NATIONAL CRANE®

600H
Product Guide

ASME B30.5
Imperial 85%, Metric 85%

Features

- 18,1 t (20 USt) rating
- Five boom options available from 15 m (49 ft) to 27,42 m (90 ft)
- Multiple outrigger positions
- Standard RCL System
- Internal anti-two block wiring
- Standard, rear and tractor mount options

NATIONAL CRANE 600H SERIES

The 600H Series delivers 18,1 t (20 USt) maximum capacity and a 30,5 m (100 ft) maximum vertical hydraulic reach with main boom.

Features

> Boom

At 27,5 m (90 ft) the 600H series four-section boom is the longest in its size range. The longer boom allows the operator to perform more lifts without the use of a jib, reducing setup time and improving efficiency.

A 15 m (49 ft) four-section boom, 18,3 m (60 ft) three-section boom, and 24,38 m (80 ft) four or five-section boom are also available.

> Overload protection

Rated Capacity Limiter (RCL) with work area definition system (WADS) is standard on all Series 600H machines. The RCL display console is weatherproof and displays all crane load lifting values simultaneously.

> Out and Down style outriggers

Multiple outrigger positions of full-span, mid-span and retracted span options provide added versatility. Main outriggers are equipped with removable ball and socket aluminum foot pads as standard.

> Options and Lift Solutions

- Hydraulic hose reels
- Factory installed tool box options
- Bulkhead and flat-bed options
- One-option hydraulic tool circuit

Lift Solutions™

Jobsite benefits

- Many boom lengths and mounting configuration choices to serve many applications
- Flexible out & down style outriggers with multiple outrigger spans allow for convenient setup on demanding job sites
- Internal anti-two-block cable on all three and four section boom options eliminates potential for damage
- Utilization enhancing options such as a hydraulic oil cooler for duty cycle applications and an auxiliary hydraulic circuit
- Pre-painted components reduce the possibility of rust, improve serviceability and enhance the appearance of the machine.

What you need, when you need it.

Get right to work with the right equipment — Manitowoc Finance gives you access to flexible, affordable financing you can use to seize profitable new opportunities as they arise.

Feel confident in your investment — rest easy with the assurance of the world's most advanced crane service and support network.

Contents

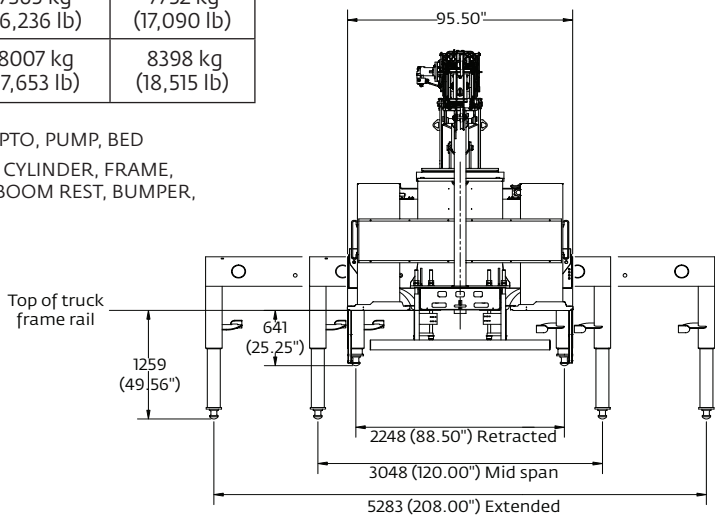
Dimensions

Series	G	H	Dry weight*	w/oil weight*
649H	141 cm (55.32 in)	123 cm (48.38 in)	6590 kg (14,529 lb)	6937 kg (15.294 lb)
660H	168 cm (66.09 in)	128 cm (50.55 in)	6857 kg (15,116 lb)	7218 kg (15,912 lb)
680H	165 cm (64.93 in)	142 cm (55.95 in)	7365 kg (16,236 lb)	7752 kg (17,090 lb)
690H	197 cm (77.45 in)	153 cm (60.08 in)	8007 kg (17,653 lb)	8398 kg (18,515 lb)

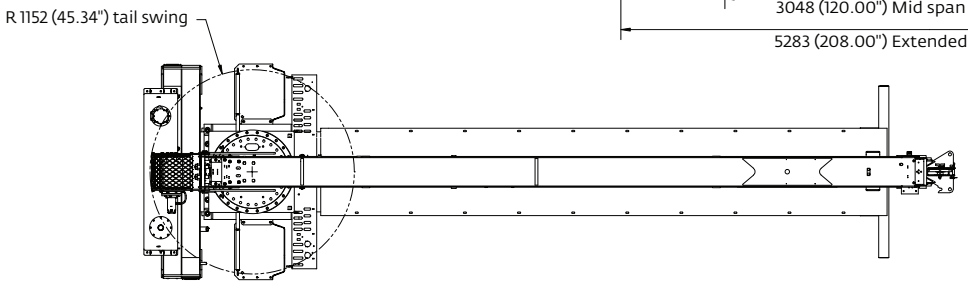
"H" style rear stabilizers
with oil weight
672 kg (1481 lb)

* ABOVE WEIGHTS DO NOT INCLUDE RESERVOIR, RSOD, PTO, PUMP, BED

** WEIGHT INCLUDES BOOM, WINCH, ROPE, TURRET, LIFT CYLINDER, FRAME, CONTROLS, OUTRIGGERS, PLATFORMS, TORQUE BOX, BOOM REST, BUMPER, DOWNHAUL WEIGHT



