



**TECH  
SPEC**

# IC-80-B



## AT A GLANCE:

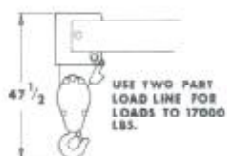
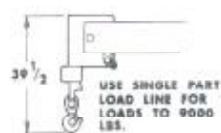
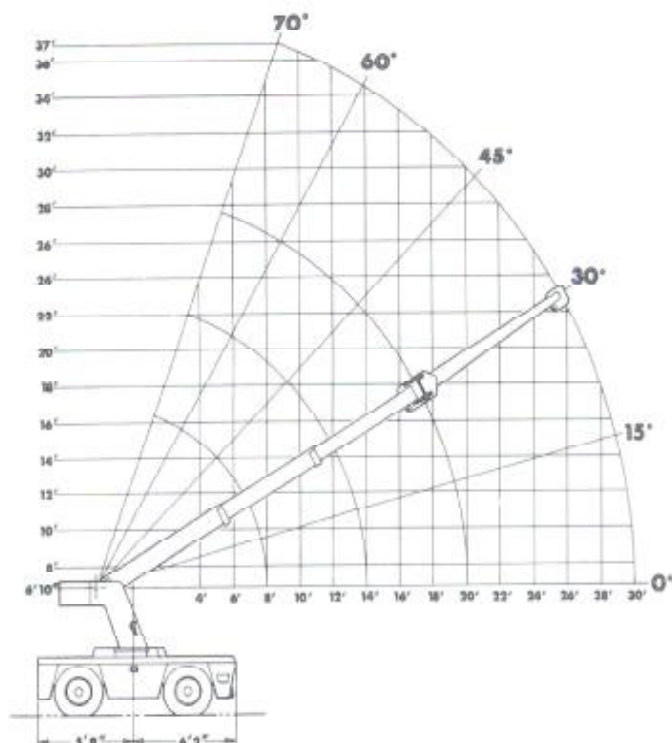
- Rated Capacity — 17,000
- Vertical Reach — 20'0"
- Horizontal Reach — 20'2"
- Continuous rotation • 14'9" turning radius • Large Carry Deck • Hyd. outriggers •
- Built tough to work tough in industrial applications where a sure touch is needed on loads up to 8½ tons.

**BMC BRODERSON**  
Manufacturing Corp.

P.O. Box 14770, Lenexa, Kansas 66215 • (913) 888-0606



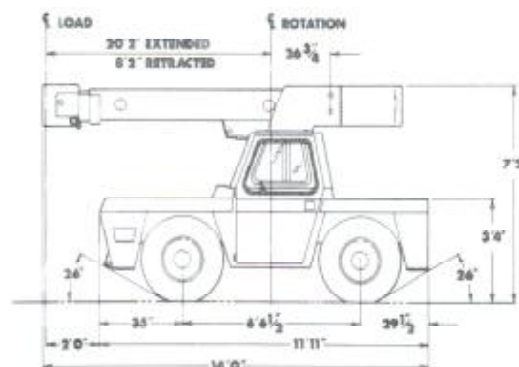
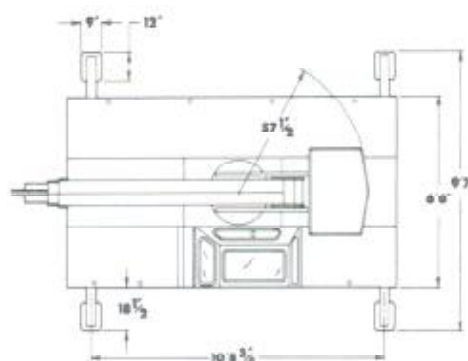
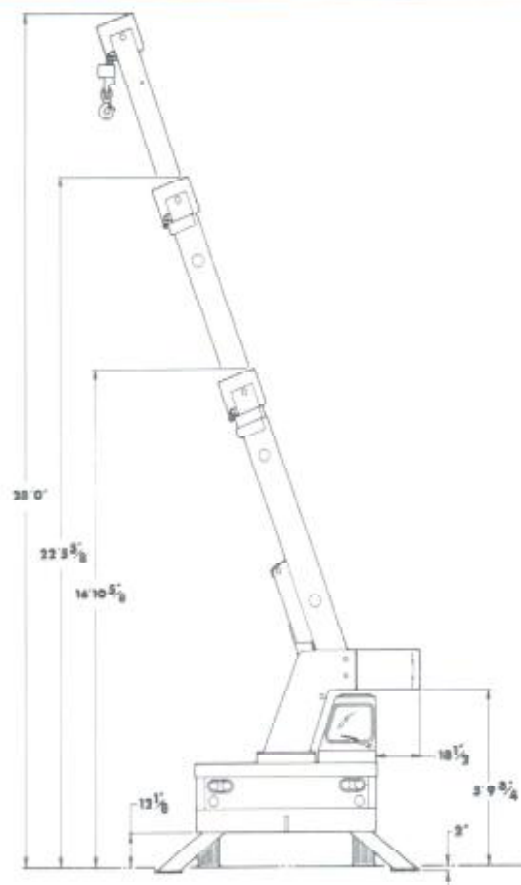
# IC-80-B



ALL CAPACITIES FOR 360° ROTATION

| LOAD<br>RADIUS<br>FEET | 3-SECTION BOOM |            | 10' BOOM<br>EXTENSION INSTALLED |            |
|------------------------|----------------|------------|---------------------------------|------------|
|                        | ON<br>RUBBER   | ON<br>O/R* | ON<br>RUBBER                    | ON<br>O/R* |
| 5                      | 9450           | 17000      | 5900                            | 7000       |
| 6                      | 8375           | 14500      | 5290                            | 6000       |
| 8                      | 5650           | 10250      | 4200                            | 5000       |
| 10                     | 3925           | 7700       | 3450                            | 4000       |
| 12                     | 3000           | 6550       | 2935                            | 3450       |
| 14                     | 2375           | 5550       | 2625                            | 3050       |
| 16                     | 1925           | 4450       | 2300                            | 2700       |
| 18                     | 1625           | 3950       | 1875                            | 2250       |
| 20                     | 1375           | 3550       | 1600                            | 2250       |
| 22                     |                |            | 1325                            | 2250       |
| 24                     |                |            | 1150                            | 2250       |
| 26                     |                |            | 975                             | 2250       |
| 28                     |                |            | 850                             | 2125       |
| 30                     |                |            | 700                             | 1900       |

\*OUTRIGGERS



**General:****Weight** 13,700 lbs**Travel Speeds (calculated):**

| Gear   | Forward | Reverse |
|--------|---------|---------|
| First  | 5.4     | 4.9     |
| Second | 11      | 10      |
| Third  | 20      | 18.2    |

**Drawbar Pull:**

| Gear   | Pounds |
|--------|--------|
| First  | 6,714* |
| Second | 3,130  |
| Third  | 1745   |

**Turning radius**

(C/L of outside steering wheel) 14'9"

Aisle width for 90° turn 10'3"

\* Wheels will spin on dry concrete at 3,800 lbs.

**Engine:**

|                            | Standard    | Optional | Optional    |
|----------------------------|-------------|----------|-------------|
| <b>Make</b>                | Continental | Perkins  | Continental |
| <b>Model</b>               | TM27        | D4.203   | TMD27       |
| <b>Type</b>                | Gas         | Diesel   | Diesel      |
| <b>Number of cylinders</b> | 4           | 4        | 4           |
| <b>Displacement</b>        | 165         | 203      | 165         |
| <b>HP at governed RPM</b>  | 64          | 63       | 58          |

**Electrical:****12 volt system****Lighting group:**

One pair headlights with Hi and Low beams, integral tail, brake and turn signals and front turn signals

**Instrument group:**

Fuel, ammeter, oil pressure, water temperature, converter oil temperature gauges and hourmeter

**Transmission:****Make** Borg Warner**Model** 72T/T18**Type** Reversing gear box and manual shift three speed gear box. Equipped with torque converter and transmission oil cooler.

| Gear Ratio | Gear   | Forward | Reverse |
|------------|--------|---------|---------|
|            | First  | 6.324:1 | 6.956:1 |
|            | Second | 3.092:1 | 3.401:1 |
|            | Third  | 1.686:1 | 1.855:1 |

**Torque Converter:** Stall ratio of 2.15:1**Axles:****Drive Axle:**

|                   |          |
|-------------------|----------|
| <b>Make</b>       | Rockwell |
| <b>Gear ratio</b> | 7.2:1    |
| <b>Location</b>   | Front    |

**Steering Axle (non-driving)**

|                 |          |
|-----------------|----------|
| <b>Make</b>     | Rockwell |
| <b>Location</b> | Rear     |

**Brakes:****Service** 4-Wheel drum type brakes**Parking** Band type mounted on transmission**Tires:****Standard** 9.00 x 15, 12-ply rating, Highway tread**Optional** 10.00 x 15, 12-ply rating, Highway tread**Optional** Grizzly Supersoft XS250x15 solid rubber**Fuel Tank:**

20 gallon capacity

**Outriggers:**

Four hydraulic outriggers of box beam construction with direct connected holding valves.

