

IC-20-K **Industrial Crane**

The IC-20 may be the shortest Broderon crane on the market, but don't be fooled by its small size. Sharing many of the same features as the larger Broderon models, this crane's rugged construction makes it perfect for any close-quarters job.

Capacity

5,000 lbs. (2,270 kg)

Sheave Height

27' 9" (8.46 m)
(with boom extension)

Horizontal Reach

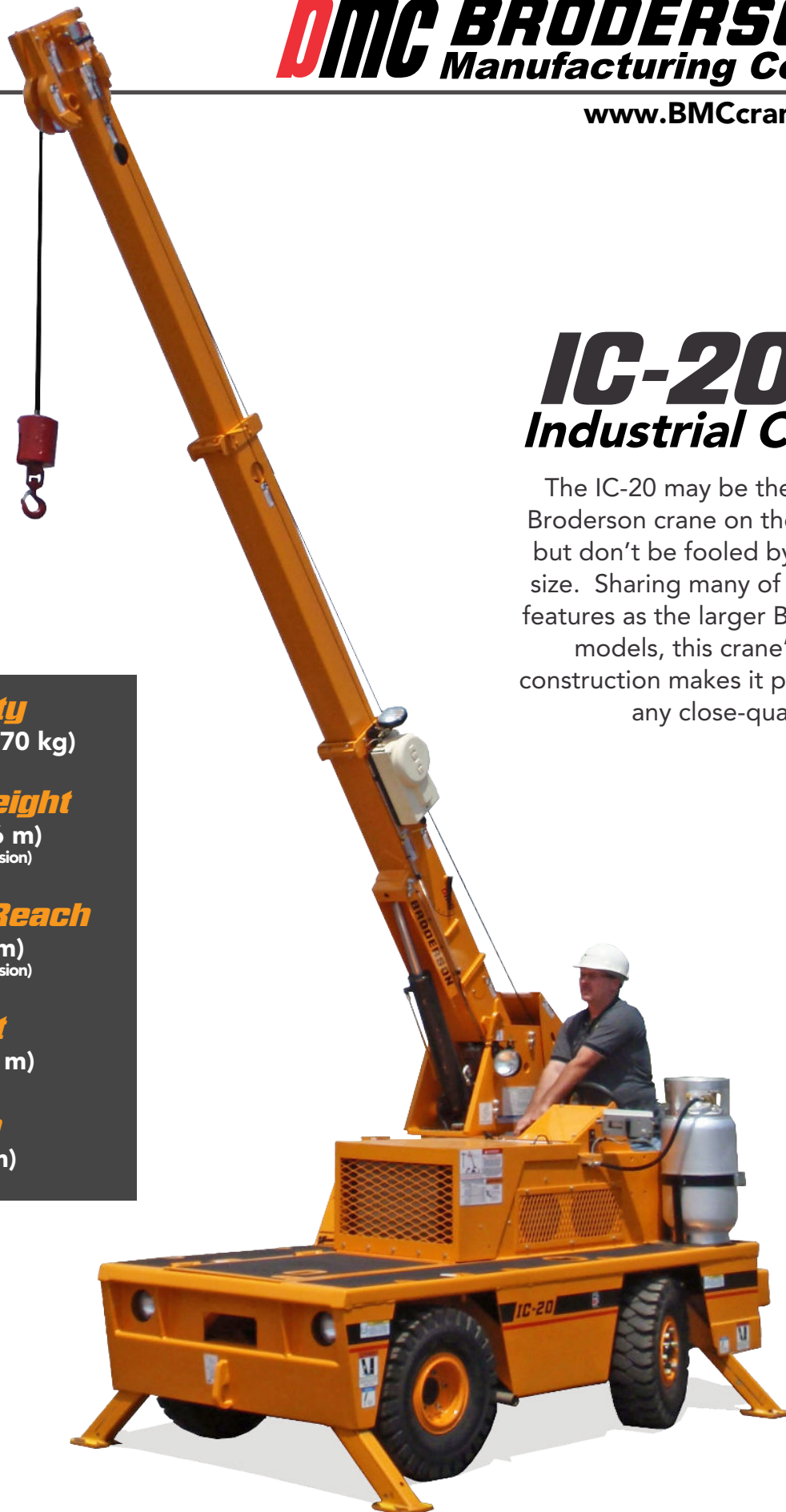
22' (4.78 m)
(with boom extension)

