

## **IC-80-L** **Industrial Crane**

Fully adaptable for a wide variety of industrial and maintenance applications, the IC-80 is the ideal industrial carry deck crane for heavy lifting in constrained environments. The IC-80 is the most popular compact pick and carry crane in the industry.

### **Capacity**

18,000 lbs (8,165 kg)

### **Sheave Height**

46' 8" (14.2 m)  
(with boom extension)

### **Horizontal Reach**

40' (12.1 m)  
(with boom extension)

### **Height**

7' 3" (2.2 m)

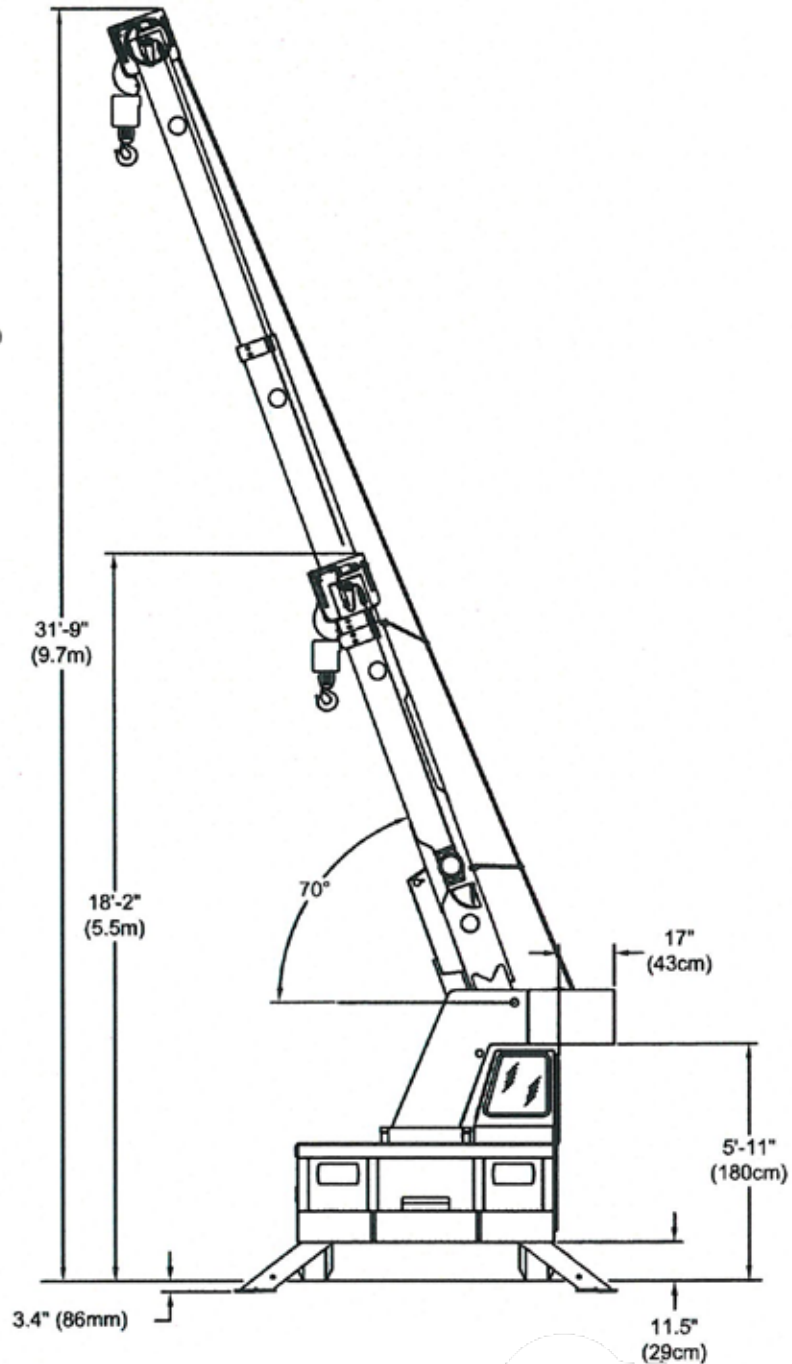
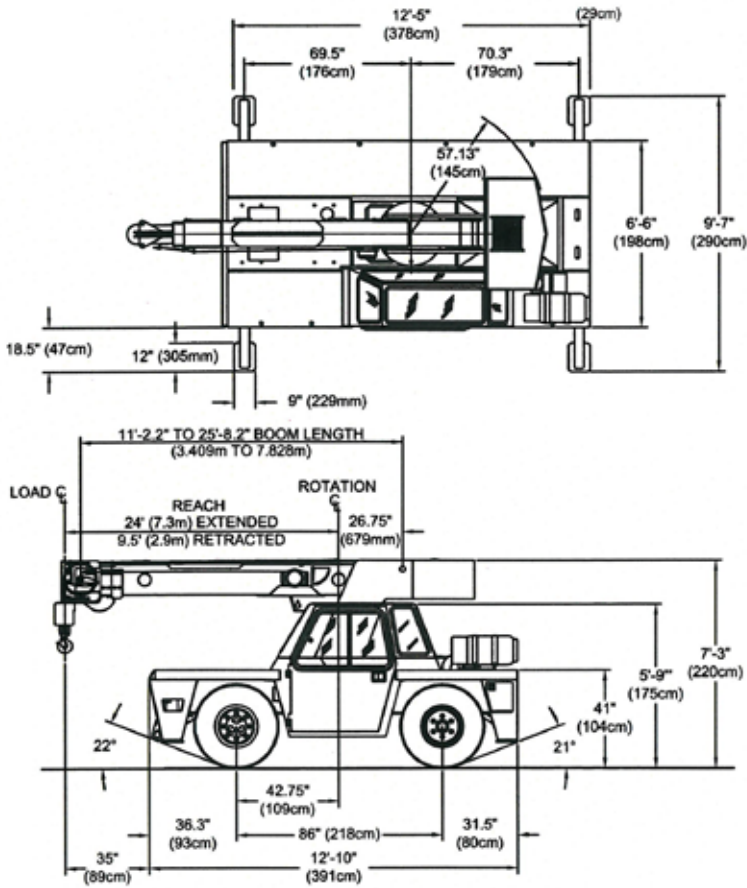
### **Width**

