



bmc
Tech Spec

IC-80-J
Industrial Crane

**18,000 lb Max. Capacity
Available in 3 Boom
Lengths**

- Rated Capacity Limiter ... Standard
- Capacity on Outriggers ... 18,000 lb
- Pick and Carry Capacity ... up to 11,700 lbs
- Height ... 7' 3"
- Width ... 6' 6"
- Boom Rotation ... 360 Degree Continuous
- Sheave Height ... up to 46'
- Horizontal Reach ... up to 40'
- 4-Wheel Steer ... Standard
- Powershift Transmission ... Standard
- Fully Hydraulic Controls for Smooth Precise Operations
- Independent Outrigger Controls
- Dual Fuel or Diesel Engine Available

BRODERSON
Manufacturing Corp.





IC-80-J

Specifications

GENERAL:

Weight:	IC-80-1J	IC-80-2J	IC-80-3J
2-Wheel Drive	16,200 lb (7,350 kg)	16,400 lb (7,440 kg)	16,750 lb (7,600 kg)
Boom Movement:			
Rotation	Continuous	Continuous	Continuous
Elevation	0° to 70°	0° to 70°	0° to 70°
Extension	12 ft. (366 cm)	14 ft. 6 in. (442 cm)	18 ft. 6 in. (564 cm)
Boom Speeds:			
Rotation	2.0 RPM	2.0 RPM	2.0 RPM
Elevation	10.0 sec.	10.0 sec.	10.0 sec.
Extension	17.0 sec.	21.0 sec.	27.0 sec.
Turning Radius:			
(C/L of Outside Steering Wheel)		11 ft. 2 in. (3.40 m)	
Aisle Width for 90° Turn:		9 ft. 7 in. (2.92 m)	
Gradeability:		63 percent (32 degrees)	

ENGINE:	Dual Fuel	Diesel
Make	GM	Cummins
Model	3.0 EFI* EPA Tier II	B 3.3L EPA Tier IVi
Type	Gas	Diesel
No. Cyl.	4	4
Displacement	181 CID (3.0 L)	199 CID (3.3 L)
HP @ Gov. Speed	59 (44kW)	74 (55kW)
Electronic Fuel Injection with Dual Fuel, US EPA & CARB. Certified for 2012 emissions standards		
Fuel Tank Capacity: 17.6 Gallons (66.6 L)		

TRANSMISSION:

Powershift transmission with 4-speeds in forward & reverse. Provides powershifts at any engine speed in any gear. All shifting is done with a single lever electrical control mounted on the steering column. Multiple-disc clutch packs operated by solenoid valve provide forward, neutral, reverse and speed selection. Equipped with oil cooler and filter. Torque converter has stall ratio of 2.2:1.

Transmission Gear	Forward or Reverse	Travel Speed MPH (km/h)	Drawbar Pull ¹ Pounds (kg)
First	5.72:1	4 (6)	15,500 (7,031)
Second	3.23:1	7 (11)	8,700 (3,946)
Third	1.77:1	13 (21)	4,600 (2,087)
Fourth	1.00:1	22 (35)	2,500 (1,134)

1) Drawbar pull is calculated based on GM 3.0L gasoline engine.

AXLES:

Front:

Planetary drive/steer axle with 11.625:1 axle ratio. Differential is "No-Spin." Axle mounted rigidly to frame.

Rear:

2-Wheel Drive:

Axle with 1-1/2° oscillation in either direction.

STEERING:

Hydraulic steering unit with cylinders attached to each axle. Rear axle is the primary steer. An electric switch in the operator's compartment is used to select rear-wheel steering, four-wheel round steering or crab steering. Electronic sensors and control box automatically align the steering when a new mode is selected.

BRAKES:

Four-wheel hydraulic. Wet disc brakes are on the front and rear axles. Parking brake is disc type.

TIRES:

2-Wheel Drive 10.00 x 15, load range H bias, 16-ply rating.

CHASSIS:

Cargo Deck:

53 square feet (5 m²) of deck area. A maximum of 14,000 lb (6,350 kg) capacity on deck when load is centered over or between axles.¹ A storage box is located in front cargo deck. Steps located on front corners. Heavy deck loads allowed at creep speed below 2 MPH (3.2 km/h) and less than 200 feet (61 m) in 30 minutes.