STANDARD MOUNT

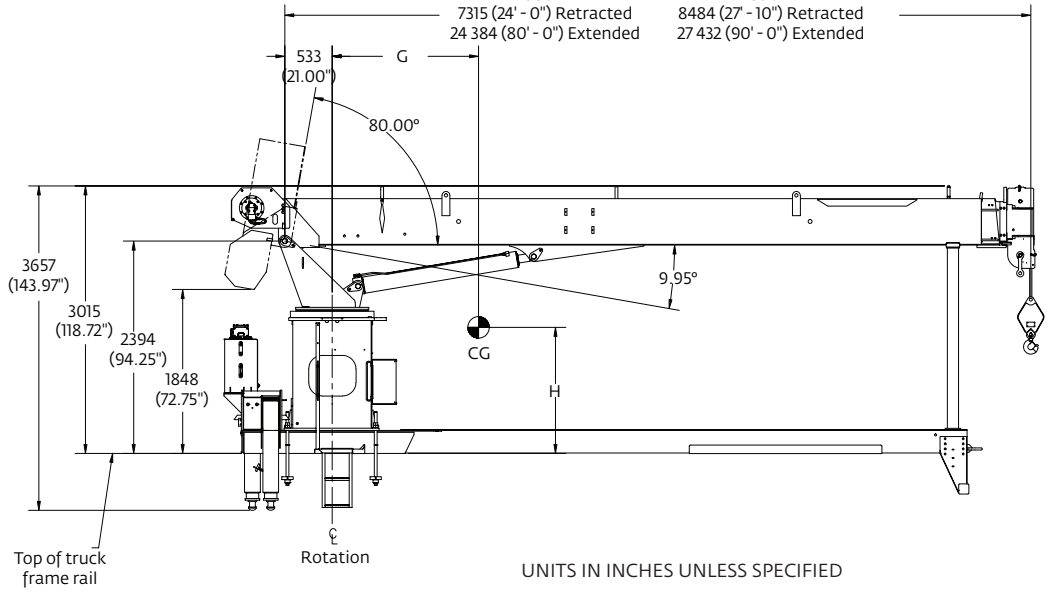


649H
4978 (16' - 4") Retracted
14 935 (49' - 0") Extended

660H
7264 (23' - 10") Retracted
18 339 (60' - 2") Extended

680H
7315 (24' - 0") Retracted
24 384 (80' - 0") Extended

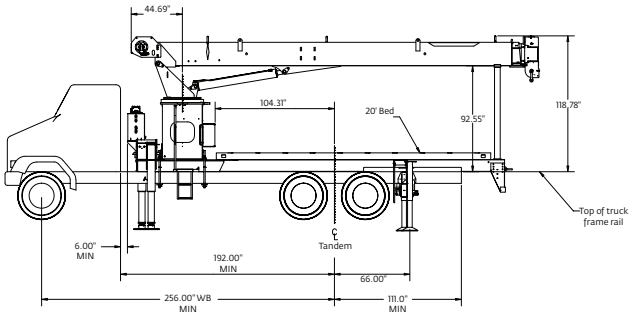
690H
8484 (27' - 10") Retracted
27 432 (90' - 0") Extended



UNITS IN INCHES UNLESS SPECIFIED

Mounting configurations

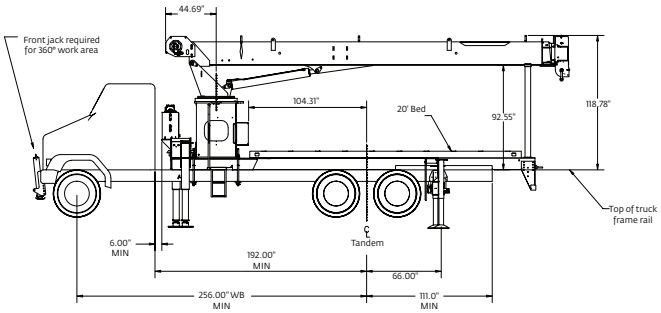
The configurations are based on the Series 600H with an 85% stability factor. The complete unit must be installed in accordance with factory requirements and a test performed to determine actual stability and counterweight requirements since individual truck chassis vary.



Minimum Truck Configuration 1 – 180˚ full capacity work area

Working area..... 180˚
Gross axle weight rating front ..... 6350 kg (14,000 lb)
Gross axle weight rating rear ..... 15,442 kg (34,000 lb)
Gross vehicle weight rating..... 21,773 kg (48,000 lb)
Wheelbase..... 650 cm (256 in)
Cab to axle/trunnion (CA/CT)..... 488 cm (192 in)
Frame Section Modulus (SM) under crane:
758 MPa (110,000 PSI) ..... 327,7 cm^3 (20 in^3)
Frame Section Modulus (SM) over rear stabilizers:
758 MPa (110,000 PSI) ..... 213 cm^3 (13 in^3)
Stability weight, front..... 3946 kg (8700 lb) minimum*
Stability weight, rear..... 3901 kg (8600 lb) minimum*

This configuration with the crane mounted behind the cab, requires the least weight of all mounts for stability; thus, you can haul larger payloads on your truck. It requires standard subbase and rear (out and down) stabilizers. *Weights do not include rear outriggers, PTO, pump, bed and SFO.

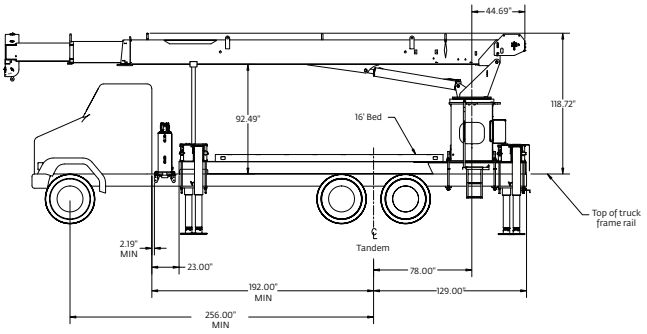


Minimum Truck Configuration 2 – 360˚ full capacity work area

Working area..... 360˚
Gross axle weight rating front ..... 6350 kg (14,000 lb)
Gross axle weight rating rear ..... 15,422 kg (34,000 lb)
Gross vehicle weight rating..... 21,773 kg (48,000 lb)
Wheelbase..... 650 cm (256 in)
Cab to axle/trunnion (CA/CT)..... 488 cm (192 in)
Frame Section Modulus (SM) under crane:
758 MPa (110,000 PSI) ..... 328 cm^3 (20 in^3)
Frame Section Modulus (SM) over rear stabilizers:
758 MPa (110,000 PSI) ..... 213 cm^3 (13 in^3)
Stability weight, front..... 3946 kg (8700 lb) minimum*
Stability weight, rear..... 3901 kg (8600 lb) minimum*

Requires front SFO stabilizer to give machine full capacity 360˚ around the truck. Truck must meet the minimum requirements above. Front stabilizer gives the machine a solid base, helping the operator control loads precisely. Extended front frame rails required for SFO installation. *Weights do not include rear outriggers, PTO, pump, bed and SFO.

