

# Tech Spec

# IC-80-G



- \* Rated Capacity Limiter...Standard
- \* Capacity on outriggers...18,000 lbs.
- \* Pick and carry capacity up to...11,700 lbs.
- \* Height...7' 3"
- \* Width...6' 6"
- \* Sheave height...up to 46'
- \* Horizontal Reach...up to 40'
- \* Tight turning radius
- \* 2-Wheel drive standard
- \* 4-Wheel steer standard
- \* 4-Wheel drive optional
- \* Powershift transmission
- \* Fully hydraulic controls for smooth precise operations
- \* Independent outrigger controls

**DMC<sup>®</sup> BRODERSON<sup>®</sup>**  
Manufacturing Corp.

P.O. Box 14770, Lenexa, KS 66285-4770  
14741 West 106th St. • Lenexa, KS 66215-2015  
(913) 888-0606 • FAX (913) 888-8431  
Website: [bmccranes.com](http://bmccranes.com)

# IC-80-1G

CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE

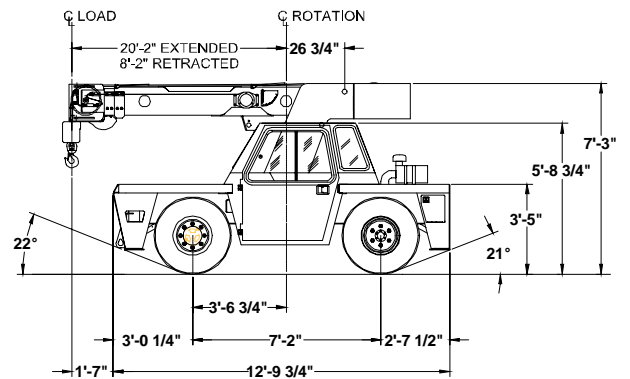
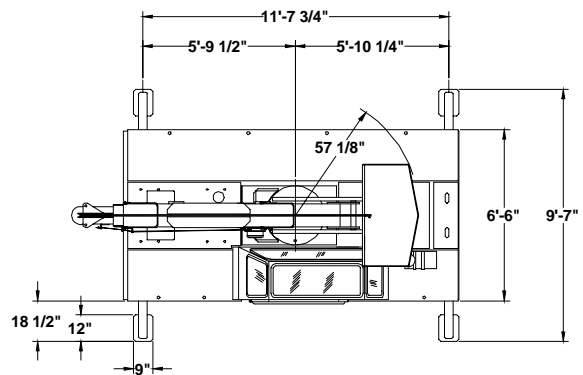
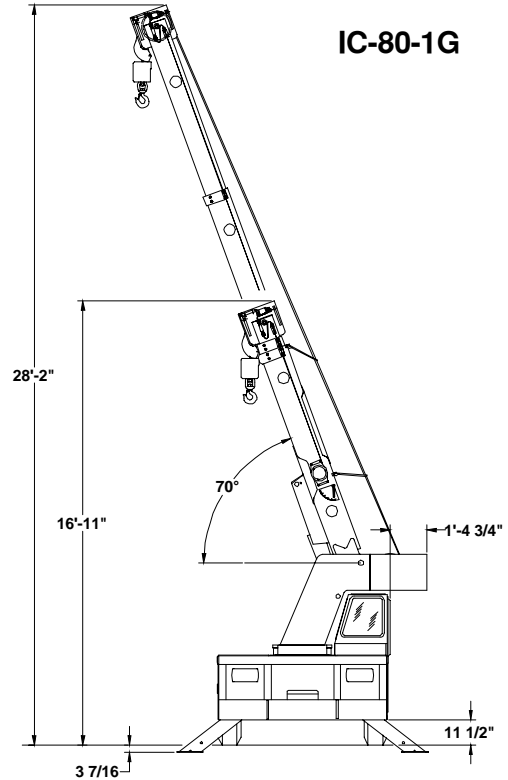
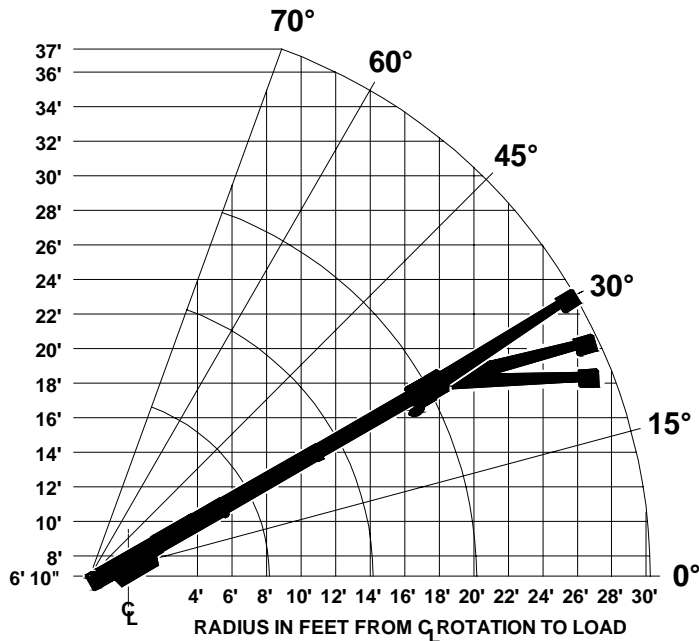
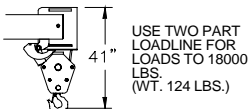
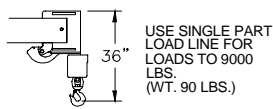
LOAD RADIUS	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS				
	360° ROTATION		OVER FRONT		
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS	
5	9600	17000	11700	18000	
6	7900	14500	10400	14500	
8	5750	10250	8400	10250	
10	4150	7700	6300	7700	
12	3100	6550	4650	6550	
14	2425	5550	3750	5550	
16	2000	4650	3100	4650	
18	1700	4100	2650	4150	
20	1450	3550	2300	3800	
22	1275	3200	2000	3000	
24	1075	2800	1725	2800	
26	925	2500	1500	2600	
28	775	2200	1300	2400	
30	675	2000	1150	2250	
BOOM EXTENSION - 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.

