

**bmc**  
*Tech Spec*

## **IC-80-H** *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
- 4-Wheel Drive ... Optional
- Powershift Transmission ... Standard
- Fully Hydraulic Controls for Smooth Precise Operations
- Independent Outrigger Controls
- Dual Fuel or Diesel Available

**BRODERSON**  
*Manufacturing Corp.*





## IC-80-1H

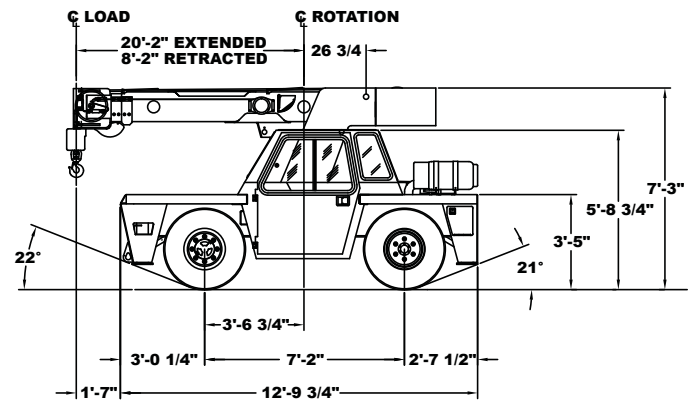
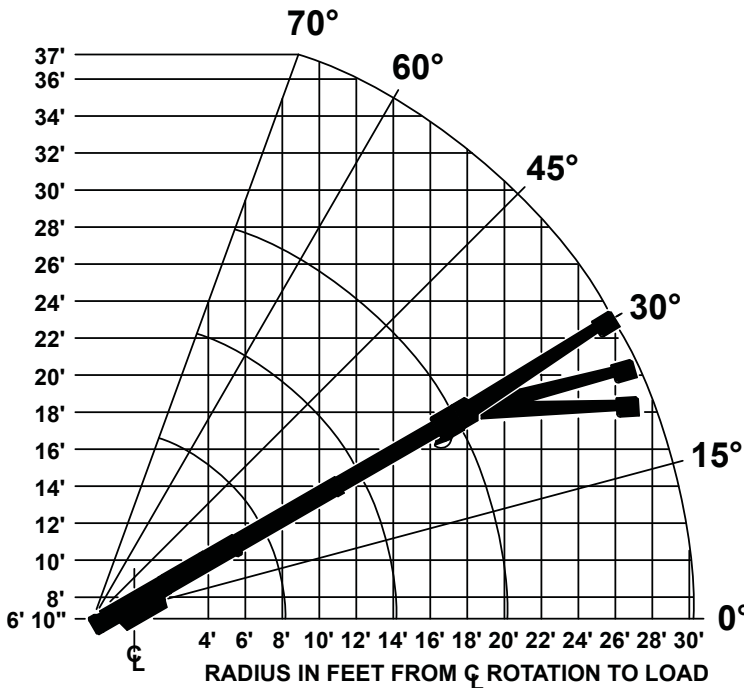
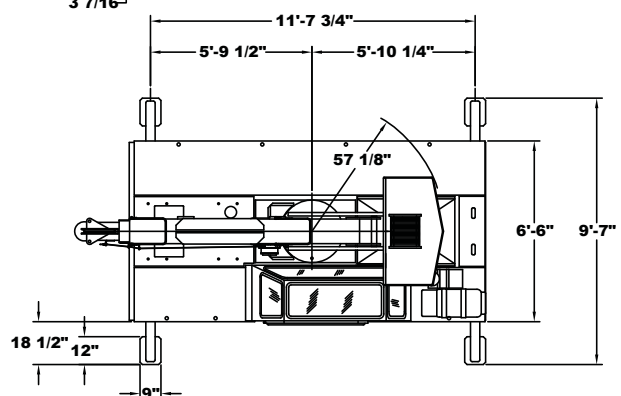
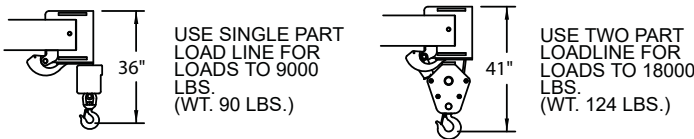
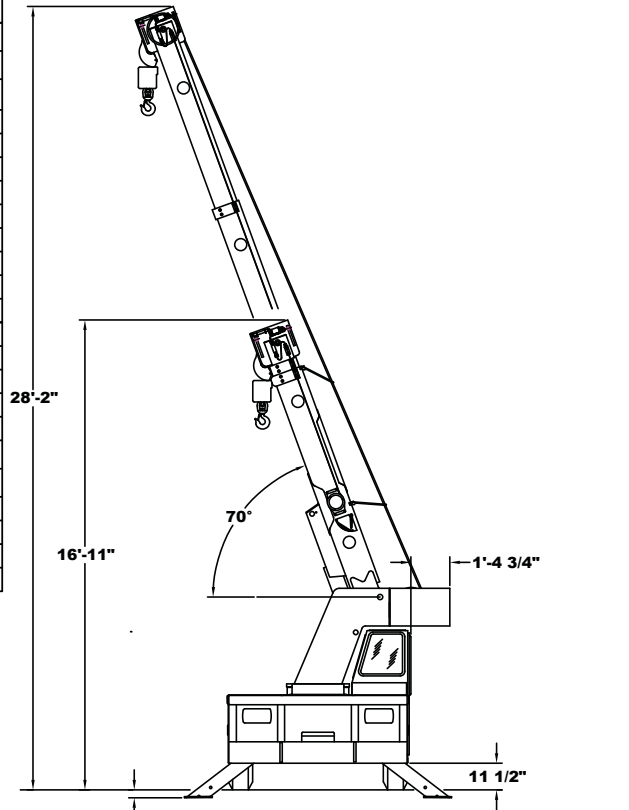
CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE						
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS					
	360° ROTATION		OVER FRONT			
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
<b>MAIN BOOM</b>	5	9600	17000	11700	18000	
	6	7900	14500	10400	14500	
	8	5750	10250	8400	10250	
	10	4150	7700	6300	7700	
	12	3100	6550	4650	6550	
	14	2425	5550	3750	5550	
	16	2000	4650	3100	4650	
	18	1700	4100	2650	4150	
	20	1450	3550	2300	3800	
	22	1275	3000	2000	3000	
<b>10' BOOM EXT.</b>	24	1075	2800	1725	2800	
	26	925	2500	1500	2600	
	28	775	2200	1300	2400	
	30	675	2000	1150	2250	
	BOOM EXT	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.