Headlight and Taillight Grilles:

Welded steel protective grilles for headlights and taillights.

Outriggers:

Four hydraulic outriggers of box beam construction. Independent controls for each outrigger. Each cylinder equipped with direct-connected holding valves. Outrigger pad dimension 9 inches (23 cm) x 12 inches (30 cm).

Lifting Rings:

Lifting rings at each corner of cargo deck so sling can be attached for lifting crane.

OPERATOR COMPARTMENT:

Operator's control station provides one-position access to all operating functions. Includes adjustable operator's seat, retracting seat belt, fire extinguisher and bubble level.

ELECTRICAL (12 Volt System):

Instrument Package:

Includes fuel gauge and hourmeter. Also included are warning lights for low oil and transmission pressure, turn signal, high beams, hazard lights, parking brake, hydraulic oil temperature, battery, check engine, stop engine, coolant temperature, outriggers.

Lighting Package:

One pair headlights with Hi and Low beams, back-up lights, integral tail, brake, front and rear turn signals and emergency flasher switch at operator's station. 12V horn actuated by button on shifting control.

Back-Up Alarm:

Provides pulsating sound from 97 dB alarm when transmission is in reverse. Conforms to SAE J994b.

Outrigger Alarm System:

Two-tone alarm is activated when "outrigger down" controls are operated.

HYDRAULIC SYSTEM:

Tandem pump, direct-driven by engine crankshaft, rated at 16 & 32 GPM at rated RPM (61 L/min & 121 L/min). Hydraulic oil tank capacity of 25 gallons (95 L).

BOOM ASSEMBLY:

Three-section boom assembly equipped with bearing pads, double-acting hydraulic cylinders with direct-connected holding valves & boom angle indicator on each side of boom.

Boom Rotation:

Heavy-duty ball bearing rotation gear with external teeth. Rotation is powered by hydraulic motor and worm gear drive.

Boom Hoist:

Turret mounted planetary gear hoist hydraulically powered with a bare-drum line pull of 10,000 lbs (4,536 kg) at a speed of 110 FPM (34 m/min). Includes downhaul weight, swivel hook & sheave block for 2-part line and 125 ft (38 m) of 9/16" (14 mm) hoist rope.

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.

Rated Capacity Limiter:

Warns operator of impending overload with audible and visual signals. Prevents overload by stopping boom functions that cause overloads.

Drum Rotation Indicator:

Provides tactile feedback to operator when hoist drum is rotating.



IC-80-1J

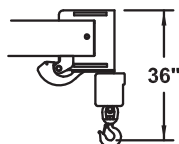
CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE				
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS			
	360° ROTATION		OVER FRONT	
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS
MAIN BOOM	5	9600	17000	11700
	6	7900	14500	10400
	8	5750	10250	8400
	10	4150	7700	6300
	12	3100	6550	4650
	14	2425	5550	3750
	16	2000	4650	3100
	18	1700	4100	2650
	20	1450	3550	2300
	22	1275	3000	2000
10' BOOM EXT.	24	1075	2800	1725
	26	925	2500	1500
	28	775	2200	1300
	30	675	2000	1150
	10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET			
	MAIN BOOM ANGLE			
	ANGLE	0°	30°	45°
		60°	70°	
	*† 0°	2250	2600	3200
	†15°	---	2400	2700
	†30°	---	2250	2500

*USE 0° FOR STRAIGHT BOOM EXTENSION. †USE 0°, 15° OR 30° FOR OFFSET BOOM EXTENSION.

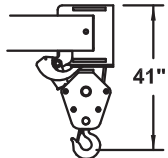
LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION OF THE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.