**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.



# IC-80-2G

**CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE**

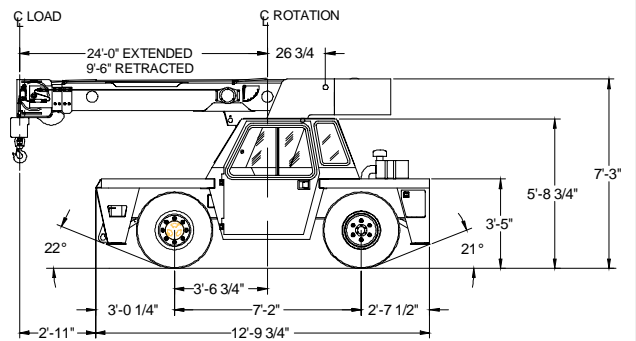
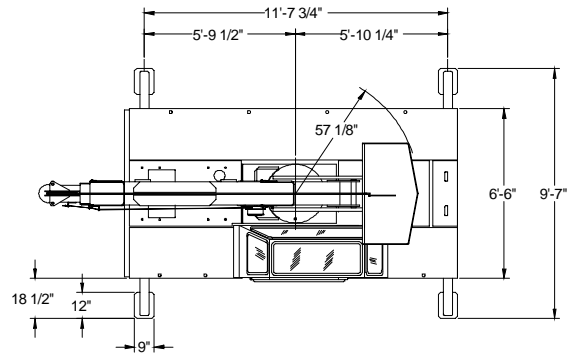
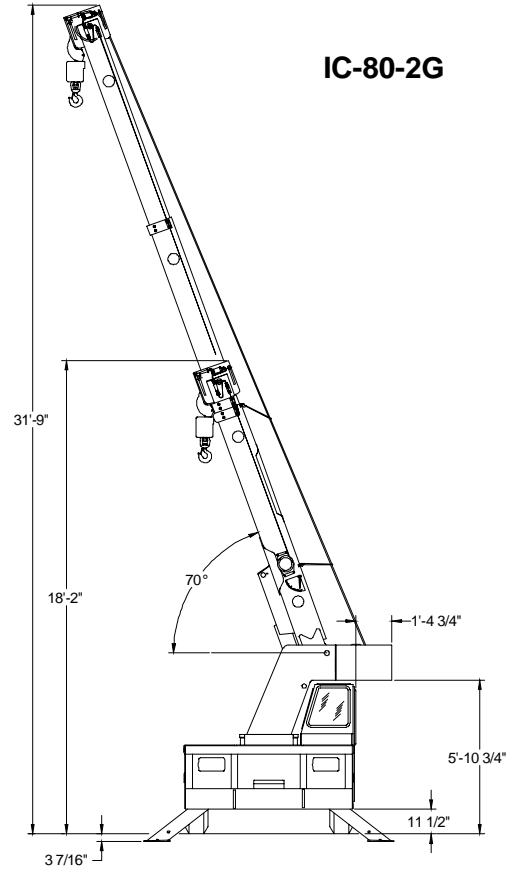
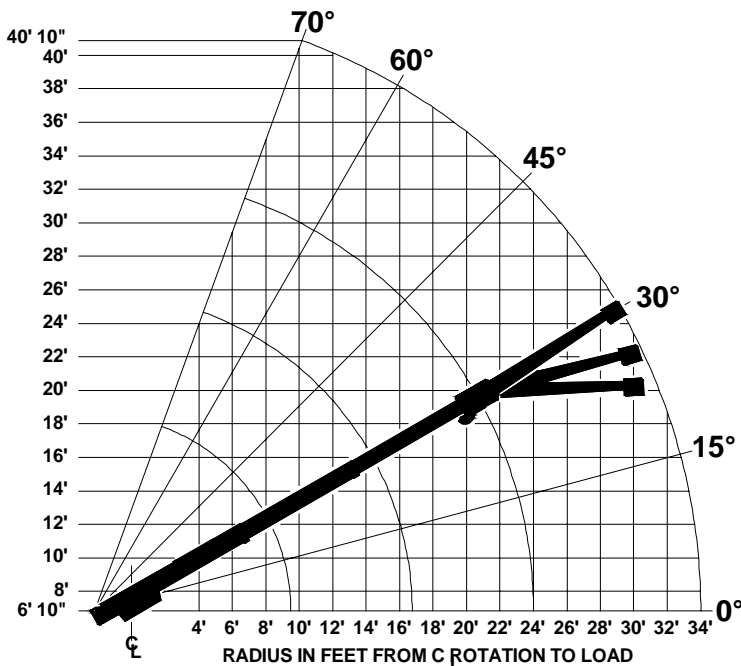
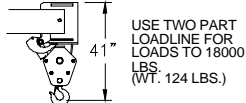
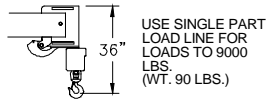
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS				
	360° ROTATION		OVER FRONT		
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS	
<b>5</b>	9500	17000	11600	18000	
<b>6</b>	7800	14500	10200	14500	
<b>8</b>	5650	10250	8250	10250	
<b>10</b>	4000	7700	6200	7700	
<b>12</b>	3000	6550	4650	6550	
<b>14</b>	2350	5550	3650	5550	
<b>16</b>	1900	4550	2950	4550	
<b>18</b>	1600	3950	2500	4050	
<b>20</b>	1350	3350	2150	3650	
<b>22</b>	1150	2950	1850	3300	
<b>24</b>	1000	2550	1650	3100	
<b>26</b>	850	2450	1450	2750	
<b>28</b>	725	2175	1275	2500	
<b>30</b>	625	1900	1125	2300	
<b>32</b>	525	1725	1000	2100	
<b>34</b>	425	1500	900	1950	
<b>10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET</b>					
<b>MAIN BOOM ANGLE</b>					
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.