6' 6" (2 m)



# IC-80-L

## SPECIFICATIONS



**GENERAL**

	ROTATION	ELEVATION	EXTENSION
<b>Boom Movement</b>	Continuous	0° to 70°	2 wheel drive: 14' 6" (4.42m) 4 wheel drive: 18' 5" (5.64 cm) Hyd.
<b>Weight Total</b>	2 wheel drive: 16,400 lbs. (7,440 kg.) 4 wheel drive 16,750 lbs. (7,600 kg.)		
<b>Turning Radius</b>	C/L of outside steering wheel: 11' 2" (3.4m) Aisle Width for 90° Turn: 9'7" (2.92m)		

**ENGINE**

<b>Make</b>	GM	Kubota
<b>Model</b>	3.0L	V3307 EPA (Tier 4i)
<b>Type</b>	Gas, Dual Fuel	Diesel
<b>Cylinder</b>	4	4
<b>Displacement</b>	181 CID (3L)	203.27 CID (3.33L)
<b>HP @ Gov. Speed</b>	59HP (44 kW)	74.3 HP (55.4 kW)
<b>Fuel Tank Capacity</b>	17.6 gal. (66.6L)	17.6 gal. (66.6L)

**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/Reverse	Speed	Drawbar Pull
<b>First</b>	5.72 : 1	4 MPH (6 km/h)	15,500 lbs. (7,031 kg.)
<b>Second</b>	3.23 : 1	7 MPH (11 km/h)	8,700 lbs. (3,946 kg.)
<b>Third</b>	1.77 : 1	13 MPH (11 km/h)	4,600 lbs. (2,087 kg.)
<b>Fourth</b>	1.00 : 1	22 MPH (35km/h)	2,500 lbs. (1,134 kg.)

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

**TRANSMISSION**

Planetary drive/steer axle with 11.625 : 1 axle ratio. Differential is "No-Spin." Axle mounted rigidly to frame. 1-1/2° oscillation in either direction.

**2-Wheel Drive:**  
Axle with 1-1/2° oscillation in either direction

**AXLES**

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.

**STEERING**

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

**BRAKES**

**2-WHEEL DRIVE**  
10.00 x 15, 16-ply rating, Highway Type Tread.  
**4-WHEEL DRIVE (ONLY)**  
Mining Tire.

**TIRES**

**CARGO DECK**  
53 square feet (5 m<sup>2</sup>) of deck area. A maximum of 14,000 lb. (6,350 kg) capacity on deck when load is centered over or between axles. 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.