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

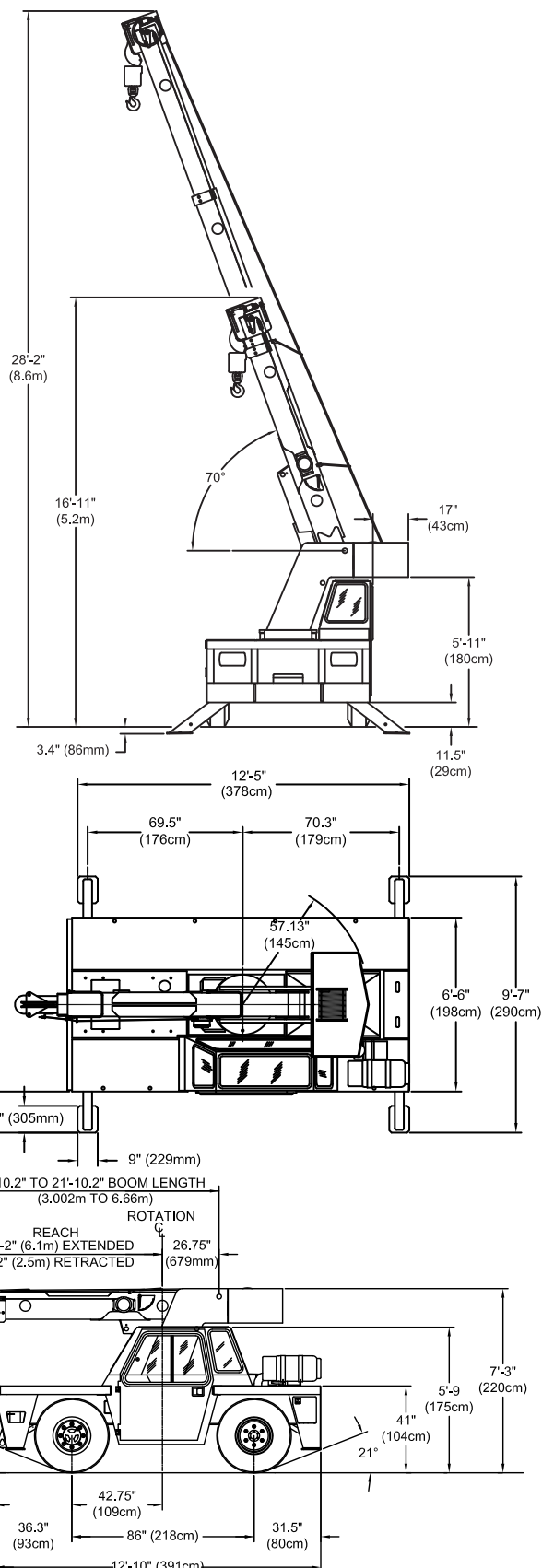
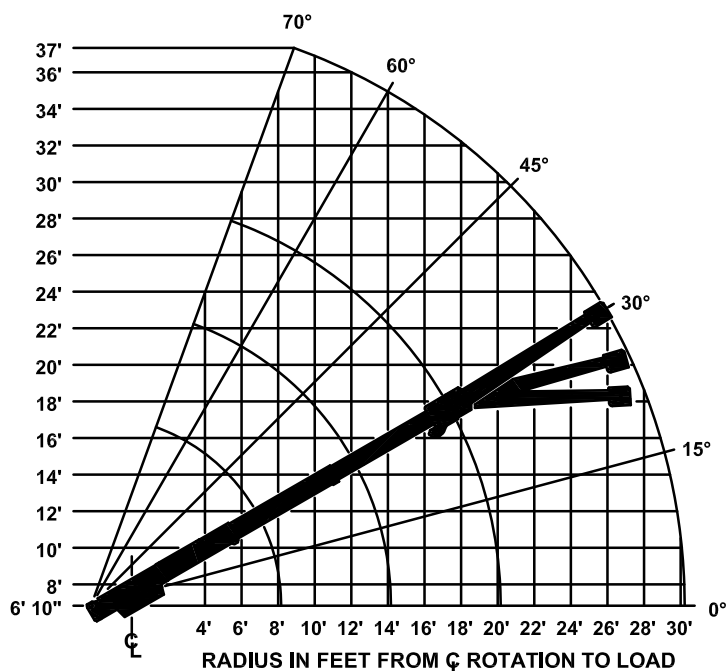
CAUTION BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY. DO NOT PICK & CARRY WITH LOADS ON BOOM EXTENSION. CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITY.