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# IC-80-3G

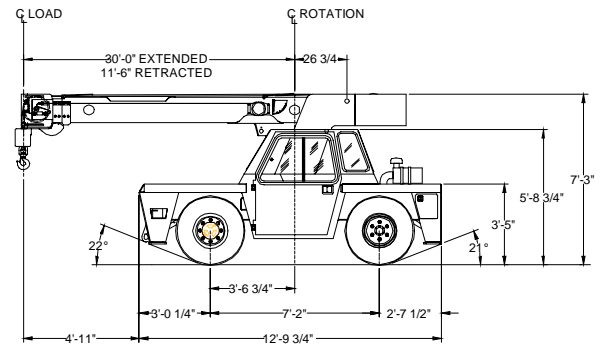
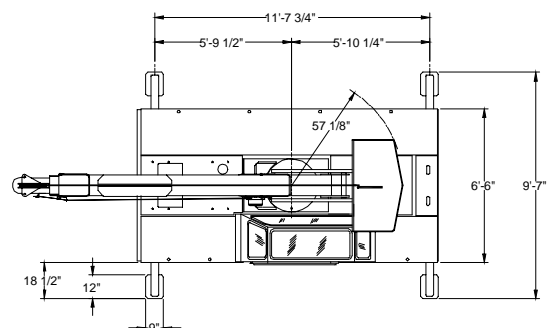
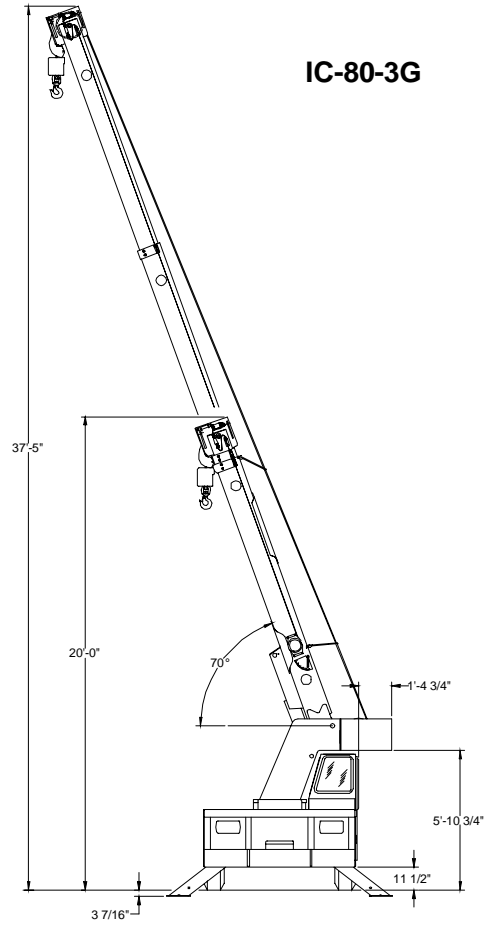
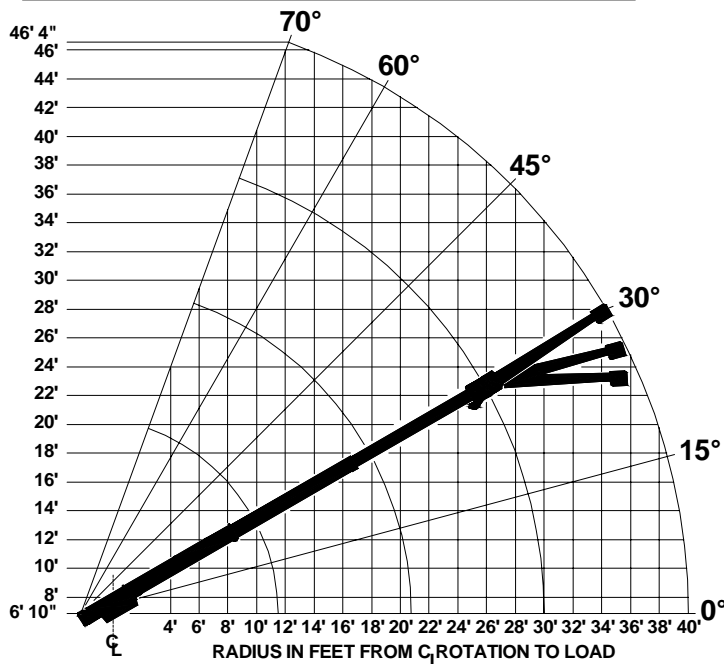
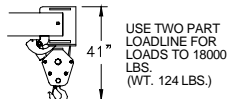
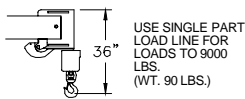
CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE						
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS					
	360° ROTATION		OVER FRONT			
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
5	9400	17000	11400	18000		
6	7550	14000	10000	14000		
8	<b>5600</b>	<b>10000</b>	<b>8100</b>	<b>10000</b>		
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	<b>3050</b>	1550	<b>3050</b>		
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' 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