Independent controls for left and right hand outriggers

Outrigger pad dimension 9" x 12"

**Cargo Deck:**

60 square feet

12,000 lbs. maximum capacity

Steps located on front corners

**Hydraulic System:**

Tandem pump, direct-driven by engine crankshaft, rated at 16 and 32.5 gpm at rated rpm

Hydraulic oil tank capacity of 17 gallons

**Steering:**

Full hydraulic orbitrol unit with two double acting

2 inch cylinders attached to rear axle

**Crane:****Boom Movement:**

|           |                     |
|-----------|---------------------|
| Rotation  | Continuous          |
| Elevation | 0° to 70°           |
| Extension | 8'2" to 20'2" (12') |

**Boom Speeds:**

|           |            |
|-----------|------------|
| Rotation  | 1.7 rpm    |
| Elevation | 15 seconds |
| Extension | 28 seconds |

**Boom Assembly:**

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

**Boom Rotation:**

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

**Boom Winch:**Turret-mounted  
Hydraulic powered  
Bare drum line pull of 10,000 lbs.  
Winch line speed of 110 fpm  
90 feet of 5/8" wire rope, downhaul weight and swivel hook, standard



# IC-80-B

## Options:

### Anti-Two Blocking Device

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

### 10 foot Boom Extension

Boom stowable. Fiberglass bucket(s) or work platform can be attached to boom extension tip.

### Fiberglass Bucket(s)

24" x 24" x 42" deep personnel bucket with maximum capacity of 300 pounds.

### Work Platform

69" x 32 1/4" x 42" deep, constructed of steel tubing with expanded metal floor. Maximum capacity of 600 pounds.

### Bucket/Platform Brake

Friction brake for holding bucket(s) or Work Platform in a fixed position.

### Overload Alert System

Designed to prevent excessive overloads on crane structures

### Back-Up Alarm

Provides pulsating sound when transmission is in reverse

### Auxiliary Winch

Mounted behind front bumper, hydraulically driven with control in operators console

### LP Gas Fuel System Kit

Contains all necessary components for LPG operation

### Dual Fuel System Kit

Contains all necessary components to burn LPG or gasoline.

### No-Spin Differential

Differential equipped with "no-spin" feature

### Operators Guard

Tubular steel weldment with heavy expanded steel mesh top section

### Pintle Hook

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

### Sheave Block

Required for maximum capacity lifts

### All Weather Cab

Rigid-mounted canopy section and removable hinged door. Includes heater 12 volt electric windshield wiper two sliding windows, one in the door and one in the right-hand side.

### Defroster

Variable speed electric defroster fan inside cab.



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TECH  
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# IC-80-C



## AT A GLANCE:

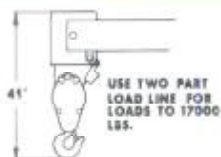
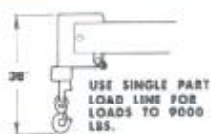
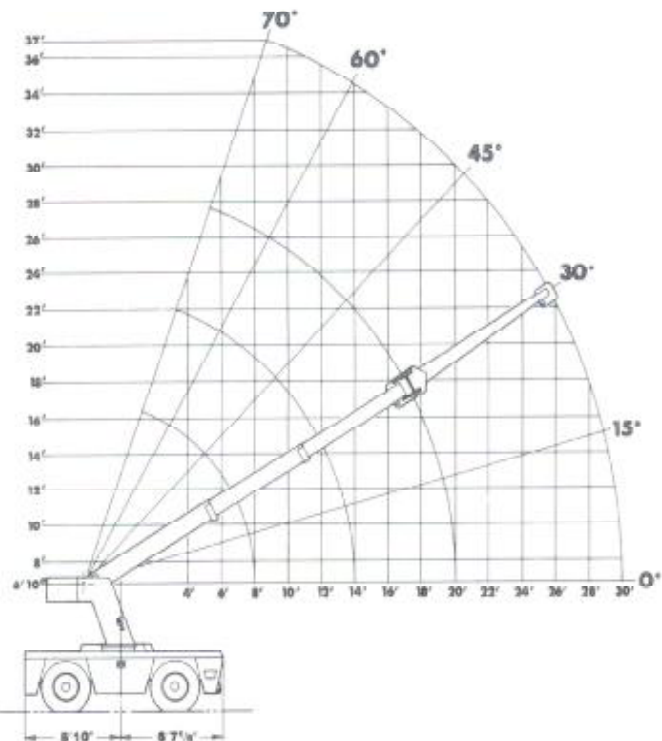
- Rated Capacity — 17,000 pounds
- Vertical Reach — 28' 0"
- Horizontal Reach — 20' 2"
- Continuous Rotation
- 10' 2" Turning Radius with  
Optional Four Wheel Steer
- Carry Deck
- Hydraulic Outriggers

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# IC-80-C

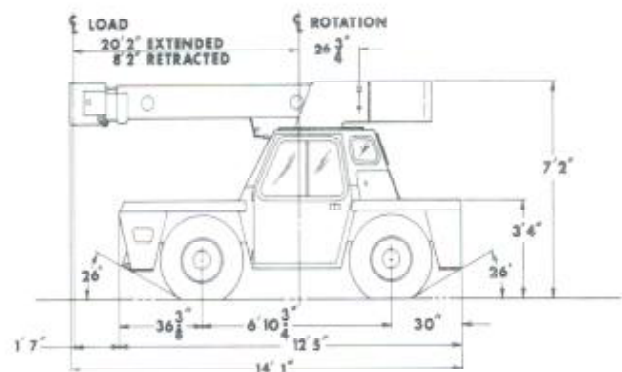
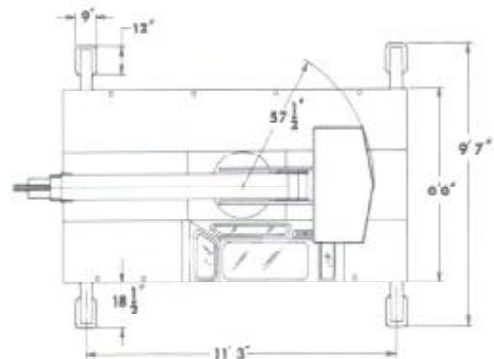
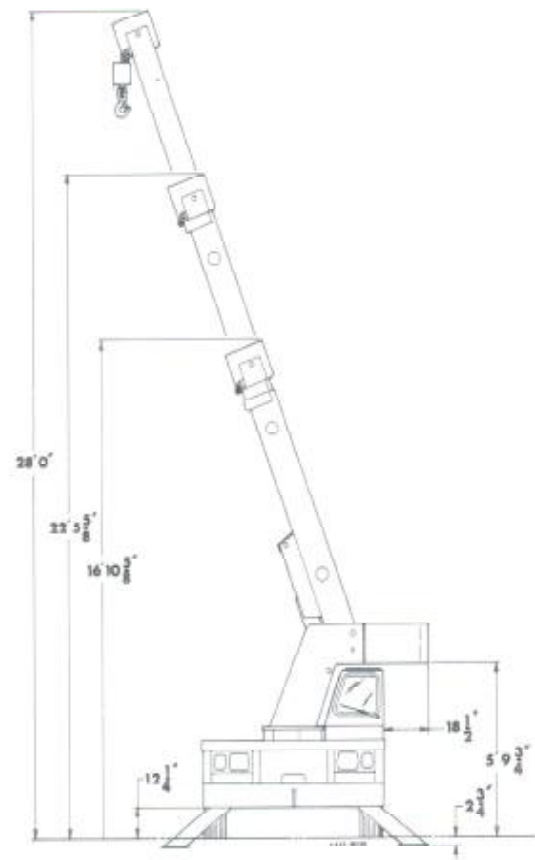


ALL CAPACITIES FOR 360° ROTATION

| LOAD<br>RADIUS<br>FEET | 3-SECTION BOOM |            | 10' BOOM<br>EXTENSION INSTALLED |            |
|------------------------|----------------|------------|---------------------------------|------------|
|                        | ON<br>RUBBER   | ON<br>O/R* | ON<br>RUBBER                    | ON<br>O/R* |
| 5                      | 9500           | 17000      | 7000                            | 7000       |
| 6                      | 8500           | 14500      | 6000                            | 6000       |
| 8                      | 5675           | 10250      | 5000                            | 5000       |
| 10                     | 4400           | 7700       | 4000                            | 4000       |
| 12                     | 3100           | 6550       | 3275                            | 3450       |
| 14                     | 2525           | 5550       | 2700                            | 3050       |
| 16                     | 2050           | 4450       | 2175                            | 2700       |
| 18                     | 1675           | 3950       | 1850                            | 2250       |
| 20                     | 1400           | 3550       | 1550                            | 2250       |
| 22                     |                |            | 1325                            | 2250       |
| 24                     |                |            | 1200                            | 2250       |
| 26                     |                |            | 975                             | 2250       |
| 28                     |                |            | 825                             | 2150       |
| 30                     |                |            | 675                             | 1825       |

\* Outrigger

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.

**General:**

|                                                            | Standard<br>Drive Axle | Optional<br>Drive Steer Axle |
|------------------------------------------------------------|------------------------|------------------------------|
| <b>Weight:</b>                                             | 13,900 lbs.            | 14,200 lbs.                  |
| <b>Travel Speeds (Calculated):</b>                         |                        |                              |
| Gear: First                                                | 5.4                    | 3.0                          |
| Second                                                     | 11.0                   | 6.5                          |
| Third                                                      | 20.0                   | 12.0                         |
| Fourth                                                     | N/A                    | 20.0                         |
| <b>Gradeability:</b>                                       | 43%                    | 71%                          |
| <b>Drawbar Pull:</b>                                       |                        |                              |
| Gear                                                       | <b>Pounds</b>          | <b>Pounds</b>                |
| First                                                      | 7,050*                 | 11,900*                      |
| Second                                                     | 3,450                  | 5,820*                       |
| Third                                                      | 1,880                  | 3,170                        |
| Fourth                                                     | N/A                    | 1,880                        |
| <b>Turning Radius:</b><br>(C/L of Outside Steering Wheel): | 14'8"                  | 10'2"                        |
| <b>Aisle Width for 90° Turn:</b>                           | 11'9"                  | 9'9"                         |

\* Wheels will spin before these values are reached.