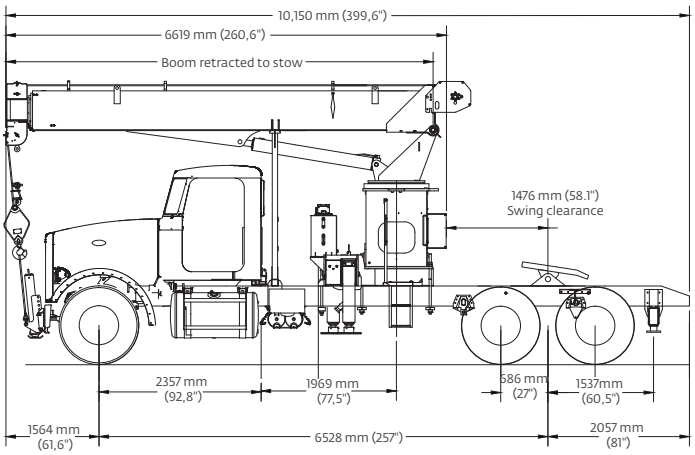
Mounting configurations



Minimum Truck Configuration 3 – Rear Mount

Working area....360°
Gross axle weight rating front ....5443 kg (12,000 lb)
Gross axle weight rating rear .... 15,422 kg (34,000 lb)
Gross vehicle weight rating.... 20,865 kg (46,000 lb)
Wheelbase....650 cm (256 in)
Cab to axle/trunnion (CA/CT).... 488 cm (192 in)
Frame Section Modulus (SM) under crane:
758 MPa (110,000 PSI) .... 261 cm^3 (15.9 in^3)
Frame Section Modulus (SM) over rear stabilizers:
758 MPa (110,000 PSI) .... 261 cm^3 (15.9 in^3)
Stability weight, front.... 2948 kg (6500 lb) minimum*
Stability weight, rear.... 4309 kg (9500 lb) minimum*

Typical rear mount allows the installation of the Model 600H on a chassis. In most cases, the chassis will not require reinforcing, and the amount of counterweight required is minimized, increasing payload capacities. *Weights do not include rear outriggers, PTO, pump, bed and SFO.



Recommended Truck Configuration 4 – Tractor Mount 680H-TM with five-section boom

Working area....360°
Gross axle weight rating front ....9072 kg (20,000 lb)
Gross axle weight rating rear .... 18 144 kg (40,000 lb)
Gross vehicle weight rating.... 27 216 kg (60,000 lb)
Wheelbase....653 cm (257 in)
Cab to axle/trunnion (CA/CT).... 617 cm (243 in)
Frame Section Modulus (SM) under crane:
827 MPa (120,000 PSI) .... 655 cm^3 (40 in^3)
Frame Section Modulus (SM) over rear stabilizers:
827 MPa (120,000 PSI) .... 261 cm^3 (15.9 in^3)
Stability weight, front.... 4762 kg (10,500 lb) minimum*
Stability weight, rear.... 4445 kg (9800 lb) minimum*

Allows the installation of the Model 600H on a chassis. In most cases, the chassis will not require reinforcing, and the amount of counterweight required is minimized, increasing payload capacities. *Weights do not include rear outriggers, PTO, pump, bed and SFO. If truck recommendations above cannot be met, it is recommended to contact the factory for chassis review.

Notes:

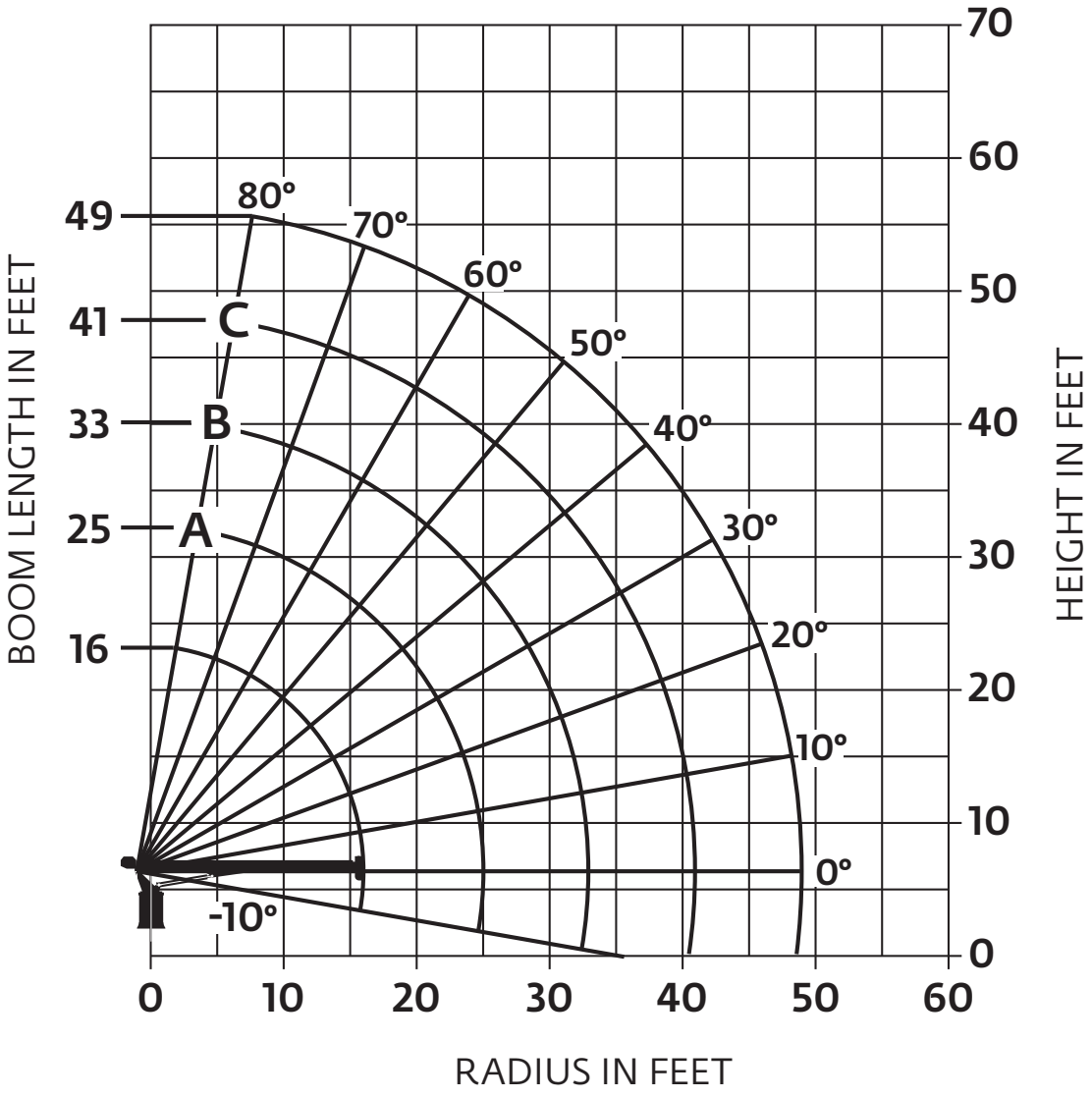
- Gross Vehicle Weight rating (GVWR) is dependent on all components of the vehicle (axles, tires, springs, frame, etc.) meeting manufacturers' recommendations: always specify GVWR when purchasing trucks
- Diesel engines require a variable speed governor and energize-to-run fuel solenoid for smooth crane operation; electronic fuel injection requires EET engine remote throttle
- All mounting data is based on a National Series 600H with an 85 percent stability factor
- The complete unit must be installed in accordance with factory requirements, and a test performed to determine actual stability and counterweight requirements per SAE J765; contact the factory for details
- Transmission neutral safety interlock switch is required with optional radio remote control