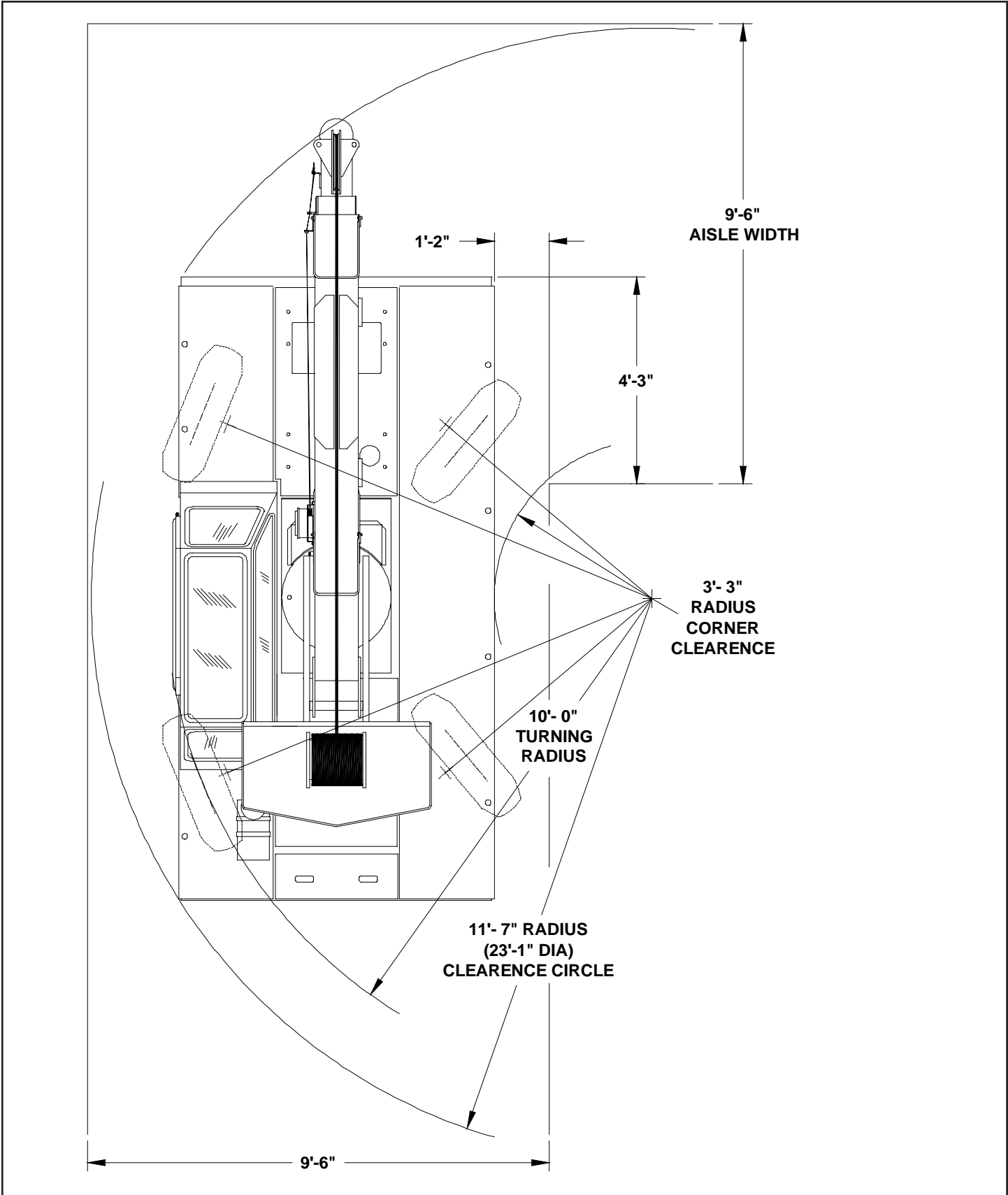
\* USE 0° FOR STRAIGHT BOOM EXTENSION.