**Engine:**

|                                 | Standard    | Optional   |
|---------------------------------|-------------|------------|
| <b>Make</b>                     | Continental | Perkins    |
| <b>Model</b>                    | TM27        | D4.203     |
| <b>No. of Cyl.</b>              | 4           | 4          |
| <b>Displacement</b>             | 165 C.I.D.  | 203 C.I.D. |
| <b>HP at Governed<br/>Speed</b> | 64          | 63         |

**Electrical:****12 Volt System****Lighting Package:**

One Pair Headlights with Hi and Low Beams, Back-up Lights,  
Integral Tail, Brake and Turn Signals and Front turn Signals

**Instrument Package:**

Fuel, Ammeter, Oil Pressure, Water Temperature, Converter Oil  
Temperature Gauges and Hourmeter

**Transmission:**

**Make:** Borg Warner

**Model:** 72T/T18

**Type:** Reversing Gearbox and Manual Shift Three Speed Gearbox.\*

Equipped with Torque Converter and Transmission Oil Cooler.

| <b>Gear Ratio:</b> | <b>Forward</b> | <b>Reverse</b> |
|--------------------|----------------|----------------|
| First              | 6.324:1        | 6.956:1        |
| Second             | 3.092:1        | 3.401:1        |
| Third              | 1.686:1        | 1.855:1        |
| Fourth*            | 1:1            | 1:1            |

Torque Converter Has Stall Ratio of 2.15:1

\* 4-speed gearbox only available with 4-wheel steer option.

**Axles:**

|                                     | Standard | Optional |
|-------------------------------------|----------|----------|
| <b>Drive Axle:</b>                  |          |          |
| Make                                | Rockwell | Hurth    |
| Model                               | F-146    | 272A     |
| Gear Ratio                          | 7.2:1    | 11.98:1  |
| Location                            | Front    | Front    |
| <b>Steering Axle (Non-Driving):</b> |          |          |
| Make                                | Rockwell |          |
| Model                               | FF-931   |          |
| Location                            | Rear     |          |

**Brakes:**

Service - 4-Wheel Drum Type Brakes

Parking - Band Type Mounted on Transmission

**Tires:**

Standard - 9:00x15, 12-Ply Rating, Highway Tread  
Optional - 10:00x15, 12-Ply Rating, Highway Tread  
Optional - 10:00x15, 14-Ply Rating, Mining & Industrial Tread  
Optional - Grizzly Supersoft XS250x15 Solid Rubber  
Optional - Foam Filling for the Above Pneumatic Tires

**Fuel Tank:**

20 Gallon Capacity

**Outriggers:**

Four Hydraulic Outriggers of Box Beam Construction with Direct-  
Connected Holding Valves. Independent Controls for Left and  
Right-Hand Outriggers. Outrigger Pad Dimension 9"x12".

**Cargo Deck:**

62 Square Feet  
12,000 pounds Capacity  
Steps Located on Front Corners

**Hydraulic System:**

Tandem Pump, Direct-Driven by Engine Crankshaft, Rated at 16  
and 32.5 GPM at Rated RPM. Hydraulic Oil Tank Capacity of 16  
Gallons.

**Steering:****Standard:**

Full Hydraulic Orbitrol Unit with Two Double-Acting Hydraulic  
Cylinders Attached to Rear Axle.

**Optional:**

Full Hydraulic Orbitrol Unit with Two Double-Acting Hydraulic  
Cylinders Attached to Both Front and Rear Axles.

Steering Modes Include:

Front Steer      Round Steer      Crab Steer

**Crane:****Boom Movement:**

Rotation      Continuous  
Elevation      0° to 70°  
Extension      8'2" to 20'2" (12')

**Boom Speeds:**

Rotation      1.5 RPM  
Elevation      10.0 Seconds  
Extension      28.0 Seconds

**Boom Assembly:**

Three-Section Boom Assembly Equipped with Bearing Pads,  
Double-Acting Hydraulic Cylinders with Direct-Connected  
Holding Valves and 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 Winch:**

Turret-Mounted  
Hydraulic Powered  
Bare Drum Line Pull of 10,000 Pounds  
Winch Line Speed of 110 FPM  
90 Feet of 5/16" Wire Rope, Downhaul Weight and Swivel  
Hook.

**Anti-Two-Block Device:**

An Audible and Visual Warning System to Alert the Operator  
if the Load Hook or Hook Block Pulls Too Close to Boom Tip.



# IC-80-C

## Options:

### Engine:

#### LP Gas Fuel System Kit (2).

Contains All Necessary Components for LP Gas Operation.

#### Dual Fuel System Kit (3).

Contains All Necessary Components to Burn LPG or Gasoline.

#### Diesel Engine (4).

Perkins Model D4.203 Diesel Engine.

#### Spark-Arrester Muffler (5).

Installed in Addition to Standard Muffler.

#### Engine Shutdown Gauges (6).

Shuts Engine Off When High Water Temperature or Low Engine Oil Pressure Occurs.

### Front Axle:

#### No-Spin Differential (Standard Axle) (7).

Differential Equipped with "No-Spin" Feature.

#### Four-Wheel Steering (8).

Hurth Drive/Steer Axle for Four-Wheel Steering. Differential Equipped with "No-Spin" Feature.

### Tires:

10:00x15, 12-Ply Rating (9)

10:00x15, 14-Ply Rating, Mining and Industrial Tires (10).

Solid Rubber Tires (11).

Foam Filled Tires (12,13).

Foam Filling of Either 9:00 or 10:00x15 Tires.

#### Spare Tires and Wheels (14,15,16).

Spare Tires and Wheels are Available for All Pneumatic Tires on the IC-80.

### Chassis Options:

#### Accessory Storage Box (17).

Storage Box is 14" Deep x 10 1/2" Long x 27" Wide. Located in Front Carry Deck.

#### Auxiliary Winch (18).

Mounted Behind Front Bumper, Hydraulically Driven with Control in Operators Console.

#### Pintle Hook (19).

Pintle Hook Mounted on Rear Frame. 5 Ton Capacity.

#### Headlight and Taillight Grilles (20).

Welded Steel Protective Grilles for Headlights and Taillights.

#### Lifting Rings (21).

Lifting Ring at Each Corner of Carry Deck So Sling Can Be Attached for Lifting Crane.

### Operators

#### Compartment:

##### Operator Guard (22).

Tubular Steel Weldment with Heavy Expanded Steel Mesh Top Section.

##### All-Weather Cab (23).

Rigid-Mounted Canopy Section and Removable Hinged Door. Includes Heater, Electric Wind-

shield Wiper, One Sliding Glass Window in the Door and One Fold-Out Window in Rear to Provide Flow-Through Ventilation. Defroster Fan Included.

##### Windshield Washer (24).

Includes Reservoir Pump and Nozzle.

##### Floormat (25).

Vinyl Mat with Foam Backing.

##### Operator Suspension Seat (26).

Provides Additional Operator Comfort.

### Electrical:

##### Back-Up Alarm (27).

Provides Pulsating Sound when Transmission is in Reverse.

##### Strobe Lights (28).

Yellow Strobe Light Mounted on Each Side of Turret Weight Box.

##### Lighted Instrument Guages (29).

Instrument Guages Equipped with Lights for Night Operations.

##### Amber Rotating Beacons (30).

Amber Rotating Beacon Mounted on Each Side of Turret Weight Box.

##### Boom Work Lights (31).

One Work Light Mounted to Boom to Light Boom Tip and One Work Light Mounted to Turret to Light Ground Under Boom Tip.

### Boom Attachments:

#### Anti-Two-Blocking Device (32).

Prevents Damage to Hoist Rope and/or Crane Components from Pulling Load Hook Against Boom Tip. This System uses a Weight Suspended from a Switch.

#### Anti-Two-Blocking Device (33).

Same as Above Except a Trip Arm is used Instead of a Weight.

#### 10 Foot Boom Extension (34).

Boom Stowable. Fiberglass Bucket(s) or Work Platform can be Attached to Boom Extension Tip.

#### Fiberglass Bucket(s) (35,36).

24" x 24" x 42" Deep Personnel Bucket with Maximum Capacity of 300 Pounds.

#### Work Platform (37).

69" x 32 7/8" x 42" Deep. Constructed of Steel Tubing with Expanded-Metal Floor. Maximum Capacity of 600 Pounds.

#### Bucket/Platform Brake (38).

Friction Brake for Holding Bucket(s) or Work Platform in a Fixed Position.

#### Sheave Block (39).

Required for Maximum-Capacity Lifts.

#### Searcher Hook (40).

3,000 Pound Capacity, Mounts to Boom Tip.