Working range - 649H

15 m
(49 ft)

100%

360°



THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.
The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

Load chart - 649H

 4,88 m - 15 m
(16 ft - 49 ft)

 100%

 360°

 Pounds

LOADED RADIUS (ft)	LOADED BOOM ANGLE (deg)	16 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	A 25 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	B 33 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	C 41 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	49 FT BOOM (lb)
5	67	40,000	75.5	38,100						
8	54	29,600	68	27,400	74	26,200	77.5	25,300		
10	44	24,700	63	23,200	70	22,200	74.5	21,300	78	19,500
12	31.5	20,400	57.5	20,200	66.5	19,250	71.5	18,450	75.5	17,500
14	8	13,750	51.5	17,750	62.5	17,000	68.5	16,300	73	15,000
16			45	15,750	58	15,200	65.5	14,550	70.5	13,750
20			29	12,100	49.5	12,500	59	12,050	65	11,750
25					36	9850	50	9800	58.5	9600
30					17	6950	40	8050	51	8050
35							28	6450	43.5	6800
40									33.5	5650
45									19	4300
	0	10,950	0	6350	0	4350	0	3200	0	2600

NOTE:
1. All capacities are in pounds, angles in degrees, radius in feet.
2. Loaded boom angles are given as reference only.

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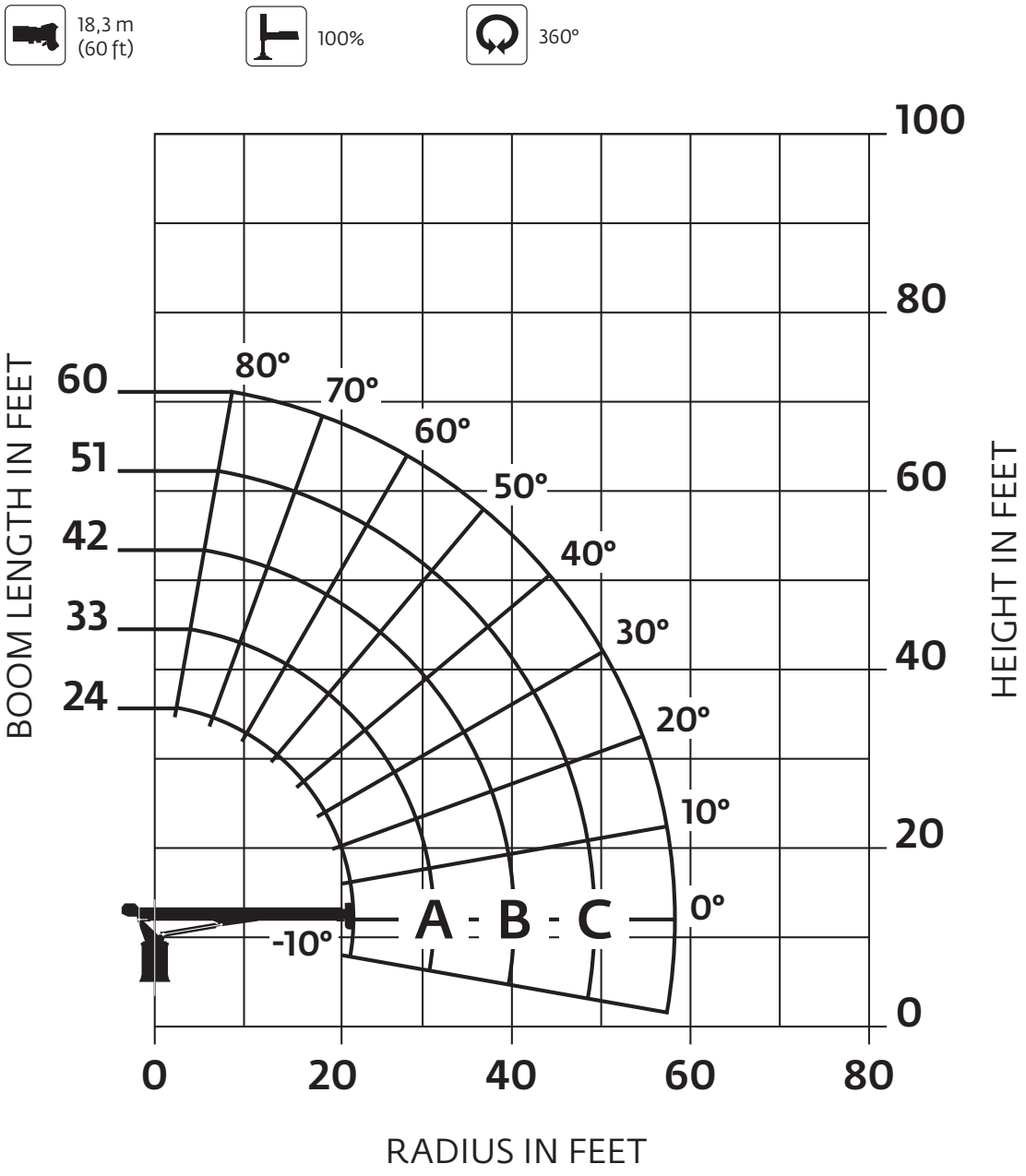
Working range - 660H



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Load chart - 660H

 7,32 m - 18,3 m
(24 ft - 60 ft)

 100%

 360°

 Pounds

LOADED RADIUS (ft)	LOADED BOOM ANGLE (deg)	24 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	A 33 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	B 42 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	C 51 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	60 FT BOOM (lb)
5	75.5	40,000								
8	67.5	27,200	74	25,800	77.5	25,000				
10	62	22,800	70	21,600	75	20,700	78	20,400		
12	56	19,650	67	18,700	72	17,800	75.5	17,400	78.5	17,150
14	49.5	17,150	62.5	16,400	69	15,750	73	15,250	76.5	14,950
16	43	15,150	58.5	14,600	66	14,050	71	13,600	74.5	13,200
20	24.5	11,150	49.5	11,950	60	11,550	66	11,200	70.5	10,850
25			37.5	9400	51.5	9350	59.5	9100	65.5	8800
30			14.5	6600	42	7700	53	7600	60	7400
35					30.5	6100	45.5	6400	54.5	6200
40							36.5	5350	48	5400
45							25	4250	41	4550
50									33	3900
55									21.5	3000
	0	6150	0	3950	0	2700	0	1950	0	1300