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

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# IC-80-G

## GENERAL:

<b>Weight:</b>	<b>IC-80-1G</b>	<b>IC-80-2G</b>	<b>IC-80-3G</b>
4-Wheel Steer	16,050 lbs.	16,250 lbs.	16,650 lbs.
4-Wheel Drive	16,650 lbs.	16,850 lbs.	17,650 lbs.

## Boom Movement:

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.

## 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) 10 ft. 0 in.

**Aisle Width for 90° Turn:** 9 ft. 6 in.

<b>ENGINE:</b>	<b>Standard</b>	<b>Optional</b>
<b>Make</b>	GM	Cummins
<b>Model</b>	3.0 EFI*	4B3.9
<b>Type</b>	Gas	Diesel
<b>No. Cyl.</b>	4	4
<b>Displacement</b>	181 CID	239 CID
<b>HP @ Gov. Speed</b>	69	80

\* Electronic Fuel Injection with Dual Fuel

**Fuel Tank Capacity:** 20 Gallons

## TRANSMISSION:

### 2-Wheel Drive:

Powershift transmission with 4-speeds in forward and 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.

<b>Gear</b>	<b>Forward/Reverse Gear Ratios</b>	<b>Travel Speed</b>	<b>Drawbar Pull</b>
First	5.72:1	4 MPH	10,500 lbs.
Second	3.23:1	6 MPH	6,000 lbs.
Third	1.77:1	12 MPH	3,200 lbs.
Fourth	1.00:1	20 MPH	1,800 lbs.

## AXLES:

### Front:

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

### Optional 4-Wheel Drive

Planetary drive/steer axle with integral drop box input for an overall 13.76/1 ratio. Differential is "No-Spin." Only available with mining and industrial tires.

### Rear:

#### 2-Wheel Drive:

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

#### Optional 4-Wheel Drive:

Planetary drive/steer axle with 13.76/1 ratio including the reduction through the front-axle-mounted drop box. Differential is "No-Slip." Oscillation is 1-1/2 degree in either direction. Only available with mining and industrial tires.