**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.

**CHASSIS**

**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.

**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, engine oil pressure and transmission temperature.

**LIGHTING PACKAGE**

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.

**ELECTRICAL (12-VOLT SYSTEM)**

**HYDRAULIC**

**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).

**THREE-SECTION BOOM ASSEMBLY** equipped with bearing pads, double-acting hydraulic cylinders with direct-connected holding valves & boom angle indicator on driver's 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 down-haul weight, swivel hook & sheave block for 2-part line and 125 ft (38 m) of 9/16" (14 mm) hoist rope.

**BOOM ASSEMBLY**

**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.

**OTHER**

Shorter boom models **IC-80-1L, IC-80-2L** available.

CONSULT THE IC-80 ENGINEERING SPEC FOR ADDITIONAL INFORMATION.

## **Main Features**

**RATED CAPACITY LIMITER**  
Standard

**CAPACITY ON OUTRIGGERS**  
18,000 lbs. (8,165 kg)

**PICK AND CARRY CAPACITY**  
up to 11,400 lbs. (5,170 kg)

**HEIGHT**  
7' 3" (2.2 m)

**WIDTH**  
6' 6" (2.0 m)

**BOOM ROTATION**  
360° Continuous

**SHEAVE HEIGHT**  
up to 46' 8" (14.2 m)

**HORIZONTAL REACH**  
up to 40' (12.1 m)

**4-WHEEL STEER**  
Standard

**4-WHEEL OR 2-WHEEL DRIVE**  
Standard

**POWERSHIFT TRANSMISSION**  
Standard

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

**INDEPENDENT OUTRIGGER  
CONTROLS**

**DUAL FUEL OR DIESEL AVAILABLE**

## **ENGINE**

**Spark Arrester Muffler**

Installed in addition to standard muffler

**Catalytic Converter**

Reduces engine emissions

**Engine Heater**

Coolant heater installed to circulate warm water through engine. Plugs into 120 volt AC, 1,500 watts

**Cold Weather Package**

## **TIRE**

**Mining & Industrial**

10 x 15 , 193 lbs. (88 kg.)

**Mining & Industrial Non-Marking**

10 x 15 , 193 lbs. (88 kg.)

**Solid Rubber Tires**

8.25 x 15

**Foam Filled Tires**

All four 900 lbs. (408 kg.)

**Spare Tire & Wheel**

Mounted

## **CHASSIS**

**Auxiliary Winch**

Mounted behind front bumper, hydraulically driven with controls.

**Pintle Hook:**

Pintle Hook, Rear

Pintle Hook, Front

**Rearview Mirrors**

One mounted on right & left-hand deck stake

## **OPERATOR COMPARTMENT**

**Operator Guard**

Tubular steel weldment with heavy expanded steel mesh top section.

**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.

## **Options**

**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.

**Operator Suspension Seat**

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**

**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.

**RCL Light Bar**

3 color light bar for external indication of load status

## **BOOM ATTACHMENTS**

**Boom Extension**

10ft. (3m), Boom stowable.

**Boom Extension**

10ft. (3m), Offsettable.

Same as above item, except boom extension is offsettable to 3 different positions; 0° (inline), 15° and 30° offset.

**Searcher Hook**

Nose Mount

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<sup>®</sup>**  
**Manufacturing Corp.**  
14741 West 106th Street  
Lenexa, KS 66215 USA

(913) 888-0606  
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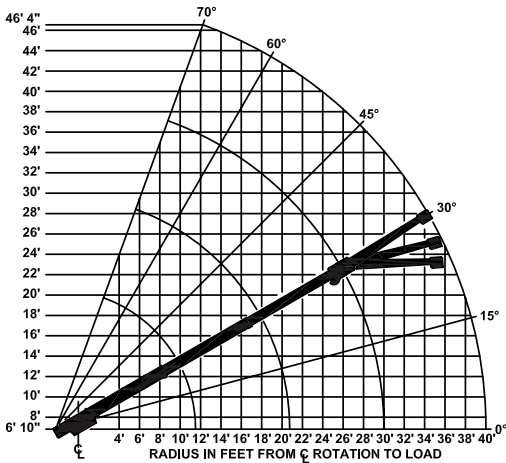
Dimensions and values shown  
are for reference purposes  
only. Specifications subject  
to change.