USE SINGLE PART
LOAD LINE FOR
LOADS TO 9000
LBS.
(WT. 90 LBS.)



USE TWO PART
LOADLINE FOR
LOADS TO 18000
LBS.
(WT. 124 LBS.)





IC-80-2J

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE						
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS					
	360° ROTATION		OVER FRONT			
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
MAIN BOOM	5	9500	17000	11600	18000	
	6	7800	14500	10200	14500	
	8	5650	10250	8250	10250	
	10	4000	7700	6200	7700	
	12	3000	6550	4650	6550	
	14	2350	5550	3650	5550	
	16	1900	4550	2950	4550	
	18	1600	3950	2500	4050	
	20	1350	3350	2150	3650	
	22	1150	2950	1850	3300	
	24	1000	2550	1650	3100	
	10' BOOM EXT.	26	850	2450	1450	2750
28		725	2175	1275	2500	
30		625	1900	1125	2300	
32		525	1725	1000	2100	
34		425	1500	900	1950	
BOOM EXT.		10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET				
		MAIN BOOM ANGLE				
ANGLE		0°	30°	45°	60°	70°
*† 0°		2250	2600	3200	5000	7000
†15°		---	2400	2700	3500	4200
†30°	---	2250	2500	3000	3300	

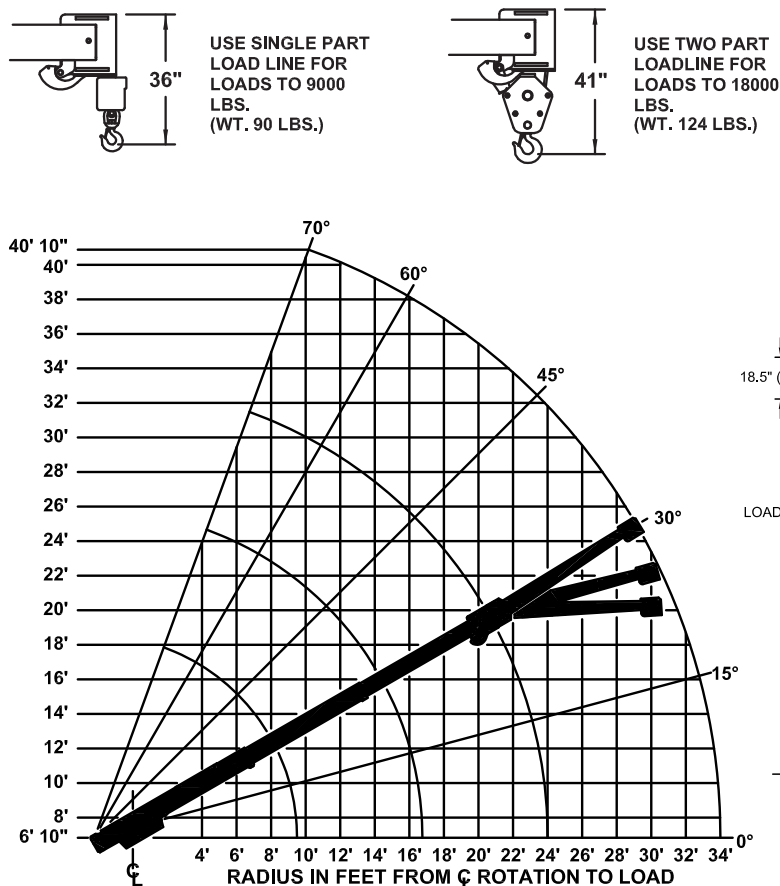
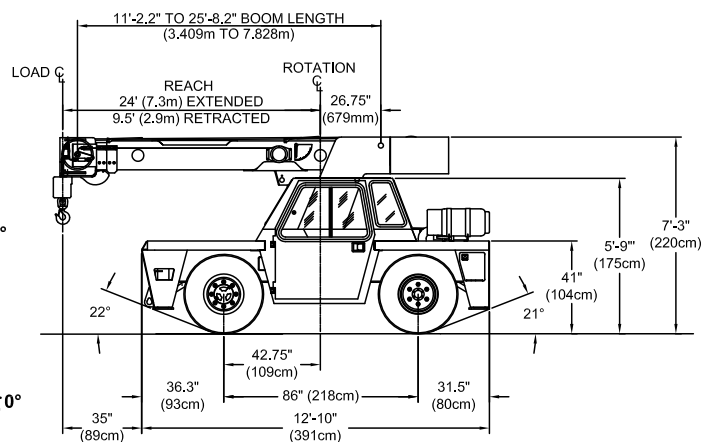