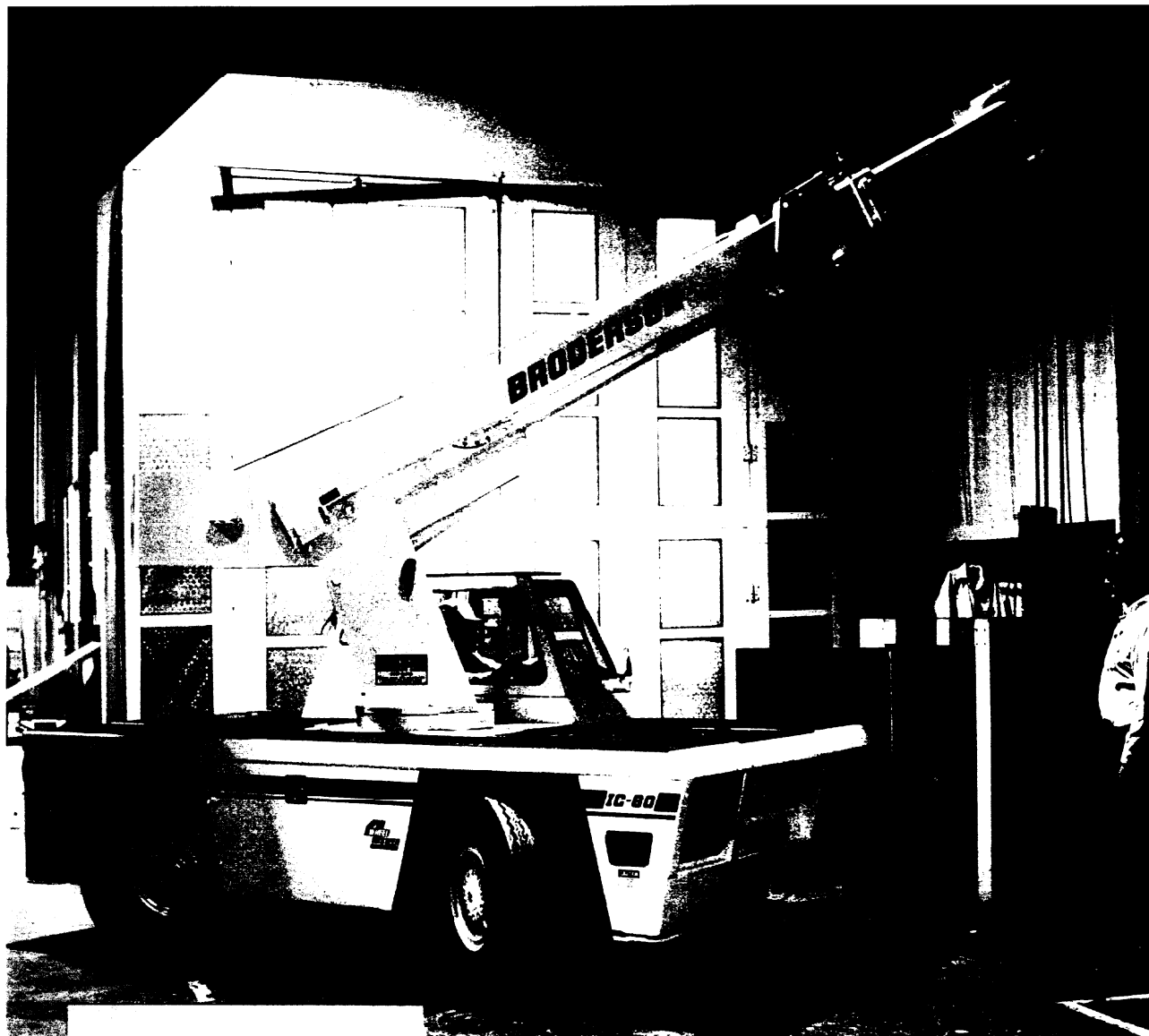


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IC-80-0 as per BMC



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Manufacturing Corp.

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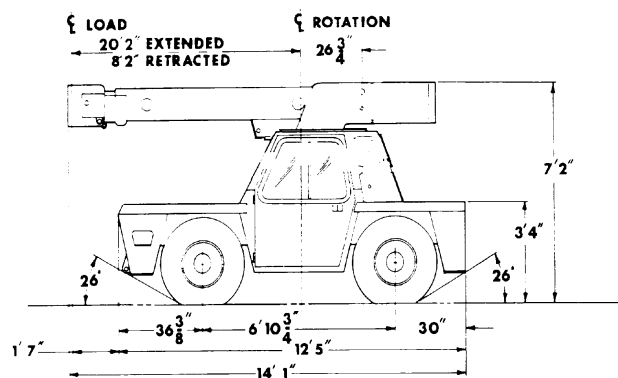
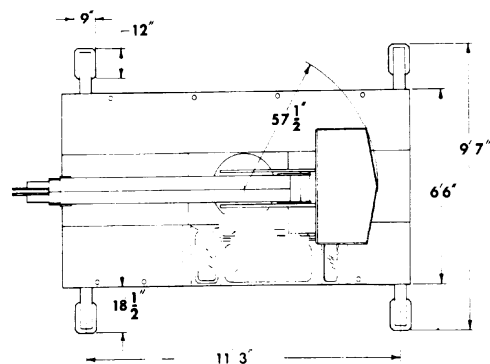
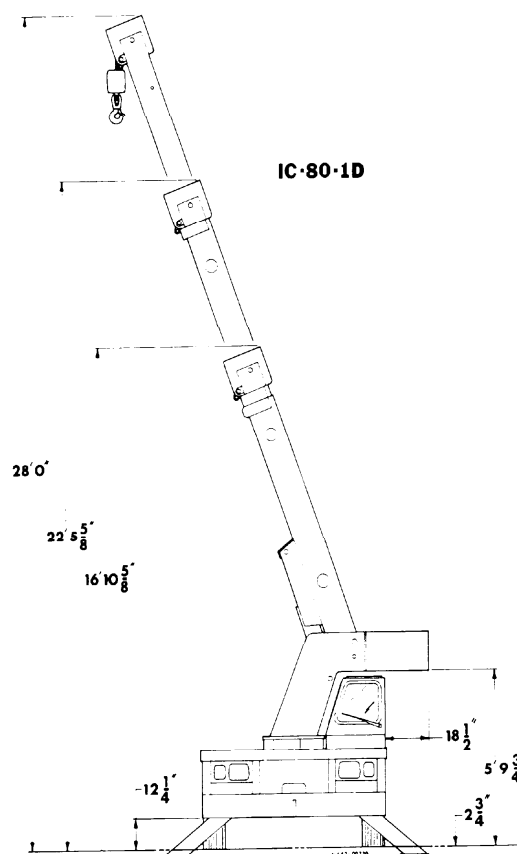
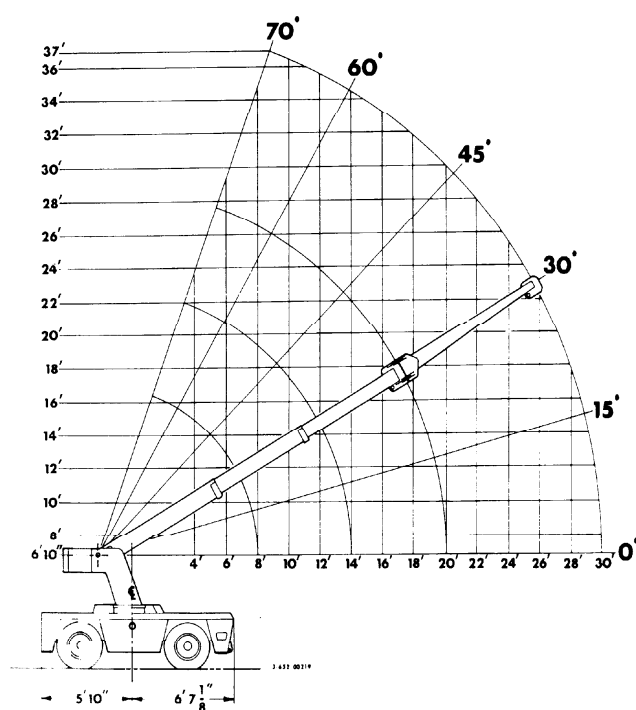
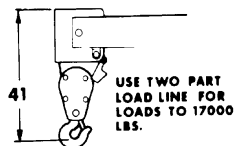
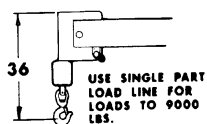


## IC-80-1D

8'2"-20'2" Boom

| LOAD<br>RADIUS<br>FEET | 3-SECTION BOOM |              | 10' BOOM<br>EXTENSION INSTALLED |              |
|------------------------|----------------|--------------|---------------------------------|--------------|
|                        | ON<br>O/R*     | ON<br>RUBBER | ON<br>O/R*                      | ON<br>RUBBER |
| 5                      | 17000          | 9500         | 7000                            | 7000         |
| 6                      | 14500          | 8500         | 6000                            | 6000         |
| 8                      | 10250          | 6000         | 5000                            | 5000         |
| 10                     | 7700           | 4150         | 4000                            | 4000         |
| 12                     | 6550           | 3100         | 3450                            | 3275         |
| 14                     | 5550           | 2425         | 3050                            | 2650         |
| 16                     | 4450           | 1975         | 2700                            | 2175         |
| 18                     | 3950           | 1625         | 2250                            | 1850         |
| 20                     | 3550           | 1400         | 2250                            | 1550         |
| 22                     |                |              | 2250                            | 1325         |
| 24                     |                |              | 2250                            | 1200         |
| 26                     |                |              | 2250                            | 975          |
| 28                     |                |              | 2150                            | 825          |
| 30                     |                |              | 1825                            | 675          |

1. Capacities on outriggers are 85% of tipping loads. Capacities on rubber 75% of tipping loads.
2. Deduct 120 lbs. with Boom Extension in stowed position.