NOTE:
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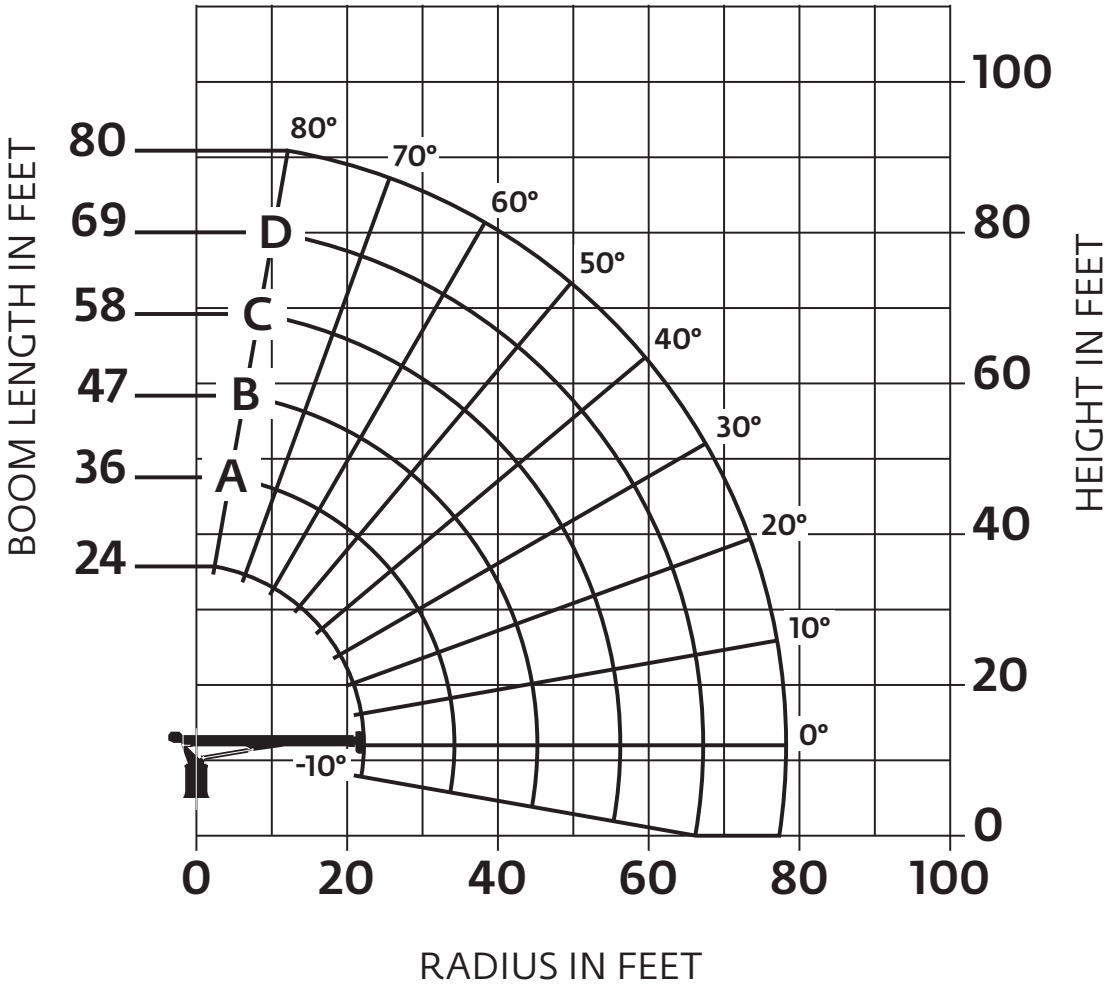
Working range - 680H

24,38 m
(80 ft)

100%

360°



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Load chart - 680H

 7,32 m - 24,38 m
(24 ft - 80 ft)

 100%

 360°

 Pounds

LOADED RADIUS (ft)	LOADED BOOM ANGLE (deg)	24 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	A 36 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	B 47 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	C 58 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	D 69 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	80 FT BOOM (lb)
5	76	40,000										
8	68	27,100	75	25,400								
10	62.5	22,400	72	21,400	76.5	20,600						
12	56.5	19,500	68.5	18,350	74	17,550	77.5	17,050				
14	50.5	17,100	65	16,000	71.5	15,300	75.5	14,750				
16	43.5	14,750	61	14,200	70	13,550	73.5	13,050	77	12,150		
20	27	11,100	53.5	11,450	63.5	11,000	69.5	10,550	73.5	10,100	77	8550
25			43	9150	55.5	9000	64	8450	69	8200	73	8000
30			29.5	7000	48	7200	58.5	7050	64.5	6850	69	6550
35					39	5850	52	5900	59.5	5700	65	5500
40					28	4650	45	4800	54.5	4850	61	4650
45					7.5	2600	37	4100	49	4150	56.5	4000
50							28	3450	43	3500	52	3450
55							13.5	2200	36	2950	47	3000
60									28	2450	41.5	2550
65									16	1550	35.5	2150
70											28.5	1700
75											18.5	1150
	0	5800	0	3050	0	1750	0	1000				

NOTE:
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2. Loaded boom angles are given as reference only.