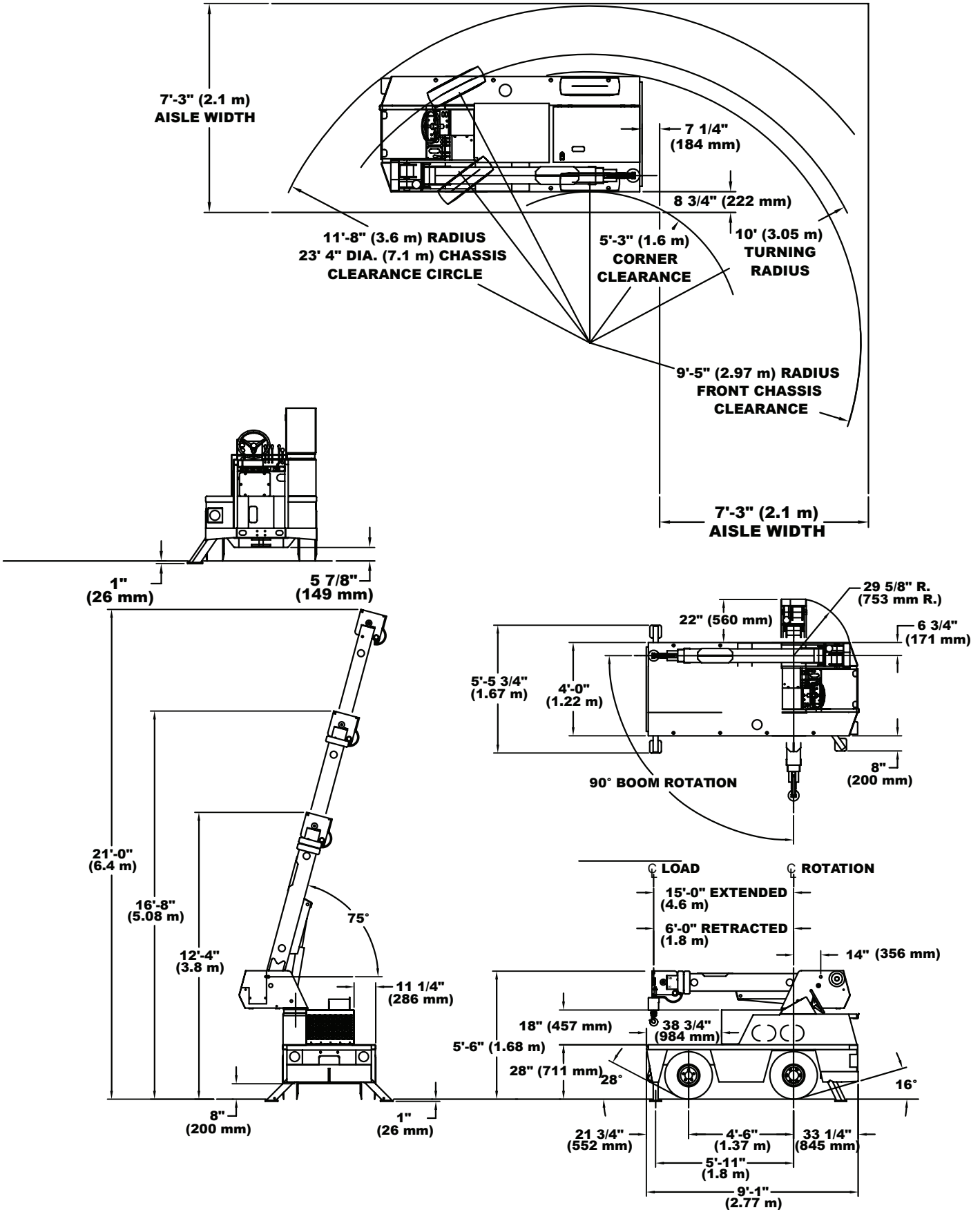
Height

5' 6" (1.68 m)