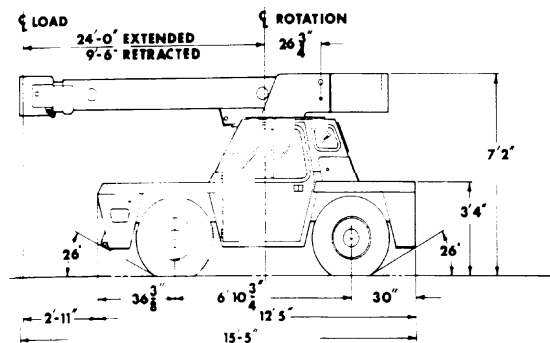
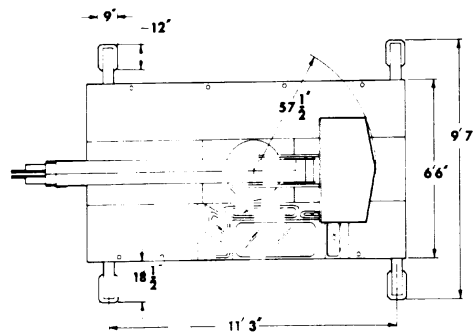
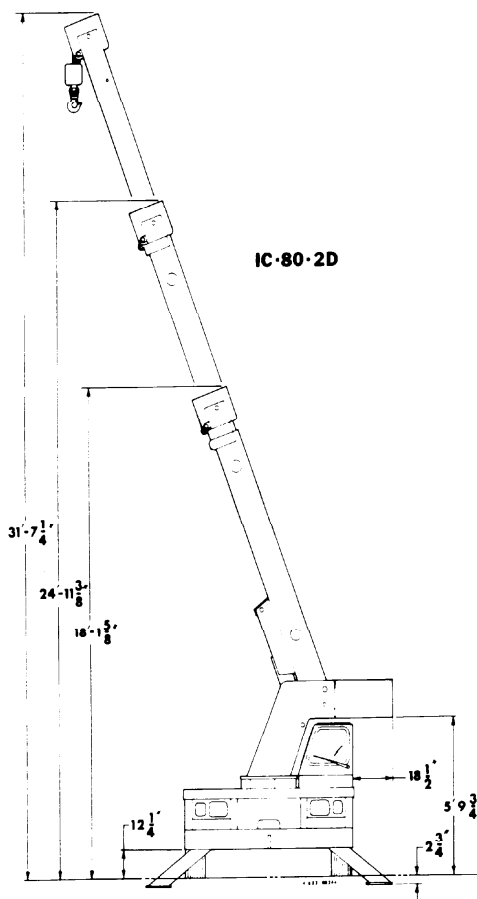
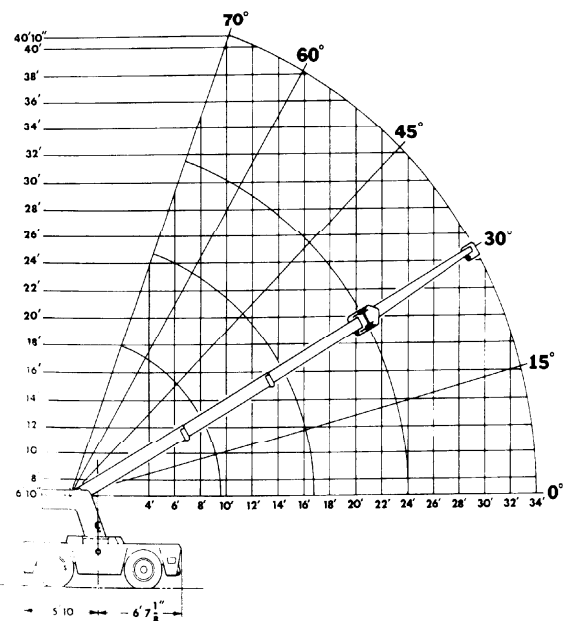
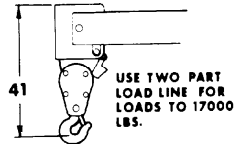
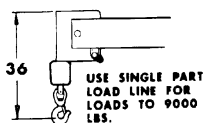


**IC-80-2D**

9'6"-24'0" Boom

| LOAD<br>RADIUS<br>FEET | 3-SECTION BOOM |              | 10' BOOM<br>EXTENSION INSTALLED |              |
|------------------------|----------------|--------------|---------------------------------|--------------|
|                        | ON<br>O R*     | ON<br>RUBBER | ON<br>O R*                      | ON<br>RUBBER |
| 5                      | 17000          | 9500         | 7000                            | 7000         |
| 6                      | 14500          | 8500         | 6000                            | 6000         |
| 8                      | 10250          | 6000         | 5000                            | 5000         |
| 10                     | 7700           | 4150         | 4000                            | 4000         |
| 12                     | 6550           | 3025         | 3450                            | 3275         |
| 14                     | 5550           | 2350         | 3050                            | 2600         |
| 16                     | 4450           | 1850         | 2700                            | 2125         |
| 18                     | 3950           | 1550         | 2250                            | 1800         |
| 20                     | 3250           | 1300         | 2250                            | 1525         |
| 22                     | 2075           | 1100         | 2250                            | 1275         |
| 24                     | 2475           | 925          | 2250                            | 1050         |
| 26                     |                |              | 2250                            | 850          |
| 28                     |                |              | 2000                            | 700          |
| 30                     |                |              | 1775                            | 600          |
| 32                     |                |              | 1625                            | 525          |
| 34                     |                |              | 1400                            | 450          |

- Capacities on outriggers are 85% of tipping loads. Capacities on rubber 75% of tipping loads.
- Deduct 120 lbs. with Boom Extension in stowed position.



**General:**

|                                    | Standard<br>Drive Axle | Optional<br>Drive Steer Axle |
|------------------------------------|------------------------|------------------------------|
| <b>Weight:</b>                     |                        |                              |
| IC-80-1D                           | 14,230 lbs.            | 14,530 lbs.                  |
| IC-80-2D                           | 14,530 lbs.            | 14,830 lbs.                  |
| <b>Travel Speeds (Calculated):</b> |                        |                              |
| <b>Gear:</b>                       |                        |                              |
| First                              | 5.4                    | 3.0                          |
| Second                             | 11.0                   | 6.5                          |
| Third                              | 20.0                   | 12.0                         |
| Fourth                             | N/A                    | 20.0                         |
| <b>Gradeability:</b>               | 43%                    | 71%                          |
| <b>Drawbar Pull:</b>               |                        |                              |
| <b>Gear</b>                        | <b>Pounds</b>          | <b>Pounds</b>                |
| First                              | 7,050*                 | 11,900*                      |
| Second                             | 3,450                  | 5,820*                       |
| Third                              | 1,880                  | 3,170                        |
| Fourth                             | N/A                    | 1,880                        |
| <b>Turning Radius:</b>             |                        |                              |
| (C/L of Outside Steering Wheel):   | 14'8"                  | 10'2"                        |
| <b>Aisle Width for 90° Turn:</b>   | 11'9"                  | 9'9"                         |

Wheels will spin before these values are reached.

**Engine:**

|                                     | Standard    | Optional   | Optional   | Optional   |
|-------------------------------------|-------------|------------|------------|------------|
| <b>Make</b>                         | Continental | John Deere | Perkins    | Cummins    |
| <b>Model</b>                        | TM27        | 4.239      | D4.203     | 4B3.9      |
| <b>No. of Cyl.</b>                  | 4           | 4          | 4          | 4          |
| <b>Displacement</b>                 | 165 C.I.D.  | 239 C.I.D. | 203 C.I.D. | 239 C.I.D. |
| <b>HP at<br/>Governed<br/>Speed</b> | 64          | 80         | 63         | 76         |

**Electrical:****12 Volt System****Lighting Package:**

One Pair Headlights with Hi and Low Beams, Back-up Lights, Integral Tail, Brake and Turn Signals and Front turn Signals

**Instrument Package:**

Fuel, Ammeter, Oil Pressure, Water Temperature, Converter Oil Temperature Gauges and Hourmeter

**Back-Up Alarm**

Provides pulsating sound when transmission is in reverse.

**Transmission:**

**Make:** Borg Warner

**Model:** 72T/T18

**Type:** Reversing Gearbox and Manual Shift Three Speed Gearbox.\*  
Equipped with Torque Converter and Transmission Oil Cooler.

| <b>Gear Ratio:</b> | <b>Forward</b> | <b>Reverse</b> |
|--------------------|----------------|----------------|
| First              | 6.324:1        | 6.956:1        |
| Second             | 3.092:1        | 3.401:1        |
| Third              | 1.686:1        | 1.855:1        |
| Fourth*            | 1:1            | 1:1            |

Torque Converter Has Stall Ratio of 2.15:1

\* 4-speed gearbox only available with 4-wheel steer option

**Axles:**

|                                     | Standard | Optional |
|-------------------------------------|----------|----------|
| <b>Drive Axle:</b>                  |          |          |
| <b>Make</b>                         | Rockwell | Hurth    |
| <b>Model</b>                        | F-146    | 272A     |
| <b>Gear Ratio</b>                   | 7.2:1    | 11.98:1  |
| <b>Location</b>                     | Front    | Front    |
| <b>Steering Axle (Non-Driving):</b> |          |          |
| <b>Make</b>                         | Rockwell |          |
| <b>Model</b>                        | FF-931   |          |
| <b>Location</b>                     | Rear     |          |

**Brakes:**

Service - 4-Wheel Drum Type Brakes

Parking - Band Type Mounted on Transmission

**Tires:**

Standard - 9:00x15, 12-Ply Rating, Highway Tread

Optional - 10:00x15, 12-Ply Rating, Highway Tread

Optional - 10:00x15, 14-Ply Rating, Mining & Industrial Tread

Optional - Grizzly Supersoft XS250x15 Solid Rubber

Optional - Foam Filling for the Above Pneumatic Tires

**Fuel Tank:**

20 Gallon Capacity

**Outriggers:**

Four Hydraulic Outriggers of Box Beam Construction with Direct-Connected Holding Valves. Independent Controls for Left and Right-Hand Outriggers. Outrigger Pad Dimension 9"x12".

**Cargo Deck:**

62 Square Feet

12,000 pounds Capacity

Steps Located on Front Corners

**Hydraulic System:**

Tandem Pump, Direct-Driven by Engine Crankshaft, Rated at 16 and 32.5 GPM at Rated RPM. Hydraulic Oil Tank Capacity of 16 Gallons.