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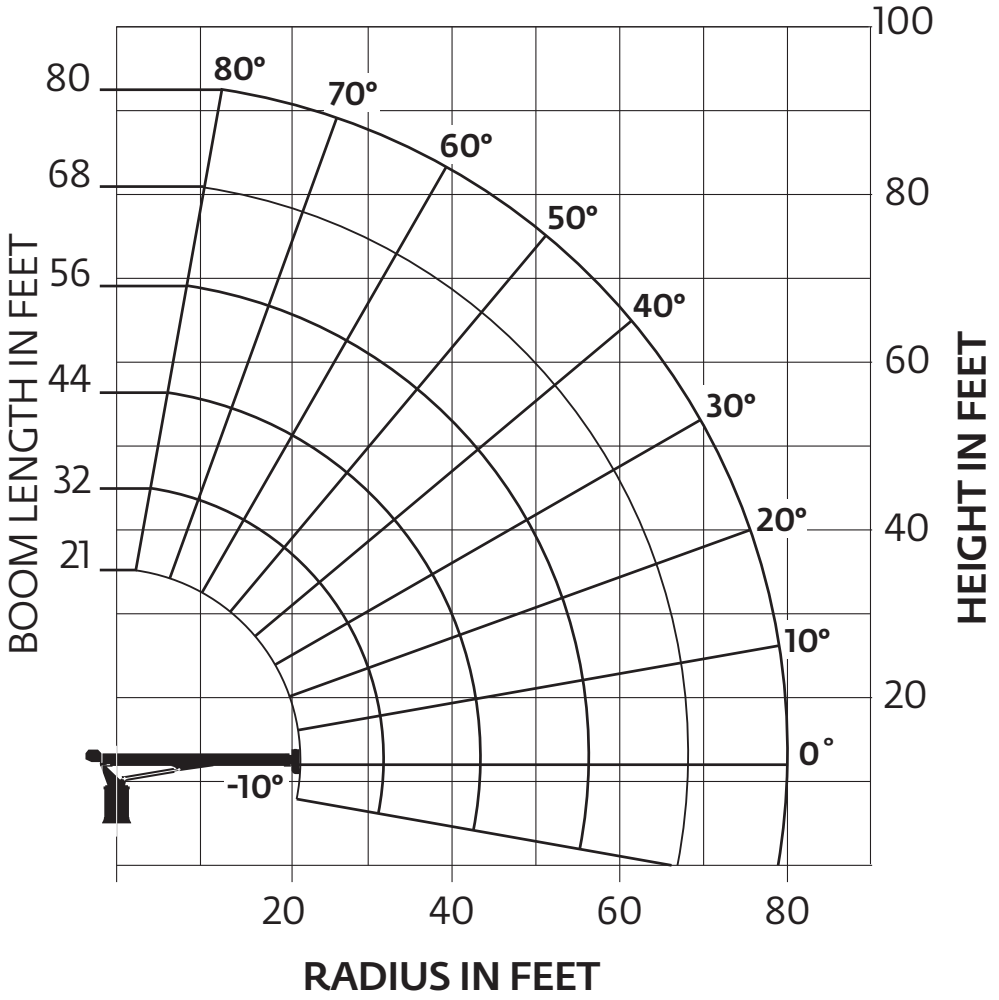
Working range - 680H-TM

24,38 m
(80 ft)

100%

360°



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Load chart - 680H-TM

 7,32 m - 24,38 m
(24 ft - 80 ft)

 100%

 360°

 Pounds

LOADED RADIUS (ft)	LOADED BOOM ANGLE (deg)	21 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	32 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	44 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	56 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	68 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	80 FT BOOM (lb)
5	73	40,000										
8	64	27,000	74	18,000								
10	57.5	21,400	70	18,000	76	16,500						
12	51	18,450	66	18,000	73.5	16,500	77.5	13,200				
14	43.5	16,400	62	16,400	71	16,500	75.5	13,200	80	10,700		
16	34	14,750	57.5	14,750	67.5	14,750	73.5	12,600	78	10,100	79	6800
20			48.5	11,250	61	11,400	69	11,150	74	9250	76	5600
25			34.5	8900	53.5	9150	63	9150	69	8100	72	5100
30					45	7200	56.5	7200	64.5	7200	68.5	4400
35					34.5	6400	50.5	6400	59.5	6400	64.5	3850
40					20	5300	43	5150	54	5000	60	3400
45							35	4150	48	4000	56	2950
50							24	3400	42	3250	51.5	2600
55									35.5	2650	46.5	2300
60									27	2250	41	1950
65									13	1900	35	1650
70											29	1400
75											18	1200
	0	7500	0	5000	0	3900	0	2400	0	1500	0	1200

NOTE:
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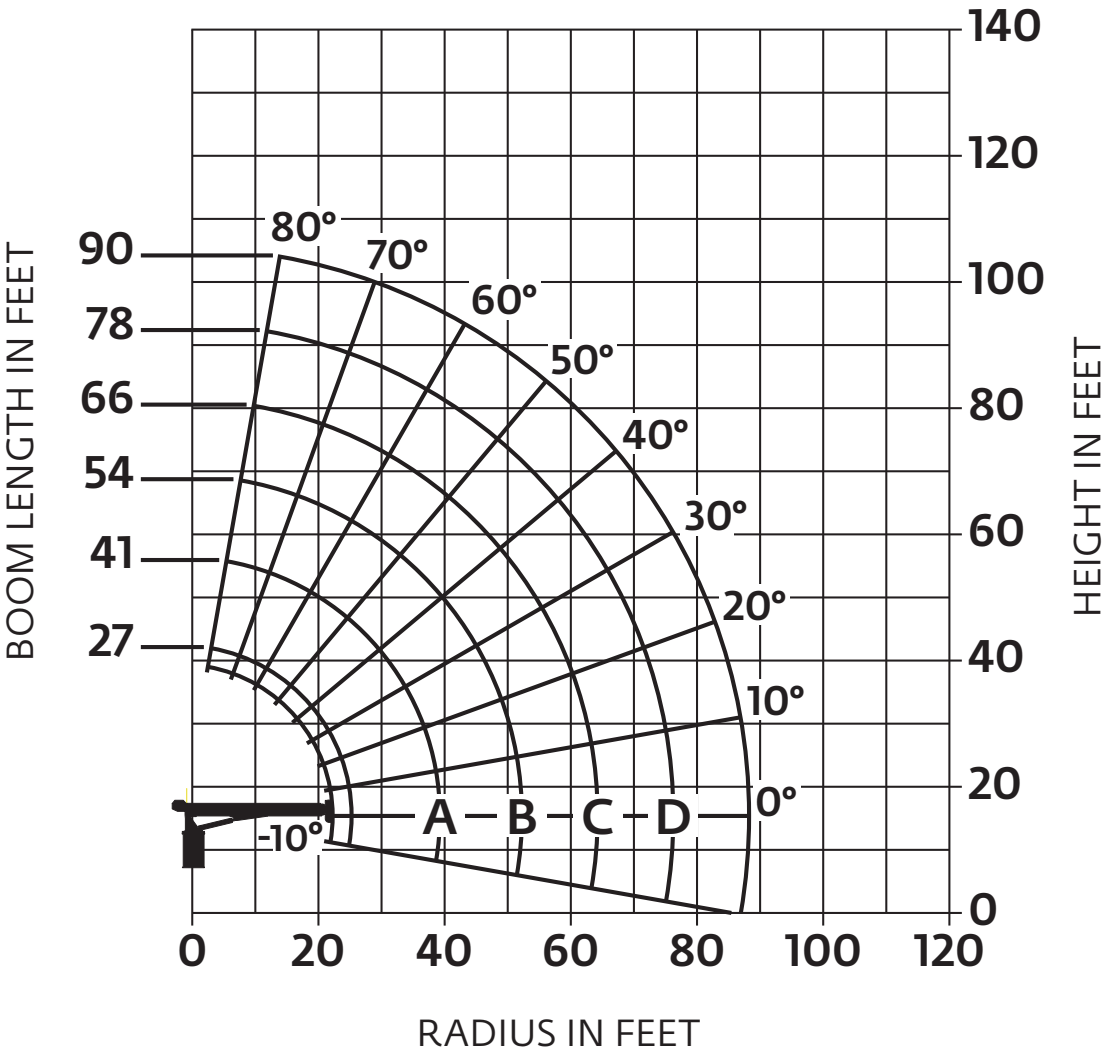
Load chart - 690H

