
| 50 | | | | | | | 29 | 2,730 | 46 | 3,000 | 55 | 2,700 |
| 55 | | | | | | | | | 40 | 2,500 | 50.5 | 2,300 |
| 60 | | | | | | | | | 33 | 2,010 | 46 | 2,000 |
| 65 | | | | | | | | | 24 | 1,580 | 41 | 1,700 |
| 70 | | | | | | | | | | | 35 | 1,400 |
| 75 | | | | | | | | | | | 28 | 1,180 |
| 80 | | | | | | | | | | | 19 | 850 |
| | 0 | 9,200 | 0 | 4,300 | 0 | 2,000 | 0 | 1,200 | 0 | 600 | 0 | 350 |



NOTES:

- Loads based on crane with fully extended outriggers
- Loads above heavy line are based on structural rating
- Loads below heavy line are based on tipping rating 85%

Data published herein is intended as a guide only. Crane operations is subject to machine specific load charts and information.

LMI OPERATING CODES

| Setting | Crane Configuration | Outrigger Configuration | Area of Operation |
|---------|---------------------|-------------------------|---------------------------------|
| #1 | Main Boom | Fully Extended | 360° Continuous with FBS Option |
| #2 | Main Boom | Intermediate | 360° Continuous with FBS Option |
| #3 | Main Boom | Retracted | 360° Continuous with FBS Option |