**Steering:****Standard:**

Full Hydraulic Orbitrol Unit with Two Double-Acting Hydraulic Cylinders Attached to Rear Axle.

**Optional:**

Full Hydraulic Orbitrol Unit with Two Double-Acting Hydraulic Cylinders Attached to Both Front and Rear Axles.

Steering Modes Include: Rear Wheel Steer; Round Steer

**Crane:**

|                       |                     |             |
|-----------------------|---------------------|-------------|
| <b>Boom Movement:</b> | IC-80-1D            | IC-80-2D    |
| Rotation              | Continuous          | Continuous  |
| Elevation             | 0° to 70°           | 0° to 70°   |
| Extension             | 8'2" to 20'2" (12') | 9'6" to 24' |

**Boom Speeds:**

|           |              |              |
|-----------|--------------|--------------|
| Rotation  | 1.7 RPM      | 1.7 RPM      |
| Elevation | 10.0 Seconds | 10.0 Seconds |
| Extension | 28.0 Seconds | 34.0 Seconds |

**Boom Assembly:**

Three-Section Boom Assembly Equipped with Bearing Pads, Double-Acting Hydraulic Cylinders with Direct-Connected Holding Valves and 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 Winch:**

Turret-Mounted  
Hydraulic Powered  
Bare Drum Line Pull of 10,000 Pounds  
Winch Line Speed of 110 FPM  
IC-80-1D—90 feet of <sup>9</sup>/<sub>16</sub>" Wire Rope  
IC-80-2D—105 feet of <sup>9</sup>/<sub>16</sub>" Wire Rope  
Downhaul Weight and Swivel Hook

**Anti-Two Block Device:**

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

**2-Part-Line Sheave Block:**

Single sheave block for two part line requirements



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

1. IC-80-1D Industrial Crane with 8'2"-20'2" Boom
2. IC-80-2D Industrial Crane with 9'6"-24' Boom

#### ENGINE OPTIONS:

3. LP Gas Fuel System  
Contains all necessary components for LP gas operations
4. Dual Fuel System  
Contains all necessary components to burn LP gas and gasoline.
- Diesel Engines:**
5. John Deere  
4-cylinder, Model 4239D
6. Perkins  
4-cylinder, Model D4.203
7. Cummins  
4-cylinder, Model 4B3.9
8. Spark Arrester Muffler  
Installed in addition to standard muffler.
9. Catalytic Converter  
Reduces engine emissions, Cummins Diesel only.
10. Engine Heater  
Engine coolant heater installed to circulate warm water through engine, plugs into 120 volt AC.
11. Ether Injection System  
Ether starting aid controlled by switch in operator compartment and injects ether directly into intake manifold, Cummins Diesel only.
12. Engine Shut Down Gauges  
Shuts engine off when high water temperature or low engine oil pressure occurs.

#### FRONT AXLE OPTIONS:

13. No-Spin Differential  
The differential equipped with "No-Spin" feature.
14. Four-Wheel Steering  
Hurth drive/steer axle for four-wheel steering, differential equipped with "No-Spin" feature.

#### TIRE OPTIONS:

15. 10.00 x 15, 12-Ply Rating
16. Solid Rubber Tires
17. 10.00 x 15, 14-Ply Rating, Mining & Industrial Tires

#### FOAM FILLING OF TIRES:

18. 9.00 x 15 Tires
19. 10.00 x 15 Tires

#### SPARE TIRE AND WHEELS:

20. 9.00 x 15
21. 10.00 x 15
22. 10.00 x 15 Mining & Industrial

#### CHASSIS OPTIONS:

23. Accessory Storage Box  
Storage box is 14" deep x 10-1/2" long and 27" wide, located in front carry deck.

24. Auxiliary Winch  
Mounted behind front bumper, hydraulically driven with control in operator's console.
25. Pintle Hook  
Pintle hook mounted on rear frame, 5-ton capacity.
26. Headlight and Taillight Grilles  
Welded steel protective grilles for headlight and taillights.
27. Rearview Mirrors  
One mounted on right-hand deck stake and one mounted on left-hand deck stake.
28. Lifting Rings  
Lifting rings at each corner of carry deck so sling can be attached for lifting crane.

#### OPERATOR COMPARTMENT OPTIONS:

29. Operator Guard  
Tubular steel weldment with heavy expanded steel mesh top section.
30. All-Weather Cab  
Rigid-mounted canopy section and removable hinged door. Includes heater, electric windshield wiper, one sliding glass window in the door and one fold-out window in rear to provide flow-through ventilation. Defroster fan included.
31. Sliding Right-Hand Window  
Window on right-hand side of cab slides open for additional ventilation.
32. Windshield Washer  
Includes reservoir pump and nozzle.
33. Floor Mat  
Vinyl mat with foam backing.
34. Operator Suspension Seat  
Provides additional operator comfort.
35. Noise Reduction Kit  
Includes floor mat, control valve and side panels of foam backed vinyl for noise reduction.

#### ELECTRICAL OPTIONS:

36. Outrigger Warning System  
Two-tone alarm is activated when "outrigger down" controls are operated.
37. Strobe Lights  
Yellow strobe light mounted on each side of turret weight box.
38. Lighted Instrument Gauges  
Instrument gauges equipped with lights for night operations.
39. Amber Rotating Beacons  
Amber rotating beacon mounted on each side of turret weight box.
40. 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.
41. Boom Work Lights and Beacons  
Boom work lights and amber rotating beacons installed.

42. Boom Work Lights and Strobe  
Boom work lights and strobe lights installed.
43. Dome Light  
Interior light installed for units equipped with an all weather cab.

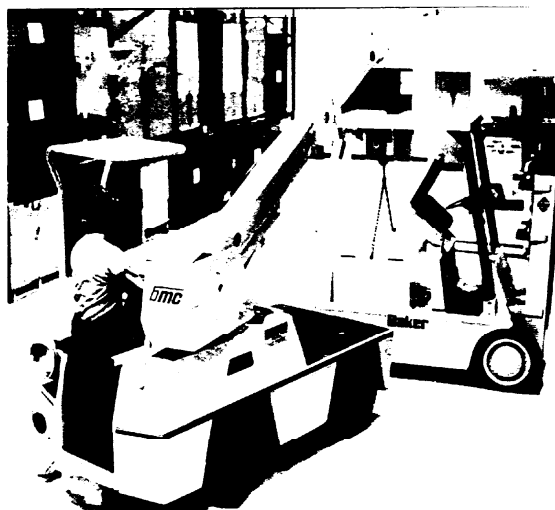
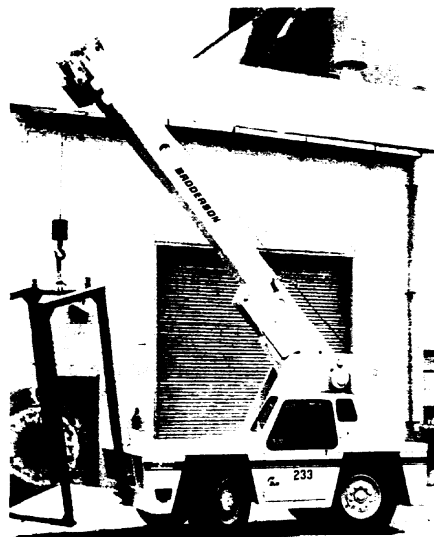
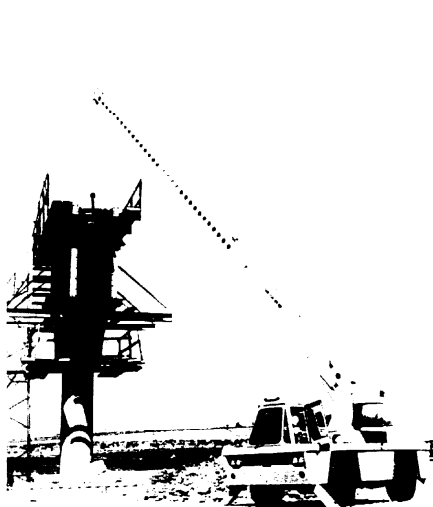
#### HYDRAULIC OPTIONS:

44. Boom Structural Protection System  
Important to understand fully the description of the Boom Structural Protection System described in the IC-80 Engineering Spec. This option is not intended to and will not replace an LMI.
45. Outrigger Control - Individual  
Electric switch used in conjunction with existing two outrigger valve section to select for individual operation of each outrigger.

#### BOOM ATTACHMENTS:

46. Anti-Two Block - Chain & Weight  
Prevents damage to hoist rope and/or crane components from pulling load hook against boom tip. This system uses a suspended weight on the boom tip instead of a trip arm.
47. Boom Extension, 10 Foot  
Boom Stowable, Fiberglass bucket(s) or work platform can be attached to the boom extension tip.
48. Boom Extension, 10 Foot, Offsettable  
Same as item 47, except the boom extension is offsettable to 3 different positions; 0 degree (inline), 15 degree and 30 degree offset.
49. Searcher Hook - "H" Shape  
Swivel hook with spring latch hangs from link under boom tip, 5,000 pound capacity.
50. Searcher Hook - Large  
Swivel hook with spring latch hangs from support structure projecting outward from boom tip, 5,000 pound capacity.
51. Load Moment Indicator - Krueger  
Warns operator of impending overload with audible and visual signals. Prevents overload by stopping boom functions that cause overloads. Readouts for load, boom angle, boom length, and load radius.
52. Load Indicator - Krueger  
Includes 3-sheave load sensor on top of boom and readout box on top of instrument panel.
53. Load Moment Indicator - PAT  
Same as item 51, except manufactured by PAT.
54. Load Indicator - PAT  
Same as item 52, except manufactured by PAT.