Width

4' (1.22 m)





IC-20-K

GENERAL SPECIFICATIONS



GENERAL

	ROTATION	ELEVATION	EXTENSION
Boom Movement	90°	0° to 75°	6-15' (1.8-4.6m)
Boom Speeds	10 sec.	9 sec.	25 sec.
Weight Total	6,380 lbs. (2,900 kg.)		
Travel Speed	0 to 5.5 mph (8.8km/h)		
Drawbar Pull	3,000 lbs. (1,360 kg.)		

ENGINE

Make	Kubota	Kubota
Model	1.6L EFI	1.8L D1803 (T4F)
Type	Dual Fuel	Diesel
Cylinder	4	3
Displacement	1.6L	1.8L
HP @ Gov. Speed	44HP (33 KW)	50HP (37 KW)
Fuel Tank Capacity	13.5 gal. (51L)	13.5 gal. (51L)

HYDROSTATIC PUMP

Piston type, direct driven from engine crankshaft.
Maximum flow 30 GPM (114 L/min).
Maximum pressure 3,000 psi (207 bar).

AXLES

FRONT
Contains planetary geared torque hubs and high torque hydraulic drive motors. Axle oscillates a total of 1-1/2" (38 mm).
REAR
Non-oscillating.

STEERING

Hydraulic steering unit controls cylinder attached to rear axle.

BRAKES

Primary braking from hydrostatic transmission. Foot-actuated disc brakes for additional braking. Spring applied hydraulic released park brake, actuated from a toggle switch on operator's control panel. All braking is on front wheels.

TIRES

FRONT
7.5 x 10 pneumatic, 16-ply, 145 PSI (1000k Pa)
REAR
7.5 x 10 pneumatic, 16-ply, 145 PSI (1000k Pa)

CHASSIS

CARGO DECK

19 sq. ft. (1.77 m²) of deck area. 5,000 lbs. (2,270 kg) capacity.

OUTRIGGERS

Three hydraulic outriggers of box-beam construction. Independent controls for each. Hydraulic cylinders are equipped with direct-connected holding valves.

LIFTING SLING BRACKETS

Includes two lift rings in front deck and lug on turntable for attaching lifting sling cables. Cables not included.

PULLING EYE

Mounted on front bumper.

OPERATOR COMPARTMENT

Provides one-position access to all chassis & crane functions. Includes fire extinguisher & bubble level.

ELECTRICAL (12-VOLT SYSTEM)

LIGHTING PACKAGE

One pair headlights and taillight.

DISPLAY

Lighted fuel, voltmeter, oil pressure, and water temperature gauges, hydraulic oil temperature gauge and hourmeter.

BACK-UP ALARM

Provides pulsating sound from 97dB alarm when transmission is in reverse.

OUTRIGGER ALARM SYSTEM

Pulsating alarm is activated when outriggers are being activated.

HYDRAULIC

TANDEM PUMP mounted to rear of hydrostatic piston pump. Delivers 6 GPM (23 L/min) at 2,500 PSI (172 bar) for boom circuits and 16 GPM (98.5 L/min) at 2,500 PSI (172 bar) for hoist circuit. System protected by relief valves and two micron filters. Hydraulic oil reservoir has 9.5 gallon (36 L) capacity.

BOOM ASSEMBLY

THREE-SECTION BOOM ASSEMBLY equipped with bearing pads, double-acting hydraulic cylinders extends boom. The primary extension cylinder and the double-acting boom elevation cylinder are equipped with direct connected holding valves. Boom angle indicator on left side of boom.

BOOM ROTATION

Two double-acting hydraulic cylinders connected to turntable torque tube provides 90° rotation. Heavy-duty ball bearing supports boom.