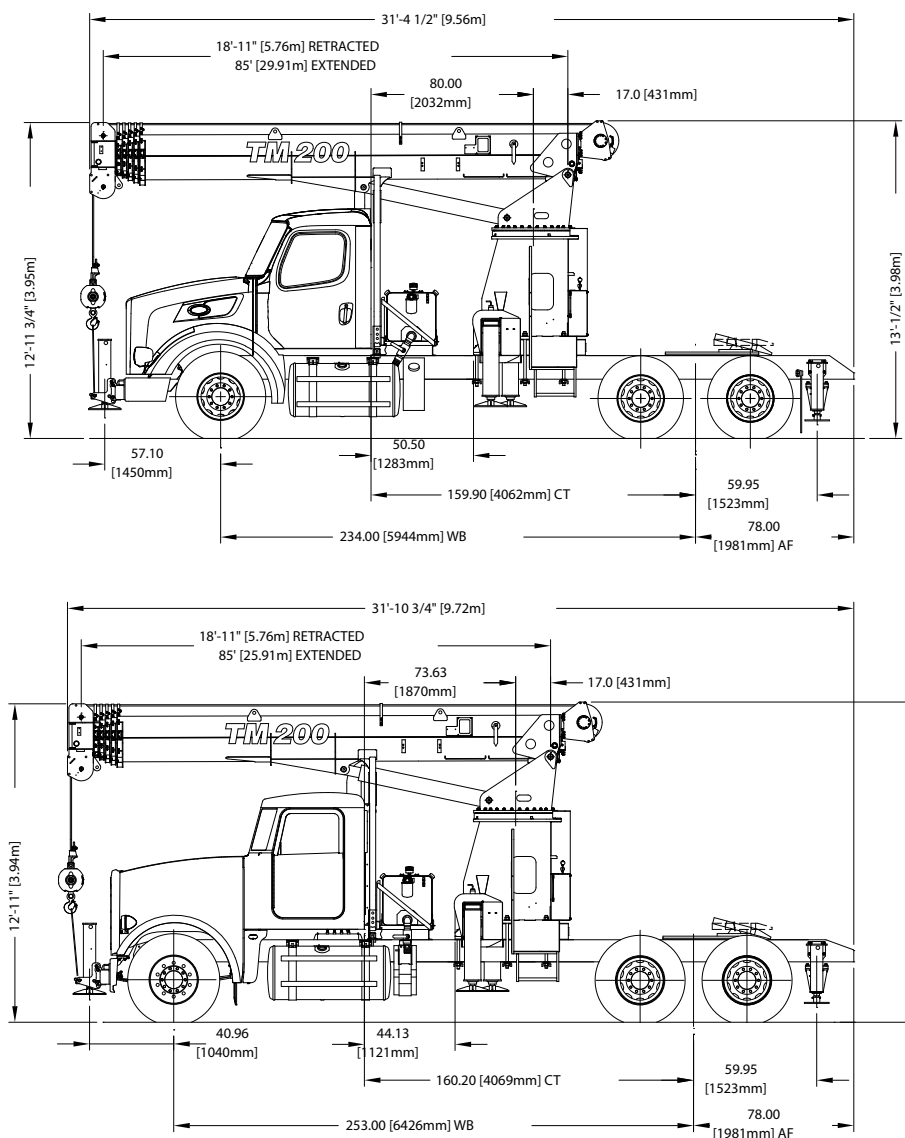
REEVING DIAGRAM

| ALLOWABLE LINE PULL | | | | | | WARNING |
|---------------------|-------------|-------------|-------------|-------------|-------------|---|
| 1 PART LINE | 2 PART LINE | 3 PART LINE | 4 PART LINE | 5 PART LINE | 6 PART LINE | |
| | | | | | | <p>ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. REFER TO OWNER'S MANUAL.</p> <p>KEEP AT LEAST 3 WRAPS OF LOAD LINE ON DRUM AT ALL TIMES.</p> |
| 8500 LBS | 17000 LBS | 25500 LBS | 34000 LBS | 40000 LBS | 40000 LBS | |
| 7700 LBS | 15400 LBS | 23100 LBS | 30800 LBS | 38500 LBS | 40000 LBS | <p>9/16" - 6X25 IWRC (3.5:1 S.F.) - 29750 LBS. MINIMUM BREAKING STRENGTH</p> <p>9/16" ROT RESISTANT (5.0:1 S.F.) - 38500 LBS. MINIMUM BREAKING STRENGTH</p> |

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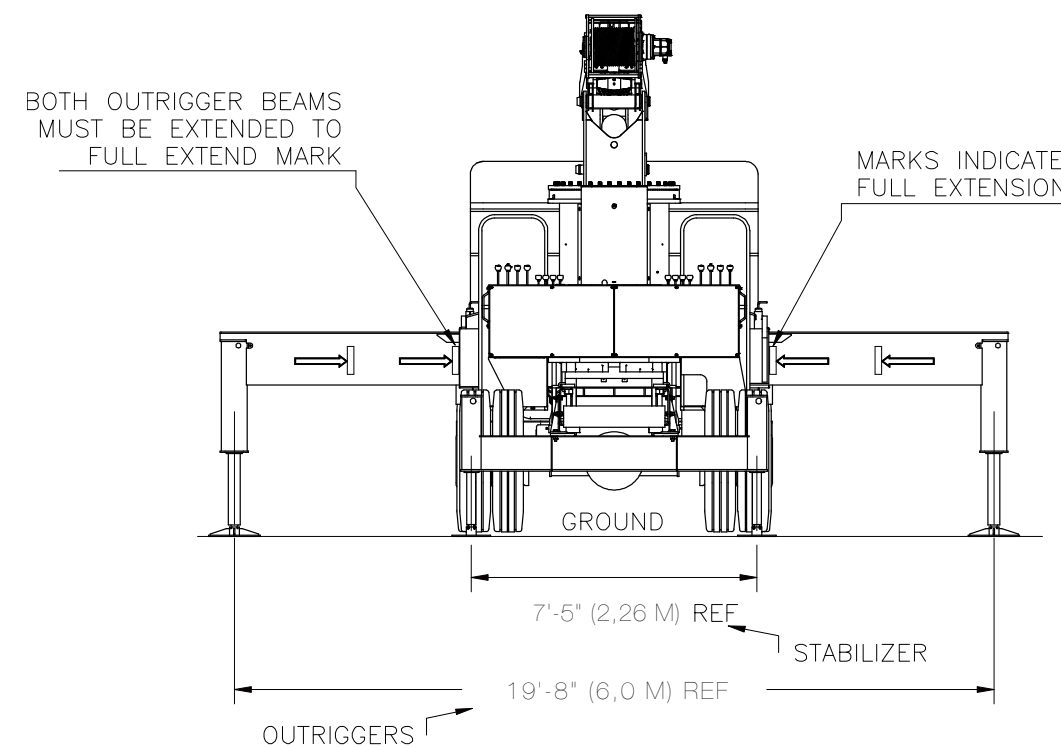
CRANE DIMENSIONS

Imperial & Metric Units

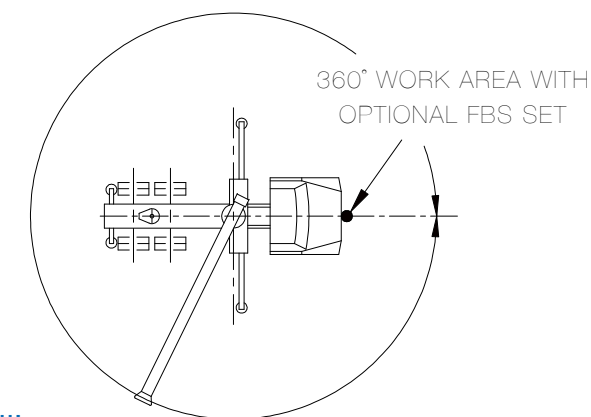


OUTRIGGER EXTENSION

Imperial & Metric Units



AREA OF OPERATION



Note: 360 degree Area of Operation when equipped with optional Front Bumper Stabilizer.