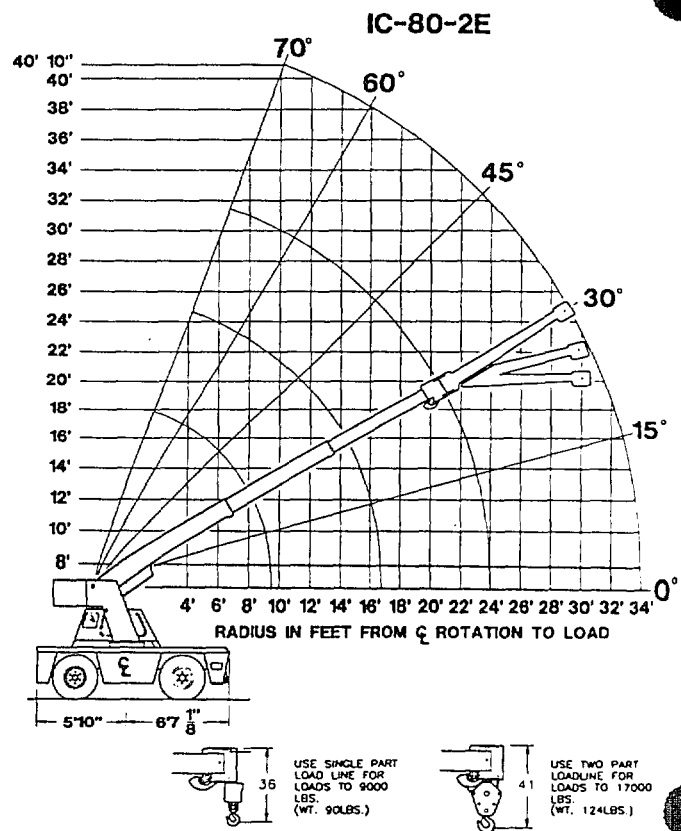
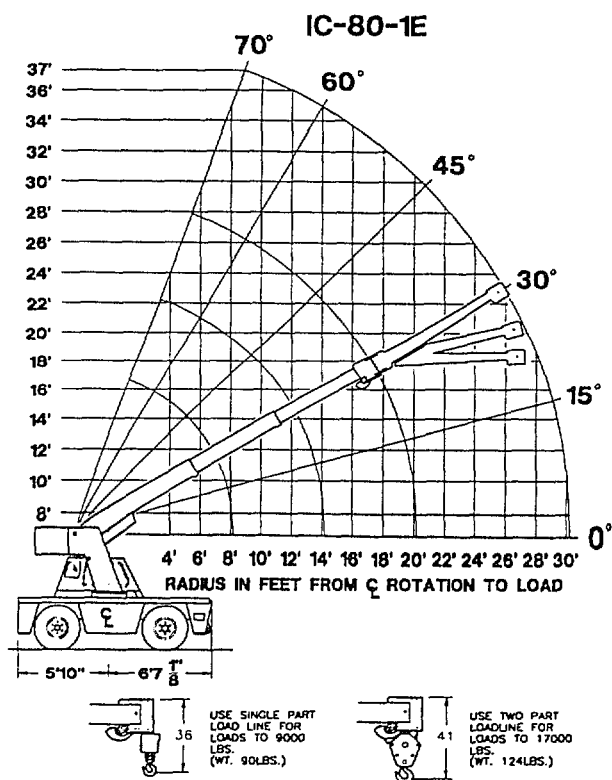
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**IC-80-1E**

| 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                                                   | 9600                                        | 17000         | 11700      | 17000         |      |
| 6                                                   | 7900                                        | 14500         | 10400      | 14500         |      |
| 8                                                   | 5750                                        | 10250         | 8400       | 10250         |      |
| 10                                                  | 4150                                        | 7700          | 6300       | 7700          |      |
| 12                                                  | 3100                                        | 6550          | 4650       | 6550          |      |
| 14                                                  | 2425                                        | 5550          | 3650       | 5550          |      |
| 16                                                  | 1975                                        | 4650          | 3000       | 4650          |      |
| 18                                                  | 1625                                        | 3950          | 2500       | 4150          |      |
| 20                                                  | 1400                                        | 3550          | 2150       | 3800          |      |
| 22                                                  | 1275                                        | 3000          | 1900       | 3000          |      |
| 24                                                  | 1075                                        | 2750          | 1650       | 2800          |      |
| 26                                                  | 925                                         | 2450          | 1425       | 2600          |      |
| 28                                                  | 775                                         | 2150          | 1250       | 2400          |      |
| 30                                                  | 675                                         | 1950          | 1100       | 2250          |      |
| 10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET         |                                             |               |            |               |      |
| MAIN BOOM ANGLE                                     |                                             |               |            |               |      |
| 0°                                                  | 30°                                         | 45°           | 60°        | 70°           |      |
| * 1 0°                                              | 2250                                        | 2600          | 3200       | 5000          | 7000 |
| † 115°                                              | ---                                         | 2400          | 2700       | 3500          | 4200 |
| 130°                                                | ---                                         | 2250          | 2500       | 3000          | 3300 |

\* USE 0° FOR STRAIGHT BOOM EXTENSION

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

BOOM EXT. LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

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 capabilities. Deduct 120 pounds with Boom Extension in stowed position.

**IC-80-2E**

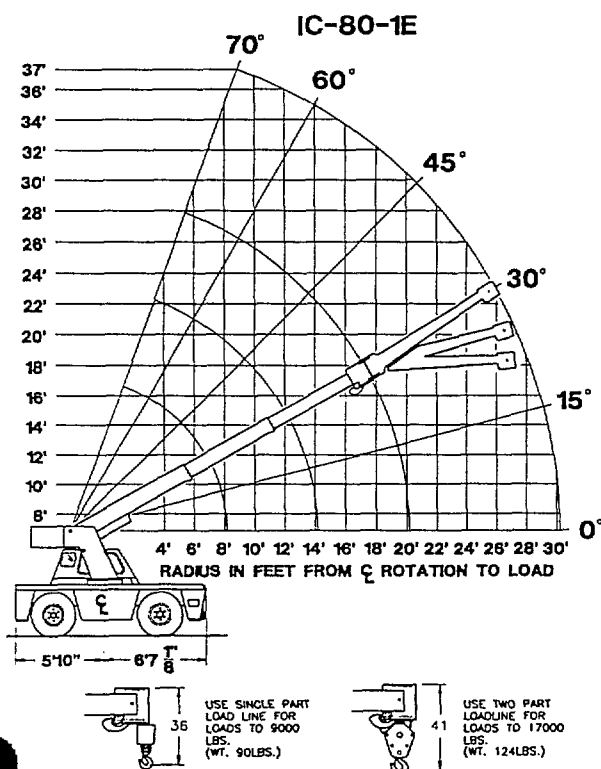
| CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE |                                             |               |            |               |      |
|-----------------------------------------------------|---------------------------------------------|---------------|------------|---------------|------|
| LOAD RADIUS FEET                                    | MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS |               |            |               |      |
|                                                     | 360° ROTATION                               |               | OVER FRONT |               |      |
|                                                     | ON RUBBER                                   | ON OUTRIGGERS | ON RUBBER  | ON OUTRIGGERS |      |
| 5                                                   | 9500                                        | 17000         | 11600      | 17000         |      |
| 6                                                   | 7800                                        | 14500         | 10200      | 14500         |      |
| 8                                                   | 5500                                        | 10250         | 8250       | 10250         |      |
| 10                                                  | 3900                                        | 7700          | 6200       | 7700          |      |
| 12                                                  | 2900                                        | 6550          | 4550       | 6550          |      |
| 14                                                  | 2300                                        | 5550          | 3550       | 5550          |      |
| 16                                                  | 1850                                        | 4550          | 2850       | 4550          |      |
| 18                                                  | 1550                                        | 3950          | 2400       | 4050          |      |
| 20                                                  | 1300                                        | 3250          | 2050       | 3650          |      |
| 22                                                  | 1100                                        | 2875          | 1750       | 3300          |      |
| 24                                                  | 925                                         | 2475          | 1550       | 3100          |      |
| 26                                                  | 850                                         | 2250          | 1350       | 2750          |      |
| 28                                                  | 700                                         | 2000          | 1175       | 2500          |      |
| 30                                                  | 600                                         | 1775          | 1025       | 2300          |      |
| 32                                                  | 500                                         | 1625          | 900        | 2100          |      |
| 34                                                  | 425                                         | 1400          | 800        | 1950          |      |
| 10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET         |                                             |               |            |               |      |
| MAIN BOOM ANGLE                                     |                                             |               |            |               |      |
| 0°                                                  | 30°                                         | 45°           | 60°        | 70°           |      |
| * 1 0°                                              | 2250                                        | 2600          | 3200       | 5000          | 7000 |
| † 115°                                              | ---                                         | 2400          | 2700       | 3500          | 4200 |
| 130°                                                | ---                                         | 2250          | 2500       | 3000          | 3300 |

\* USE 0° FOR STRAIGHT BOOM EXTENSION

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

BOOM EXT. LOADS MUST NOT EXCEED MAIN BOOM CAPACITY

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 capabilities. Deduct 120 pounds with Boom Extension in stowed position.