ANTI-TWO-BLOCK DEVICE

Prevents damage to hoist rope and/or crane components from pulling load hook against tip.

SHEAVE BLOCK, TWO-PART

Single sheave block for 2-part line requirements.

CONSULT THE IC-20-K ENGINEERING SPEC FOR ADDITIONAL INFORMATION.

MAIN FEATURES

CAPACITY ON OUTRIGGERS
5,000 lbs. (2,270 kg)

PICK AND CARRY CAPACITY
up to 2,500 lbs. (1,130 kg)

HEIGHT (w/o Operator Guard)
5' 6" (1.68 m)

HEIGHT (w/ Operator Guard)
7' 6" (2.3 m)

WIDTH
4' (1.22 m)

BOOM ROTATION
90°

SHEAVE HEIGHT
up to 27' 9" (8.46 m)

HORIZONTAL REACH
up to 22' (4.78 m)

TIGHT TURNING RADIUS

REAR WHEEL STEER
Standard

FRONT WHEEL DRIVE
Standard

**FULLY HYDRAULIC CONTROLS FOR
SMOOTH, PRECISE OPERATIONS**

DUAL FUEL OR DIESEL AVAILABLE

OPTIONS

TIRE

Solid Rubber Tires

For applications where hazardous ground conditions exist.

Solid Rubber Tires - Non Marking

Foam Filling of Tires

Spare Tire & Wheel - Pneumatic

Spare Tire & Wheel - Solid Rubber

Spare Tire & Wheel - Solid Rubber, Non Marking

Foam Filling of Spare Tires

CARGO DECK

Deck Mat

CHASSIS

Auxiliary Winch

Mounted behind the front bumper, hydraulically driven with control in operator's console provides bare drum line pull of 2,500 lbs (1,134 kg) @ 20 FPM (6m/min).

Pintle Hook - Rear

Holland "T-60-A" pintle hook mounted on rear of frame. 5-ton capacity.

Lifting Sling

Three leg lift sling to attach to Lifting Rings.

Rearview Mirrors

One mounted on right and left-hand deck stake. Pivots out of way for obstacles.

OPERATOR COMPARTMENT

Operator Guard

Tubular steel weldment with heavy expanded steel mesh top section. Overhead height with guard installed is 90 inches.

Floor Mat

Vinyl mat with foam backing.

ELECTRICAL

Strobe Lights

One yellow strobe light mounted on top of operator's guard for high visibility. When the operator's guard is not ordered the strobe light is mounted on left-hand frame rail.

Boom Work Lights

One work light mounted to boom to light boom tip and one work light mounted to turret to light ground under boom tip. Includes switch in operators compartment.

RCL Light Bar

3 color light bar for external indication of load status

BOOM ATTACHMENTS:

Boom Swing Lock

Prevents boom from being swung in normal 90 degree arc.

7 Foot Pin-On Jib

Consists of jib with pair of tension bars, tip sheave, cable keeper and jib attaching pins.

Tension bars provide two positions: In-line and 30 degree offset.

Rated Capacity Limiter

Broderson Cranes are manufactured to ISO 9001:2015 certified standards and have a market leading reputation for quality and reliability. Broderson Cranes are engineered for operating efficiency and are easy to operate and maintain.

An extensive network of full-service dealers offer parts and service support by factory-trained technicians.

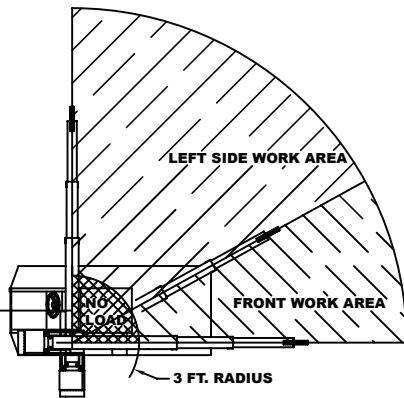
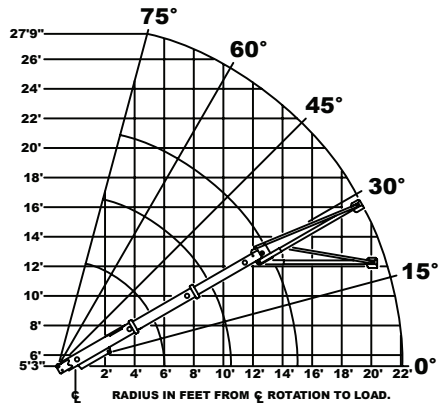
For additional options or special equipment not listed, please consult your dealer salesperson or contact Broderson Manufacturing Corp.