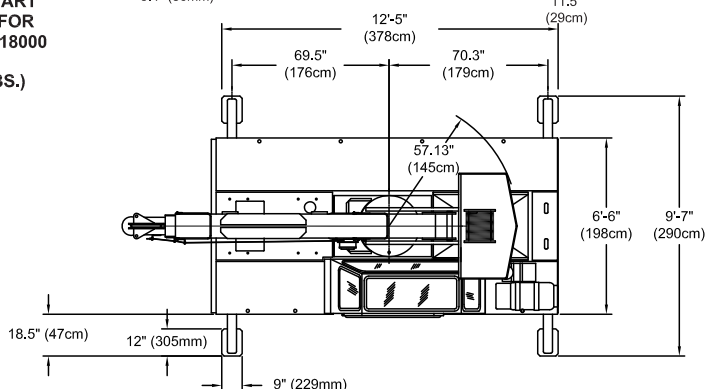
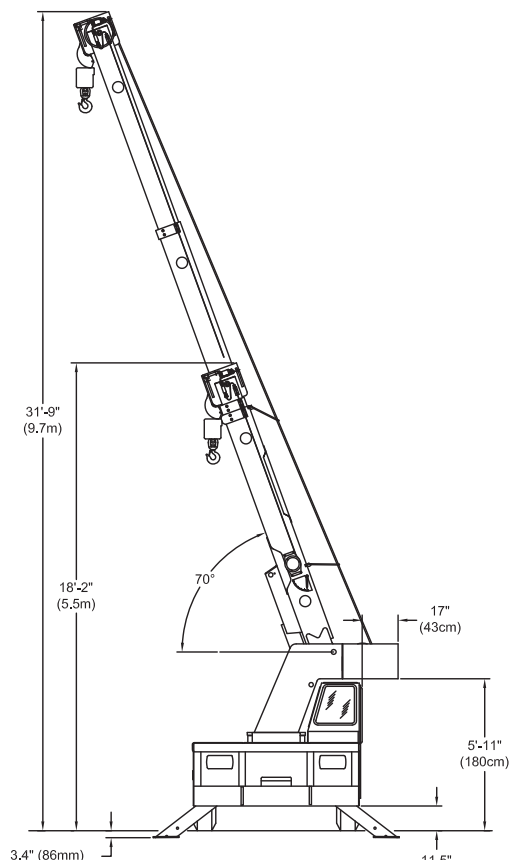
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IC-80-3J

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE						
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS					
	360° ROTATION		OVER FRONT			
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
MAIN BOOM	5	9400	17000	11400	18000	
	6	7550	14000	10000	14000	
	8	5600	10000	8100	10000	
	10	4300	7700	6100	7700	
	12	3200	6100	4450	6100	
	14	2550	5200	3400	5200	
	16	2050	4400	2700	4400	
	18	1650	3900	2200	3900	
	20	1350	3400	1800	3400	
	22	1150	3050	1550	3050	
	24	1000	2750	1350	2800	
	26	850	2450	1200	2550	
10' BOOM EXT.	28	750	2200	1100	2350	
	30	650	1950	1000	2150	
	32	450	1750	900	1950	
	34	350	1600	800	1800	
	36	250	1450	700	1650	
	38	200	1300	600	1500	
	40	150	1150	500	1400	
	BOOM	10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET				
	EXTENSION	MAIN BOOM ANGLE				
	ANGLE	0°	30°	45°	60°	70°
	*10°	2250	2600	3200	5000	7000
	†15°	---	2400	2700	3500	4200
‡30°	---	2250	2500	3000	3300	