**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.

BOOM EXTENSION DEDUCT: 100 LBS WHEN STOWED ON BASE BOOM.





## IC-80-2H

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE

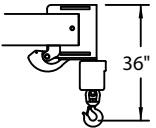
LOAD RADIUS	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS					
	360° ROTATION		OVER FRONT			
FEET	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
5	9500	17000	11600	18000		
6	7800	14500	10200	14500		
8	5650	10250	8250	10250		
10	4000	7700	6200	7700		
12	3000	6550	4650	6550		
14	2350	5550	3650	5550		
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		
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		
10' 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	

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

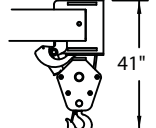
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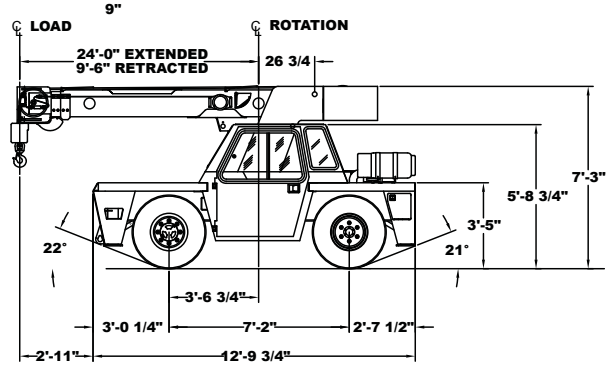
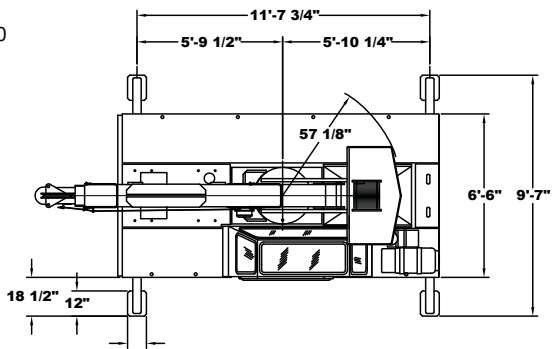
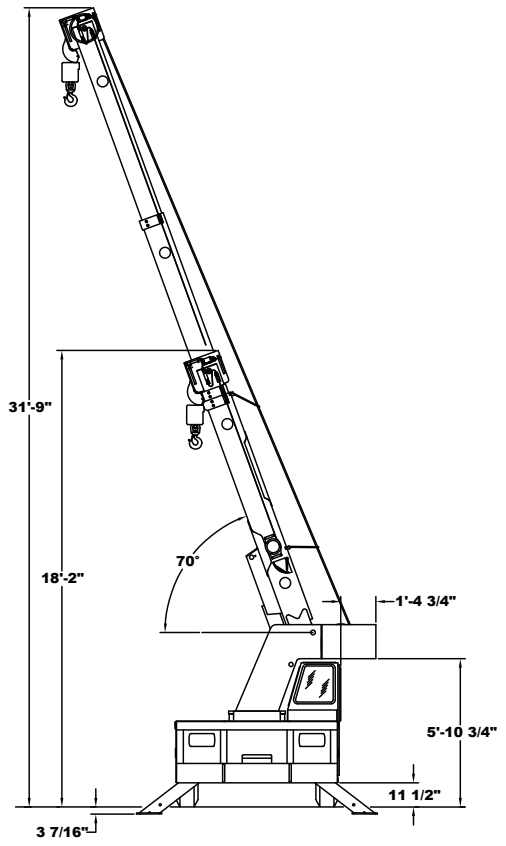
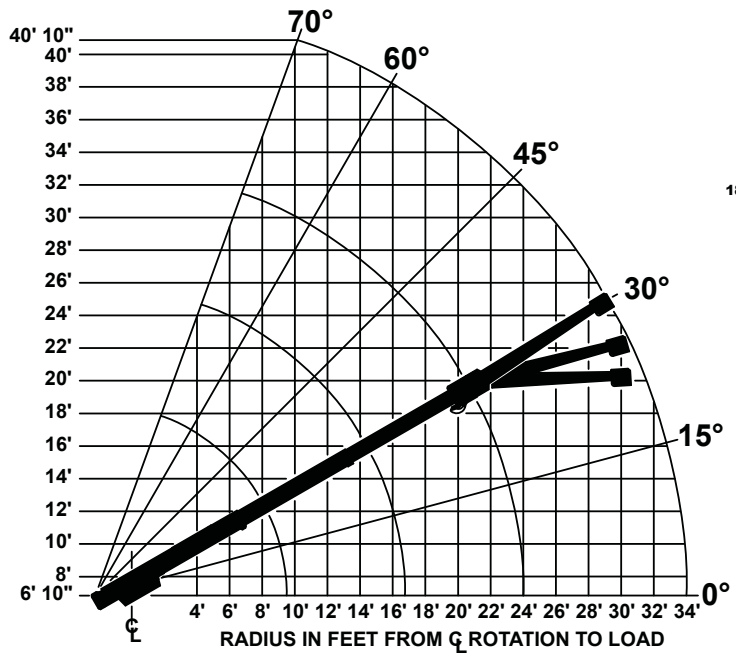
BOOM EXTENSION DEDUCT: 100 LBS WHEN STOWED ON BASE BOOM.



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-80-3H

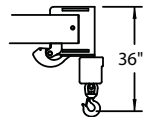
CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE

LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS				
	360° ROTATION		OVER FRONT		
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS	
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	
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	
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