27,43 m
(90 ft)

100%

360°



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Load chart - 690H

 8,23 m - 27,43 m
(27 ft - 90 ft)

 100%

 360°

 Pounds

LOADED RADIUS (ft)	LOADED BOOM ANGLE (deg)	27 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	A 41 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	B 54 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	C 66 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	D 78 FT BOOM (lb)	LOADED BOOM ANGLE (deg)	90 FT BOOM (lb)
5	77	40,000										
8	70	25,750										
10	66	21,400	74	20,950								
12	61.5	18,450	71	17,750	76	17,000						
14	57	16,400	68	15,250	74	15,000	77.5	14,450				
16	51	14,750	65.5	13,300	71.5	13,200	75.5	12,600				
20	40	11,250	58.5	10,800	67.5	10,500	72	9950	76	9700	77.5	7850
25	19	7500	50	9050	61.5	8150	67	7900	71.5	7750	74.5	7550
30			40	7550	55	6750	62.5	6450	68	6250	71.5	6150
35			26.5	5250	48	5700	58	5450	63.5	5200	68	5050
40					40	4600	52	4550	59.5	4400	64.5	4200
45					32	3850	46.5	3850	54.5	3700	61	3550
50					16.5	2450	39.5	3150	50	3150	57	3000
55							31	2550	44.5	2650	53.0	2550
60							21.5	1800	39.5	2250	48.5	2150
65									32.5	1750	44	1850
70									24	1250	39	1500
75									11	450	33	1150
80											26.5	800
	0	4150	0	1950	0	850						

NOTE:
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Specifications

Super Structure

Boom

Five boom length options:

- 4,88 m – 15 m (16 ft – 49 ft) four-section with a max. tip height of 17,98 m (59 ft)
- 7,32 m – 18,3 m (24 ft – 60 ft) three-section with a max. tip height of 21,3 m (70 ft)
- 7,32 m – 24,38 m (24 ft – 80 ft) four-section with a max. tip height of 90 ft (27,44 m)
- 8,23 m – 21,64 m (27 ft – 90 ft) four-section with a max. tip height of 30,48 m (100 ft)
- 6,3 m – 24,38 m (20.6 ft – 80 ft) five-section with a max. tip height of 26,8 m (88 ft). *Note:* This option is only available on the 600H-TM variant. [1]Quick reeve is not available on this boom.

Proportional extension via multi-stage hydraulic cylinder and cable operation; four-plate, high-strength steel construction; two-sheave, quick reeve boom nose[1] and Easy-glide wear pads.

Boom elevation

One (1) double-acting, hydraulic cylinder with holding valve with a -10^0 to $+80^0$

Rated Capacity Limiting (RCL) and anti-two block (ATB) systems

Graphical Rated Capacity Limiter and anti-two block system with audio visual warning and crane function lockout. Includes 145 mm (5.7 in), monochrome screen for real-time display of boom angle, length, radius, tip height, maximum permissible load, load indication and warning of impending overload or anti-two-block condition. Work Area Definition System (WADS) allowing operator definable non-lockout warning limits for crane operations and CAN bus sensors. Any function that will increase the load radius plus winch up of load is interrupted when maximum capacity is exceeded. A momentary override key switch for emergency repositioning of boom. Audio visual warning and crane function lockout. Hard-wired ATB circuit routed internally to the boom. Note: ATB cable is routed externally for five-section booms

Operator station

Dual-station ASME B30.5 compliant proportional crane controls with mechanical direct-to-valve control of hoist, lift, telescope and swing functions on both the driver and passenger sides of the crane. Mechanical direct-to-valve with electric-over-hydraulic selector valves to control all outrigger functions on both the driver and passenger sides of the crane. Burst of speed hoist switch located at each hoist control lever. Sealed electric switches for control of engine start/stop and horn. Throttle pedal located at each side. Load chart(s) located at each side.

Slewing

One (1) Planetary slewing gear with a low speed high torque motor. Integrated holding valves and spring applied, pressure released brake release circuit; 375°, non-continuous rotation; manually adjustable swing speed needle valve.

Hydraulic system

Open-center hydraulics system allowing for multifunction operation of all crane functions. One (1) SAE-BB mounted, three section gear pump for all functions and optimized system performance.

Shaft input of 2400 RPM generating:

Section #1 (Boom/Telescope/Outriggers): 68 lpm (18 gpm) max flow

Section #2 (Hoist): 128.7 lpm (34 gpm) max flow

Section #3 (Swing): 37.9 lpm (10 gpm) max flow

378.5 L (100 gallon) hydraulic reservoir with SAE o-ring connections and integrated suction shut-off ball valve for easy maintenance and SAE o-ring hydraulic fittings and hoses.

Electrical system

Automotive grade, fully wire harnessed 12VDC electrical system using sealed connectors

**Denotes optional equipment.*

Specifications

Lower

Chassis Mounting

Torsion resistant, high-strength steel sub-frame. Crane frame and subframe attached using threaded mounting bolts and drilled and bolted clamp plates for secure attachment to the truck chassis. Rear outriggers attached using Huck® fasteners to both the truck frame and subframe to ensure a secure and maintenance-free connection. Rear bumper underride protection standard on factory mounted cranes.