<b>Gear</b>	<b>Forward/Reverse Gear Ratios</b>	<b>Travel Speed</b>	<b>Drawbar Pull</b>
First	5.72:1	3 MPH	12,300 lbs.
Second	3.23:1	5 MPH	7,000 lbs.
Third	1.77:1	10 MPH	3,800 lbs.
Fourth	1.00:1	17 MPH	2,200 lbs.

## STEERING:

Hydraulic steering unit with two 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 brakes

**Rear** Drum type

**Parking** Disc type

## 4-Wheel Drive

Internal wet disc brakes

Internal wet disc brakes

Disc type

## **TIRES:**

**2-Wheel Drive** 10.00 x 15, load range J radial, highway type tread.

**4-Wheel Drive** 10.00 X 15, mining & industrial, 16 ply rating.

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## **CHASSIS:**

### **Cargo Deck:**

64 square feet of deck area.\* 14,000 lbs. 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.

\* 54 Square feet with Cummins engine.

\*\*14,000 pounds allowed at creep speed of 200 feet in 30 minutes.

### **Outriggers:**

Four hydraulic outriggers of box beam construction with direct-connected holding valves. Independent controls for each outrigger. Each cylinder equipped with direct-connected holding valves. Outrigger pad dimension 9"x12".

### **Accessory Storage Box:**

Storage box located in front cargo deck.

### **Lifting Rings**

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

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## **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.

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## **ELECTRICAL:**

### **12 Volt System**

#### **Instrument Package:**

Fuel, ammeter, oil pressure, water temperature, transmission oil temperature gauges & hourmeter. Also included are warning lights for low transmission pressure, turn signal, high beams, hazard lights, parking brake & 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.

## **ELECTRICAL: (Cont'd)**

### **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.

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## **HYDRAULIC SYSTEM:**

Tandem pump, direct-driven by engine crankshaft, rated at 17 & 32 GPM at rated RPM. Hydraulic oil tank capacity of 22 gallons.

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## **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. 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.

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# IC-80-G

Listed below are brief descriptions of each option available for the IC-80-G Industrial Cranes. Consult the IC-80-G Engineering Spec for additional information on each option.

## MODELS:

**IC-80-1G** Industrial Crane with 8'2"-20'2" Boom

**IC-80-2G** Industrial Crane with 9'6"-24' Boom

**IC-80-3G** Industrial Crane with 11'6"-30' Boom

## ENGINE:

### Diesel Engine

Cummins - 4B3.9

### 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.

### Ether Injection System

Ether starting aid controlled by switch in operator compartment and injects ether directly into intake manifold.

### Engine Shut Down Gauges

Shuts engine off when high water temperature or low engine oil pressure occurs. (Diesel Only)

## AXLE & STEERING OPTIONS:

**4-Wheel Steer & 4-Wheel Drive**

## TIRE OPTIONS:

### Mining & Industrial Tires

10.00 x 15, 16-Ply Rating

10.00 x 15, Non Marking

### Solid Rubber Tires:

8.25 x 15

8.25 x 15 Non-Marking

### Foam Filling of Tires

### Spare Tire & Wheel

Highway Tread, 10.00 x 15

Mining & Industrial, 10.00 x 15

Mining & Industrial, Non Marking

## CHASSIS OPTIONS:

### Auxiliary Winch

Mounted behind front bumper, hydraulically driven with control in operator's console.

## CHASSIS OPTIONS: (Cont'd)

### Pintle Hook:

**Pintle Hook, Rear**

**Pintle Hook, Front**

### Headlight and Taillight Grilles

Welded steel protective grilles for headlights and taillights.

### Rear Work Light Grilles

Protective grilles for worklights.

### Rearview Mirrors

One mounted on right-hand deck stake & 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.

### Operator Guard Door

Hinged door covers operator compartment side opening.

### 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.

### Amber Rotating Beacons

Amber rotating beacon 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, as an end user, require an option or special equipment on your IC-80-G that is not listed on our sales literature, please contact your dealer salesperson or the factory to receive a special quoted price.**