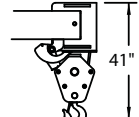
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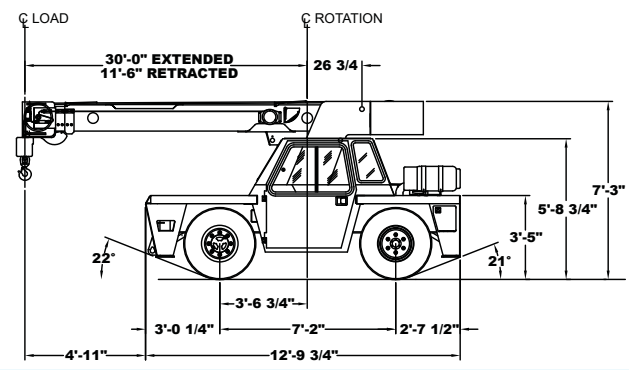
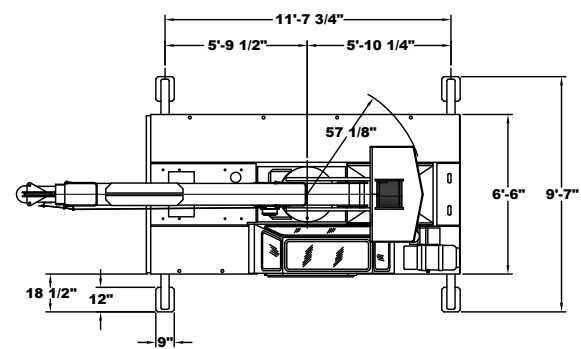
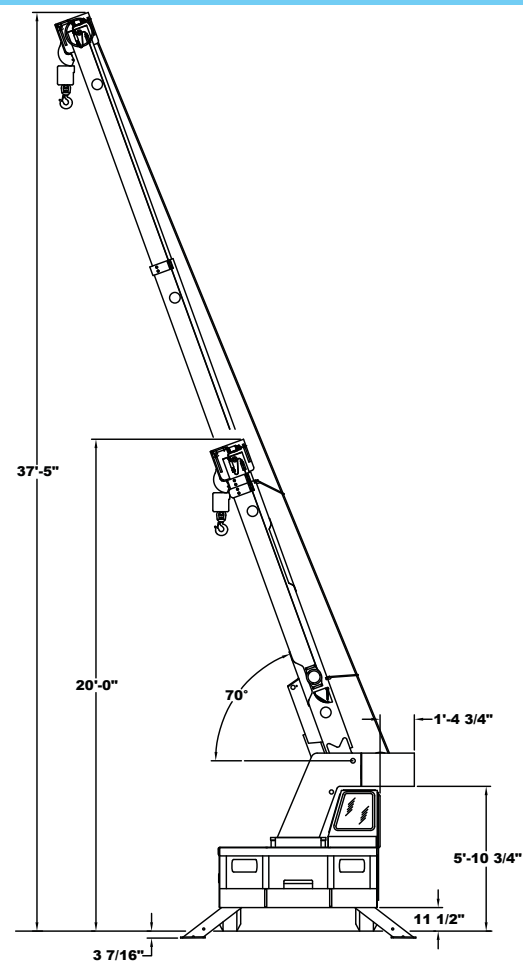
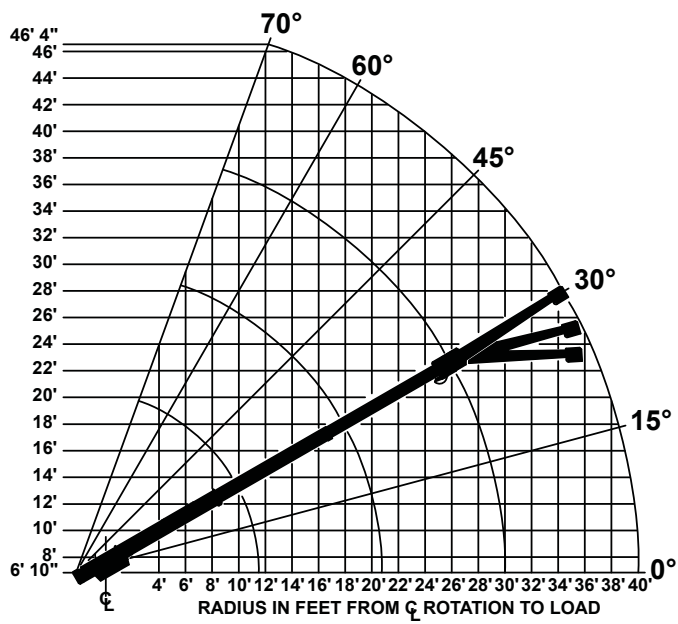
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USE SINGLE PART LOAD LINE FOR LOADS TO 9000 LBS. (WT. 90 LBS.)