BRODERSON[®]
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Lenexa, KS 66215 USA

(913) 888-0606
www.BMCcranes.com

Dimensions and values shown
are for reference purposes
only. Specifications subject
to change.





WORK AREA DIAGRAM

NOTE: DO NOT OPERATE INSIDE 3-FOOT LOAD RADIUS. JIB MAY BE OPERATED IN ALL WORKING AREAS.

Pick and carry with the shortest practical boom, centered over the front axle. Operate with the boom as low as possible, with the load close to the ground. Pick and carry capacities are for smooth, level, paved surfaces.

CAPACITIES IN LBS. FOR OPERATION ON FIRM LEVEL SURFACE					
LOAD RADIUS FEET	3-SECTION BOOM				7-FT. JIB
	FRONT ON RUBBER	FRONT ON OUTRIGGERS	LEFT SIDE ON RUBBER	LEFT SIDE ON OUTRIGGERS	ON RUBBER OR OUTRIGGERS
4	2500	5000	3800	5000	1300
5	2000	4000	3100	4000	1100
6	1500	3300	2500	3300	750
8	1400	2500	1500	2500	650
10	1300	2000	1000	2000	550
12	1200	1600	750	1400	500
15	1100	1200	500	1000	500
17					425
19					325
22					225

Boom angle must not be less than 30° except while rigging if the jib is in the 30° offset position.

Load hook, downhaul weight, hook blocks, and other load handling devices shall be considered part of the load except for hoist rope.

Deck load capacity 5,000 lbs. (centered over axle). Carry speed 3 mph max. The booms on this unit are all steel and have no line voltage rating.

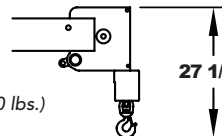
All capacities apply to firm level surfaces.

Ensure anti-two block switch is functional after installing or removing jib. Maximum hydraulic pressure 2,500 PSI.

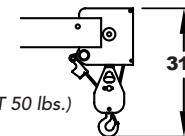
The load hoist line on this unit must be 5/16" dia. 6X36- IPS-IWRC wire rope with a minimum breaking strength of 9,160 lbs.

Tire pressure 145 PSI for 7.50-10 16PR; torque front wheel nuts to 60 ft. lbs., rear wheel nuts to 200 ft. lbs. (These conditions must be maintained to handle rated loads on this crane.)

USE SINGLE PART LOAD LINE FOR LOAD TO 2,500 lbs. (DOWNHAUL WEIGHT 40 lbs.)



USE TWO PART LOAD LINE FOR LOAD TO 5,000 lbs. (SHEAVE BLOCK WEIGHT 50 lbs.)



OPERATION

1. Read and understand the operation and maintenance manual before operating this crane.
2. Check level of engine oil and hydraulic oil daily.
3. Check unit for visible defects and loose parts daily.
4. Start engine.
5. Set vehicle park brake securely.
6. Extend outriggers to solid footing.
7. Operate all hydraulic controls slowly and smoothly. Avoid sudden starts and stops.
8. Drive slowly when making sharp turns on slopes.