# BMC<sup>®</sup> BRODERSON<sup>®</sup> Manufacturing Corp.

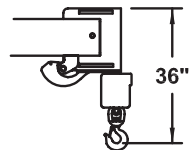
## Load Chart US Standard

# IC-80-3K Industrial Crane

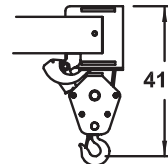


CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE						
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS					
	360° ROTATION		OVER FRONT			
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
MAIN BOOM	5	9400	17000	11400	18000	
	6	7550	14000	10000	14000	
	8	5600	10000	8100	10000	
	10	4300	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	
	28	750	2200	1100	2350	
	30	650	1950	1000	2150	
10' BOOM EXT.	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 EXTENSION	10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET				
	ANGLE	MAIN BOOM ANGLE				
		0°	30°	45°	60°	70°
	*† 0°	2250	2600	3200	5000	7000
	† 15°	---	2400	2700	3500	4200
† 30°	---	2250	2500	3000	3300	

+ USE 0° FOR STRAIGHT BOOM EXTENSION † USE 0°, 15° or 30° FOR OFFSET BOOM EXTENSION



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.)

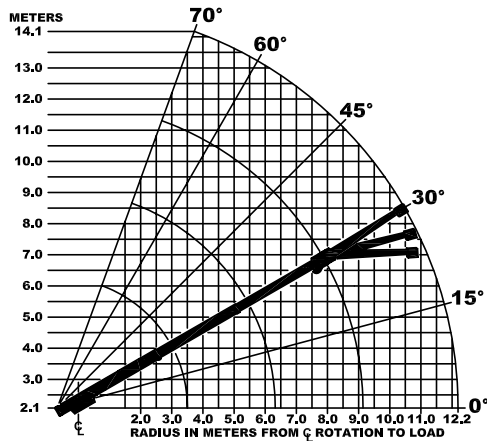
LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION OF THE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.

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

**CAUTION:** BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY. BOOM EXTENSIONS CAN BE USED ON RUBBER WHEN CRANE IS STATIONARY. DO NOT PICK AND CARRY WITH BOOM EXTENSION DEPLOYED.

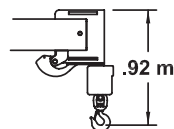
CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES ON IN & DOWN OUTRIGGERS ARE LESS THAN 85% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITY.

## Load Chart Metric

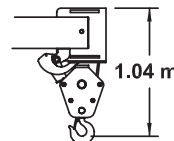


CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE					
LOAD RADIUS METERS	MAIN BOOM OR EXTENSION CAPACITIES IN KILOGRAMS				
	360° ROTATION		OVER FRONT		
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS	
MAIN BOOM	1.5	4260	7710	5170	8160
	2.0	3140	5790	4290	5790
	2.5	2470	4400	3580	4400
	3.0	1990	3560	2830	3560
	3.5	1560	2910	2180	2910
	4.0	1270	2520	1720	2520
	4.5	1060	2210	1400	2210
	5.0	890	1950	1170	1950
	5.5	740	1760	990	1760
	6.0	630	1570	840	1570
	6.5	540	1430	730	1430
	7.0	480	1320	650	1330
	7.5	430	1200	580	1230
	8.0	380	1090	530	1140
	8.5	340	1000	500	1070
3 m BOOM EXT.	9.0	290	910	460	990
	10.0	180	760	390	850
	11.0	110	650	310	740
	12.2	60	520	220	630
	<b>3 METER BOOM EXTENSION - STRAIGHT OR OFFSET</b>				
MAIN BOOM ANGLE					
ANGLE	0°	30°	45°	60°	70°
*† 0°	1020	1180	1450	2260	3170
† 15°	---	1090	1220	1580	1900
† 30°	---	1020	1130	1360	1490

+ USE 0° FOR STRAIGHT BOOM EXTENSION † USE 0°, 15° or 30° FOR OFFSET BOOM EXTENSION



USE SINGLE-PART  
LOAD LINE FOR  
LOADS TO 4080 kg  
(WT. 40 kg)



USE TWO-PART  
LOAD LINE FOR  
LOADS TO 8160 kg  
(WT. 56 kg)

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