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





## IC-80-H Specifications

### GENERAL:

Weight:	IC-80-1H	IC-80-2H	IC-80-3H
4-Wheel Steer	16,150 lb	16,350 lb	16,750 lb
4-Wheel Drive	17,000 lb	17,200 lb	17,600 lb
<b>Boom Movement:</b>			
Rotation	Continuous	Continuous	Continuous
Elevation	0° to 70°	0° to 70°	0° to 70°
Extension	12 ft.	14 ft. 6 in.	18 ft. 6 in.
<b>Boom Speeds:</b>			
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.
<b>Turning Radius:</b>			
(C/L of Outside Steering Wheel)		10 ft. 0 in.	
Aisle Width for 90° Turn:		9 ft. 6 in.	

### ENGINE:

Make	GM	Cummins
Model	3.0 EFI*	QSB 3.3L EPA Tier 3
Type	Gas	Diesel
No. Cyl.	4	4
Displacement	1.81 CID	199 CID
HP @ Gov. Speed	69	85
*Electronic Fuel Injection with Dual Fuel, US EPA & CARB Certified for 2005 Emissions Standards		
Fuel Tank Capacity: 20 Gallons		

### 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. Gradeability 63 percent.

Drawbar	Forward/Reverse Travel		
Gear	Gear Ratios	Speed	Pull
First	5.72:1	4 MPH	10,500 lb
Second	3.23:1	7 MPH	6,000 lb
Third	1.77:1	13 MPH	3,200 lb
Fourth	1.00:1	22 MPH	1,800 lb

### AXLES:

#### Front:

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

#### Optional 4-Wheel Drive

Planetary drive/steer axle with integral drop box input 11.625:1 axle ratio. Differential is "No-Spin." Mining and Industrial tires standard.

#### Rear:

##### 2-Wheel Drive:

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

##### Optional 4-Wheel Drive:

Planetary drive/steer axle with 11.625:1 axle ratio. Differential is "Limited Slip." 1-1/2° oscillation degree in either direction.

Gear	Gear Ratios	Speed	Drawbar Pull
First	5.72:1	3 MPH	12,300 lb
Second	3.23:1	6 MPH	7,000 lb
Third	1.77:1	11 MPH	3,800 lb
Fourth	1.00:1	20 MPH	2,200 lb

### 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:

#### 2-Wheel Drive

Front	Internal wet disc
Rear	Drum type
Parking	Disc type

#### 4-Wheel Drive

Front	Internal wet disc
Rear	Internal wet disc
Parking	Disc type

### TIRES:

2-Wheel Drive 10.00 x 15, load range H bias, 16-ply rating.  
4-Wheel Drive 36 X 11-15, Mining & Industrial, 16 ply rating.

### CHASSIS:

#### Cargo Deck:

53 square feet of deck area. 14,000 lbs. capacity on deck when load is centered over or between axles.<sup>1</sup> A storage box is located in front cargo deck. Steps located on front corners.

1. 14,000 pounds allowed at creep speed of 2 MPH and 200 feet maximum 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"x12".

#### 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 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 and optional 4-wheel drive.

##### 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 17 & 32 GPM at rated RPM. Hydraulic oil tank capacity of 25 gallons.

### 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 lb at a line speed of 110 FPM. Includes downhaul weight, swivel hook & sheave block for 2-part line and 125 ft of 9/16" 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.



# IC-80-H

## Options

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

**MODELS:**

- IC-80-1H Industrial Crane** with 8'2"-20'2" Boom Reach
- IC-80-2H Industrial Crane** with 9'6"-24' Boom Reach
- IC-80-3H Industrial Crane** with 11'6"-30' 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.

**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**
  - Radial
  - Bias
  - 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
- Headlight and Taillight Grilles**  
Welded steel protective grilles for headlights and taillights.
- 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.
- 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 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**  
Boom stowable.
- Boom Extension, 10 Foot, 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.**

14741 West 106th Street  
Lenexa, KS 66215 USA

Tel (913) 888-0606  
Fax (913) 888-8431  
www.bmccranes.com

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



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