Mounting configurations

Standard Mount: Crane frame located behind the truck cab; Crane frame supported by a torsion resistant sub-frame; Subframe designed for a 6,1 m (20 ft) flatbed; Out and Down style front outriggers at the crane frame; Out and Down style rear outriggers; Full span outriggers load chart operation; Boom stows over rear of truck; Removable boom rest fabricated from structural steel, located at the rear of the flatbed

Rear Mount: Crane frame located at the rear of the truck chassis; Crane frame supported by a torsion resistant subframe; Subframe designed for a 4,88 m (16 ft) flatbed; Out and Down style over-frame outriggers at the crane frame; Out and Down style over-frame outriggers behind truck cab; Full span outriggers load chart operation; Boom stows over rear of truck; Fixed boom rest fabricated from structural steel, located on the top of the front outrigger box

Tractor Mount: Crane frame located behind the truck cab on a short wheelbase, fifth wheel equipped truck; Crane frame supported by a torsion resistant sub-frame; Out and Down style front outriggers at the crane frame; ASH-style angled cylinder rear outriggers; Full span outriggers load chart operation; Boom stows over front of truck; Fixed boom rest fabricated from structural steel, located behind the truck cab

Outriggers

Standard: Main outriggers have a full span of 5,27 m (17.3 ft) and a midspan of 3,05 m (10 ft) or can be fully retracted. Rear outriggers have a full span of 4,88 m (16 ft) and a midspan of 10 ft (3,05 m) or can be fully retracted. SFO required for 360° stability

Rear: Main outriggers have a full span of 4,66 m (15.3 ft) and a midspan of 4,05 m (13.3 ft) or can be fully retracted. Rear outriggers have a full span of 4,66 m (15.3 ft) and a midspan of 4,05m (13.3 ft) or can be fully retracted. 360° stability

Tractor: Main outriggers have a full span of 6,1 m (20 ft), a midspan of 4,27 m (14 ft) or can be fully retracted. Rear outriggers are straight down only at a span of 2,44 m (8 ft). SFO required for 360° stability

Optional items

- **Outriggers, Sub-frame and Flatbed**
  - > Full and mid-span outrigger option
  - > Single Front Outrigger (SFO) option
  - > Wood and super-duty wood or steel flatbeds
- **Hook blocks**
  - > 6,35 t (7 USt) Overhaul ball for single part line operation
  - > Single sheave, 11,3 t (12.5 USt) hook block for 2-3 part reeving
  - > Two sheave, 19,9 t (22 USt) hook block for 4-5 part reeving (includes auxiliary lineblock and pendant link
  - > Three sheave, 27,2 t (30 USt) quick-reeve hook block for six-part reeving (includes auxiliary line block and pendant link)
- **Jib**
  - > No jib options
- **Duty Cycle Package**
  - > Burst of Speed (BOS) hoist control and Hydraulic Oil Cooler options
  - > Suggested for high duty-cycle and demanding jobsite applications
- **Continuous Rotation**
  - > Provides 360º continuous rotation of crane in either the clockwise or counterclockwise direction
  - > Includes hydraulic and electrical swivel NOTE: Cannot be used in conjunction with some hydraulic options
- **Hydraulics**
  - > Oil cooler option for duty-cycle operation
  - > 1-option control circuit including valve and control lever
- **Operator Aids**
  - > Four-function wireless radio remote control
  - > Metric capacity charts
  - > Spanish documentation and decals
- **Personnel platforms**
  - > One (1) or two (2) person steel, non-insulated, gravity hung, platform options
  - > Capacities up to 544,3 kg (1200 lb) on main boom and 226,7 kg (600 lb) on jib
  - > Basket test weight sets available
  - > B1-S, BSA-1, BSA-R1 (provides rotation)
- **Bulkhead**
  - > Steel 762 mm (30 in) solid wall bulkhead

**Denotes optional equipment.*

Specifications

Hoist

10,200 lb (4627 kg) planetary gear with a single speed motor;
Integrated motor manifold and spring applied, pressure released brake

Parts of Line	1 part line	2 part line	3 part line	4 part line	5 part line	6 part line
Max boom length (ft) at max elevations with stated rigging and load block and ground level	27,43 m (90 ft)	27,43 m (90 ft)	16,46 m (54ft)	12,8 m (42 ft)	8,23 m (27 ft)	8,23 m (27 ft)
Lift and speed	3493 kg (7700 lb) 30 m/min (100 fpm)	6985 kg (15,400 lb) 15 m/min (50 fpm)	10 478 kg (23,100 lb) 10 m/min (33 fpm)	13 971 kg (30,800 lb) 7,6 m/min (25 fpm)	17 463 kg (38,500 lb) 6,1 m/min (20 fpm)	18 144 kg (40,000 lb) 5,1 m/min (16.7 fpm)

NOTE: All hoist lifts and speeds in this chart are shown on the fourth layer. Hoist lifts would increase on the lower layers and hoist speeds would increase on the higher layers.

Line Pulls and Reeving Information			
Hoists	**Cable specs.**	**Permissible line pulls**	**Nominal cable length**
Main	Standard 9/16" (14 mm) diameter rotation resistant Min. Breaking Strength 17 463 kg (38,500 lb)	3493 kg (7700 lb)	99,1 m (325 ft)

The approximate weight of 9/16 (14 mm) in wire rope is 1,04 kg/m (0.70 lb/ft).
*With certain boom and hoist tackle combinations, the allowable line pull may be limited by hoist performance. Refer to Hoist Performance table for lift planning to ensure adequate hoist performance on drum rope layer required.

Hoist Performance			
Wire rope layer	**Hoist Line Pull**	**Line speed**	**Drum Capacity**
1	4627 kg (10,200 lb)	33,8 m /min (111 ft/min)	19,5 m (64 ft)
2	4173 kg (9200 lb)	37,5 m /min (123 ft/min)	41,5 m (136 ft)
3	3810 kg (8400 lb)	41,2 m /min (135 ft/min)	65,5 m (215 ft)
4	3493 kg (7700 lb)	44,8 m /min (147 ft/min)	91,7 m (301 ft)
5	3221 kg (7100 lb)	48,5 m /min (159 ft/min)	120,1 m (394 ft)

*Refer to Line Pulls and Reeving Information table for max. lifting capacity of wire rope.

Synthetic rope layer height may vary and may reduce available line pull per layer.

Weight Reductions for Load Handling Devices	
Hook blocks and headache balls	
6,35 t (7 USt) overhaul ball	77,6 kg (171 lb)+
11,3 t (12.5 USt) single-sheave hook block	85 kg (187 lb)+
19,9 t (22 USt) two-sheave hook block	161 kg (355 lb)+
27,2 t (30 USt) three-sheave hook block	261 kg (575 lb)+

+ Refer to rating plate for actual weight

When lifting over boom extension, deduct total weight of all load handling devices reeved over main boom nose directly from boom extension capacity.

NOTE: All load handling devices and boom attachments are considered part of the load and suitable allowances MUST BE MADE for their combined weights. Weights are for Manitowoc furnished equipment.

Symbols glossary


Axles


Drive


Heavy duty jib


Radius


Boom


Electrical system


Hoist


Rotation


Boom elevation


Engine


Hookblock


Speed


Boom extension


Hydraulic system


Steering


Boom length


Frame


Insert


Suspension


Boom nose


Fuel tank capacity


Lights


Swing


Brakes


Gear


Oil


Tires


Operators station


Grade


Outrigger controls


Transmission


Counterweight


Height (no max)


Outriggers

Notes

Notes

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