CHASSIS DATA

| | |
|--------------------------|--------------------------------|
| Wheelbase (WB): | 234" |
| Cab to Tandem (CT) : | 159.9" |
| After frame (AF): | 78" |
| Frame section modulus at | 30in ³ @ 120,000psi |
| Nominal frame W: | 34" |

TRUCK AXLE WEIGHT

| | |
|-----------------------------------|-----------|
| Minimum front axle weight rating | 20,000lbs |
| Minimum rear axle weight rating | 40,000lbs |
| Minimum chassis front axle weight | 10,500lbs |
| Minimum chassis rear axle weight | 8,600lbs |

CRANE WEIGHTS

| | |
|---|----------------------|
| Total crane standard H-configuration stabilizers - Dry Weight | 15,400 lbs (6985 kg) |
|---|----------------------|

Deductions from rated loads for load handling devices supplied by Manitex

| | |
|------------------|-----------------------------------|
| Auxiliary Sheave | 50 lbs. |
| Overhaul ball | See overhaul ball mfgr. nameplate |
| Load blocks | See block mfgr. nameplate |

TECHNICAL DESCRIPTIONS

Boom



Boom length: 6-section 85 ft (25.9 m) formed boom
2-sheave quick reeve boom point



Boom max. tip height: 95 ft (28.9g m)
Boom retracted tip height: 29.9 ft (9,11 m)

Rotation



Oversized ball bearing swing circle with external gear. Powered by double reduction planetary gear box.



Slewing brake: Wet, multi-disc internal brake, spring applied, hydraulic pressure released



Boom rotation: 372° non-continuous
Slewing speed: 1.5 - 2 rpm. (nominal)

Outriggers



Outriggers: Out and Down

- Front
 - Out and Down, 19.66 ft (6 m)
- Rear
 - H-Configuration Stabilizer, 7.42 ft (2.25 m)
- Stowed
 - Center to Center, 7.25 ft (2,2 m)
- Outrigger motion alarm
- Non removable 16 in diameter steel pads.

Hoist, Rope and Hook



Maximum theoretical line speed: 300 fpm (91 mpm)



Maximum theoretical bottom-layer line pull rating: 11,500 lbs. (5,216 kg)



Main winch cable diameter: 9/16 in. (14,3 mm) Rotation Resistance



Line length: 300 ft. (91,4 m)



Main Winch Motor: Gear



Load ball: 7T (6.3 mt) capacity hook with heavy-duty swivel and weight is provided for single line operation.

Hydraulics



6-8 bolt direct mounted PTO and SAE B or output or SAE BB output

3-section gear pump, SAE BB input (standard)

Counter Clockwise Rotation

Hydraulic reservoir capacity: 70 gal. (265 L)

- Suction Strainer
- Ball shut off valve
- Magnetic drain plug
- Return filter - 10 micron

Pump sections @ 2000 rpm with 100 psi

- Shaft end pump: 32.4 gpm (123 lpm)
- Center pump: 20.6 gpm (78 lpm)
- Cover end pump: 8 gpm (38 lpm)
- Oil Cooler

Operator aids



LMI with crane function cut-offs for overload protection

Graphical display

Anti-two block system - Anti-Two-Block System with Lock Out

Internally Routed

Outrigger Motion Alarm

Bubble Level

Verification Indicator for outriggers

TECHNICAL DESCRIPTIONS

Operator aids (continued)



Boom angle indicator (min/max): -10° / 80°

Control System



Dual operating stations are equipped with four single-lever crane controls arranged in accordance with ANSI B30.5 standards.

Fully proportional control valves

Each station includes:

- Individual control levers for each outrigger and stabilizer
- Engine start and stop
- Electronic foot throttle
- Signal horn
- Boom angle indicator
- Beverage holder
- Load chart with range diagram and mount for removable LMI display
- System Pressure Gauge
- High Speed winch control

Electrical System

State-of-the-art, weather-resistant components throughout

Weather resistant sealed enclosure includes power in relays and circuit status LEDs

Mounting System

Pedestal sub-frame and stabilizers are mounted to chassis by threaded rods and clamp plates

Sub-frame: Torsion resistant, rigid 4-plate design mounted under crane

Boom rest: Heavy-duty fabrication.

Options

Tool Boxes

24 in. L x 20 in. W x 18 in. H - Steel (610 mm L x 508 mm W x 457 mm H)

36 in L x 24 in W x 24 in H Aluminum Chassis Mounted (9144 mm L x 6096 mm W x 6096 mm)

Options

Hoist, Rope and Hook



Load block:

- 1-Sheave
- 3-Sheave
- Main winch cable diameter: 9/16 in. (14,3 mm) 6 x 25 EIPS IWRC

Hydraulics



3-section vane pump, SAE B input
FBS - Front Bumper Stabilizer

2-Person Baskets



2-person man basket - Aluminum or steel - consult Manitex

- Non-rotating (600 lbs. cap.)
- Rotating (up to 1,200 lbs. cap.)

Radio Remote Options



4-Function radio remote crane control system

- 900 Mhz
- Radio Remote Control with Joysticks (900 MHz or 433 MHz)
- Radio Remote Control with Paddles (900 MHz or 433 MHz)



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UPTime

UPTime is the Manitex commitment to complete support of thousands of units working every day.

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