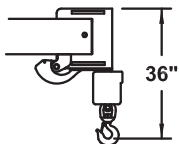
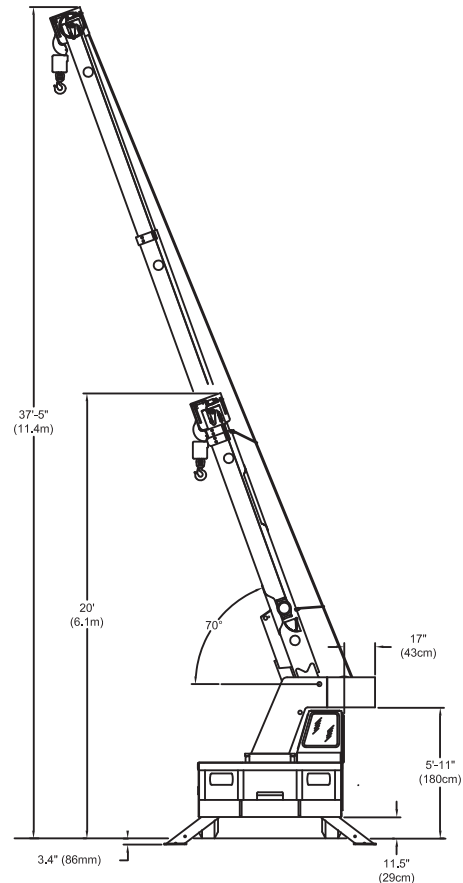
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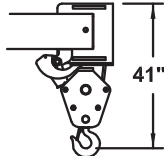
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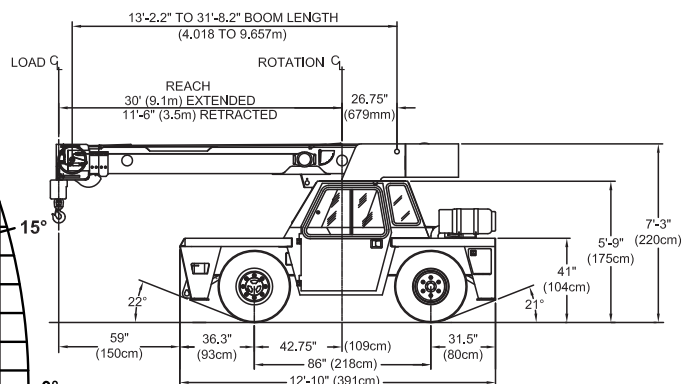
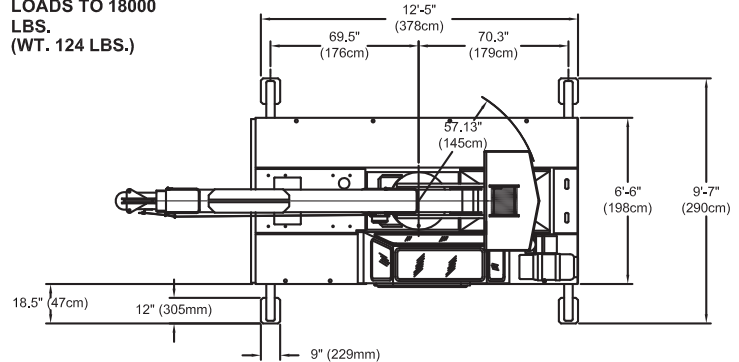
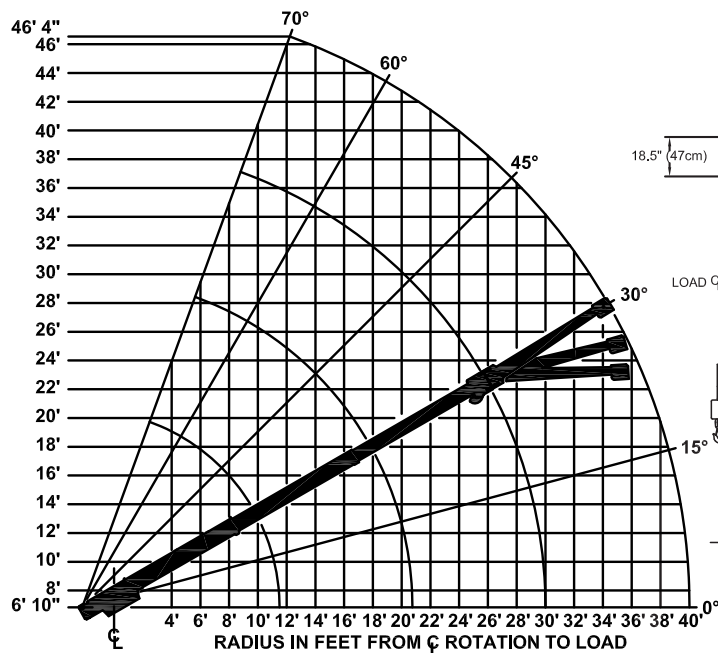
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USE SINGLE PART
LOAD LINE FOR
LOADS TO 9000
LBS.
(WT. 90 LBS.)