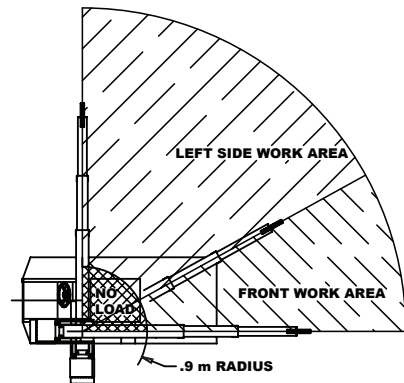
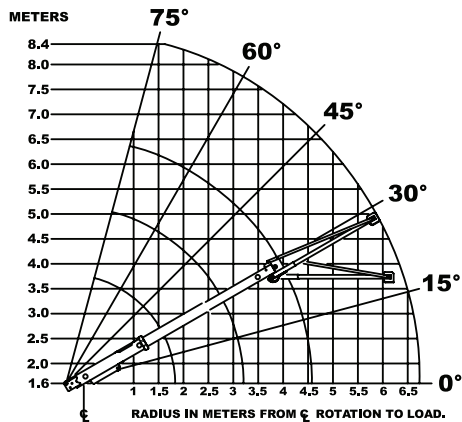
LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION OF THE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.

EXCEEDING CAPACITY RATINGS OR APPLYING SIDE LOADS TO THE BOOM OR JIB IS MISUSE, HAZARDOUS, AND VOIDS WARRANTY.

CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY. DO NOT PICK AND CARRY WITH LOADS ON BOOM EXTENSION.

CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITY.

Load Chart Metric



WORK AREA DIAGRAM

NOTE: DO NOT OPERATE INSIDE .9 METER LOAD RADIUS. JIB MAY BE OPERATED IN ALL WORKING AREAS.

Pick and carry with the shortest practical boom, centered over the front axle. Operate with the boom as low as possible, with the load close to the ground. Pick and carry capacities are for smooth, level, paved surfaces.

CAPACITIES IN KILOGRAMS FOR OPERATION ON FIRM LEVEL SURFACE

LOAD RADIUS METERS	3-SECTION BOOM				2.1 m JIB
	FRONT ON RUBBER	FRONT ON OUTRIGGERS	LEFT SIDE ON RUBBER	LEFT SIDE ON OUTRIGGERS	ON RUBBER OR OUTRIGGERS
1.2	1130	2270	1720	2270	590
1.5	920	1840	1430	1840	510
2.0	670	1370	990	1370	310
2.5	630	1110	650	1110	290
3.0	590	920	460	920	250
3.5	550	770	370	700	230
4.0	520	660	290	530	220
4.5	500	550	230	460	220
5.0					200
5.5					170
6.0					130
6.7					100

Boom angle must not be less than 30° except while rigging if the jib is in the 30° offset position.

Load hook, downhaul weight, hook blocks, and other load handling devices shall be considered part of the load except for hoist rope.

Deck load capacity 2,270 kg (centered over axle). Carry speed 5 km/h max. The booms on this unit are all steel and have no line voltage rating.

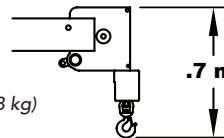
All capacities apply to firm level surfaces.

Ensure anti-two block switch is functional after installing or removing jib. Maximum hydraulic pressure 172 bar.

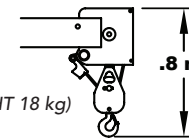
The load hoist line on this unit must be 7.9mm dia. 6X36- IPS-IWRC wire rope with a minimum breaking strength of 4,155 kg.

Tire pressure 1,000 PA for 7.50-10 16PR; torque front wheel nuts to 80 Nm, rear wheel nuts to 270 Nm. (These conditions must be maintained to handle rated loads on this crane.)

USE SINGLE PART LOAD LINE FOR LOAD TO 1135 kg (DOWNHAUL WEIGHT 18 kg)



USE TWO PART LOAD LINE FOR LOAD TO 2270 kg (SHEAVE BLOCK WEIGHT 18 kg)



OPERATION

1. Read and understand the operation and maintenance manual before operating this crane.
2. Check level of engine oil and hydraulic oil daily.
3. Check unit for visible defects and loose parts daily.
4. Start engine.
5. Set vehicle park brake securely.
6. Extend outriggers to solid footing.
7. Operate all hydraulic controls slowly and smoothly. Avoid sudden starts and stops.
8. Drive slowly when making sharp turns on slopes.

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