USE TWO PART
LOADLINE FOR
LOADS TO 18000
LBS.
(WT. 124 LBS.)





IC-80-J

Options

Listed below are brief descriptions of options available for this product.
Consult the IC-80-J Engineering Spec for additional information.

MODELS:

- IC-80-1J Industrial Crane** with
8'2" (2.5 m) - 20'2" (6.1 m) Boom Reach
- IC-80-2J Industrial Crane** with
9'6" (2.9 m) - 24' (7.3 m) Boom Reach
- IC-80-3J Industrial Crane** with
11'6" (3.5 m) - 30' (9.1 m) Boom Reach

ENGINE:

- Spark Arrester Muffler:**
Installed in addition to std. muffler.
- Catalytic Converter:**
Reduces engine emissions.
- Engine Heater:**
Engine coolant heater installed to circulate warm water through engine. Plugs into 120 volt AC. 1,500 watts.

TIRE OPTIONS:

- Mining & Industrial Tires:**
36 x 11-15, 16-Ply Rating
36 x 11-15, Non Marking
- Solid Rubber Tires, 8.25 x 15**
- Foam Filling of Tires**
- Spare Tire & Wheel:**
Bias 10.0 x 15
Mining & Industrial, 36 x 11-15
Mining & Industrial, Non Marking

CHASSIS OPTIONS:

- Auxiliary Winch:**
Mounted behind front bumper, hydraulically driven with control in operator's console.
- Pintle Hook:**
Pintle Hook, Rear
Pintle Hook, Front
- Rearview Mirrors:**
One mounted on right-hand deck stake and one mounted on left-hand deck stake.

OPERATOR COMPARTMENT OPTIONS:

- Operator Guard:**
Tubular steel weldment with heavy expanded steel mesh top section.
- Operator Guard Cover:**
Clear vinyl cover which goes over Operator Guard, for inclement weather operations.
- All-Weather Cab:**
Rigid-mounted canopy section & removable hinged door. Includes heater, electric windshield wiper, one sliding glass window in the door & one in the right side of canopy. Defroster fan & dome light included.
- Cab Heater:**
Heater with two-speed fan for units without All-Weather Cab.
- Windshield Washer:**
Includes reservoir pump and nozzle.
- Floor Mat:**
Vinyl mat with foam backing.
- Deluxe Seat:**
Deluxe Seat with upholstery springs provides additional operator comfort.
- Noise Reduction Kit:**
Includes floor mat, control valve and side panels of foam backed vinyl for noise reduction.
- Air Conditioning:**
Air Conditioner with R134 coolant.

ELECTRICAL OPTIONS:

- Strobe Lights:**
Yellow strobe light mounted on each side of turret weight box.
- 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.
- Work Lights-Rear:**
Two work lights recessed in rear bumper.

BOOM ATTACHMENTS:

- Boom Extension, 10 Foot (3 m):**
Boom stowable.
- Boom Extension, 10 Foot (3 m) Offsettable:**
Same as above item, except the boom extension is offsettable to 3 different positions; 0 degrees (inline), 15 degrees and 30 degrees offset.
- Searcher Hook:**
Nose Mount

Should you require an option or special equipment not listed please consult your dealer salesperson or BMC®.

BRODERSON®
Manufacturing Corp.

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www.broderson.net

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