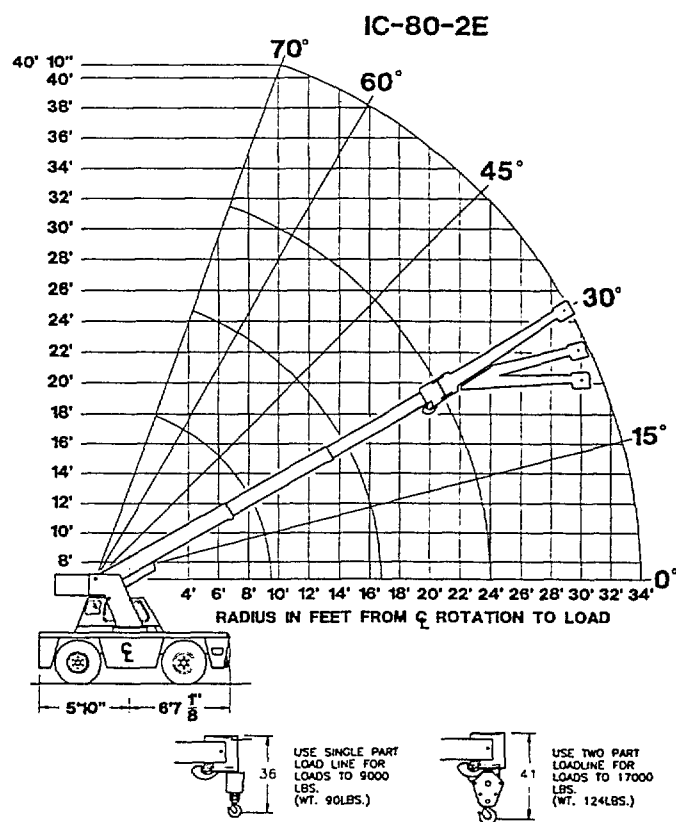


IC-80-1E

| CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE |                                             |               |            |               |       |      |
|-----------------------------------------------------|---------------------------------------------|---------------|------------|---------------|-------|------|
| LOAD<br>RADIUS<br>FEET                              | MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS |               |            |               |       |      |
|                                                     | 380° ROTATION                               |               | OVER FRONT |               |       |      |
|                                                     | ON RUBBER                                   | ON OUTRIGGERS | ON RUBBER  | ON OUTRIGGERS |       |      |
| MAIN BOOM                                           | 5                                           | 9600          | 17000      | 11700         | 17000 |      |
|                                                     | 6                                           | 7900          | 14500      | 10400         | 14500 |      |
|                                                     | 8                                           | 5750          | 10250      | 8400          | 10250 |      |
|                                                     | 10                                          | 4150          | 7700       | 6300          | 7700  |      |
|                                                     | 12                                          | 3100          | 6550       | 4650          | 6550  |      |
|                                                     | 14                                          | 2425          | 5550       | 3650          | 5550  |      |
|                                                     | 16                                          | 1975          | 4650       | 3000          | 4650  |      |
|                                                     | 18                                          | 1625          | 3950       | 2500          | 4150  |      |
|                                                     | 20                                          | 1400          | 3550       | 2150          | 3800  |      |
|                                                     | 22                                          | 1275          | 3000       | 1900          | 3000  |      |
| 10' BOOM EXT.                                       | 24                                          | 1075          | 2750       | 1650          | 2800  |      |
|                                                     | 26                                          | 925           | 2450       | 1425          | 2600  |      |
|                                                     | 28                                          | 775           | 2150       | 1250          | 2400  |      |
|                                                     | 30                                          | 675           | 1950       | 1100          | 2250  |      |
|                                                     | 10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET |               |            |               |       |      |
|                                                     | MAIN BOOM ANGLE                             |               |            |               |       |      |
|                                                     | ANGLE                                       | 0°            | 30°        | 45°           | 60°   | 70°  |
| 10' BOOM EXT.                                       | *1 0°                                       | 2250          | 2600       | 3200          | 5000  | 7000 |
|                                                     | 115°                                        | ---           | 2400       | 2700          | 3500  | 4200 |
|                                                     | 130°                                        | ---           | 2250       | 2500          | 3000  | 3300 |

\* USE 0° FOR STRAIGHT BOOM EXTENSION  
 † USE 0°, 15° OR 30° FOR OFFSET BOOM EXTENSION  
 BOOM EXT. LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

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 capabilities. Deduct 120 pounds with Boom Extension in stowed position.

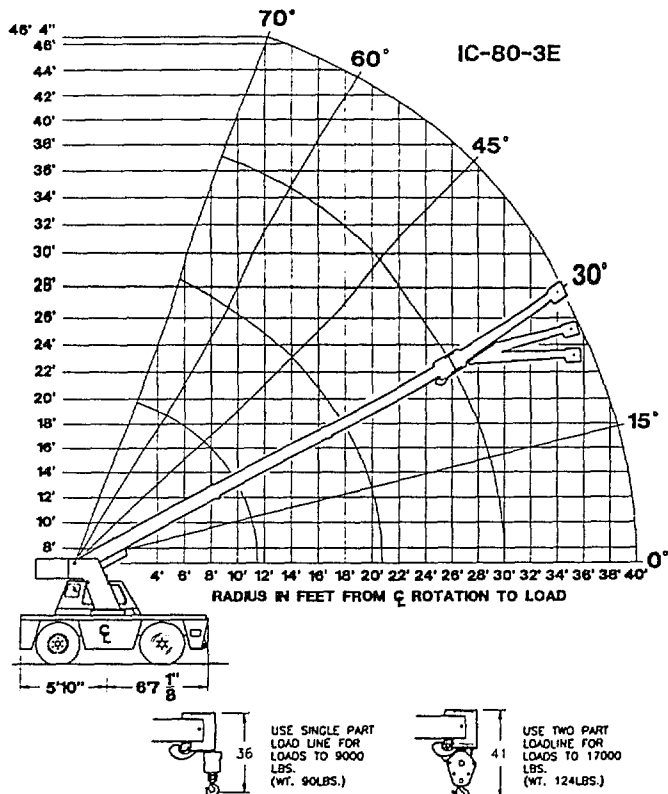


IC-80-2E

| CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE |                                             |               |            |               |       |      |
|-----------------------------------------------------|---------------------------------------------|---------------|------------|---------------|-------|------|
| LOAD<br>RADIUS<br>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         | 17000 |      |
|                                                     | 6                                           | 7800          | 14500      | 10200         | 14500 |      |
|                                                     | 8                                           | 5500          | 10250      | 8250          | 10250 |      |
|                                                     | 10                                          | 3900          | 7700       | 6200          | 7700  |      |
|                                                     | 12                                          | 2900          | 6550       | 4550          | 6550  |      |
|                                                     | 14                                          | 2300          | 5550       | 3550          | 5550  |      |
|                                                     | 16                                          | 1850          | 4550       | 2850          | 4550  |      |
|                                                     | 18                                          | 1550          | 3950       | 2400          | 4050  |      |
|                                                     | 20                                          | 1300          | 3250       | 2050          | 3650  |      |
|                                                     | 22                                          | 1100          | 2875       | 1750          | 3300  |      |
| 10' BOOM EXT.                                       | 24                                          | 925           | 2475       | 1550          | 3100  |      |
|                                                     | 26                                          | 850           | 2250       | 1350          | 2750  |      |
|                                                     | 28                                          | 700           | 2000       | 1175          | 2500  |      |
|                                                     | 30                                          | 600           | 1775       | 1025          | 2300  |      |
|                                                     | 32                                          | 500           | 1625       | 900           | 2100  |      |
|                                                     | 34                                          | 425           | 1400       | 800           | 1950  |      |
|                                                     | 10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET |               |            |               |       |      |
|                                                     | MAIN BOOM ANGLE                             |               |            |               |       |      |
|                                                     | ANGLE                                       | 0°            | 30°        | 45°           | 60°   | 70°  |
|                                                     | • 1 0°                                      | 2250          | 2600       | 3200          | 5000  | 7000 |
| 115°                                                | ---                                         | 2400          | 2700       | 3500          | 4200  |      |
| 130°                                                | ---                                         | 2250          | 2500       | 3000          | 3300  |      |

\* USE 0° FOR STRAIGHT BOOM EXTENSION  
 † USE 0°, 15° OR 30° FOR OFFSET BOOM EXTENSION  
 BOOM EXT. LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

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 capabilities. Deduct 120 pounds with Boom Extension in stowed position.



IC-80-3E

| CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE |                                             |               |            |               |       |      |     |
|-----------------------------------------------------|---------------------------------------------|---------------|------------|---------------|-------|------|-----|
| LOAD<br>RADIUS<br>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         | 17000 |      |     |
|                                                     | 6                                           | 7550          | 14000      | 10000         | 14000 |      |     |
|                                                     | 8                                           | 5250          | 10000      | 8100          | 10000 |      |     |
|                                                     | 10                                          | 3600          | 7700       | 6100          | 7700  |      |     |
|                                                     | 12                                          | 2650          | 6100       | 4450          | 6100  |      |     |
|                                                     | 14                                          | 2050          | 5200       | 3400          | 5200  |      |     |
|                                                     | 16                                          | 1600          | 4400       | 2700          | 4400  |      |     |
|                                                     | 18                                          | 1250          | 3650       | 2200          | 3900  |      |     |
|                                                     | 20                                          | 1050          | 3050       | 1800          | 3400  |      |     |
|                                                     | 22                                          | 850           | 2650       | 1550          | 3050  |      |     |
|                                                     | 24                                          | 750           | 2300       | 1350          | 2800  |      |     |
|                                                     | 26                                          | 650           | 2050       | 1150          | 2550  |      |     |
| 10' BOOM EXT.                                       | 28                                          | 550           | 1850       | 1000          | 2350  |      |     |
|                                                     | 30                                          | 450           | 1650       | 900           | 2150  |      |     |
|                                                     | 32                                          | 350           | 1550       | 750           | 1950  |      |     |
|                                                     | 34                                          | 250           | 1400       | 650           | 1800  |      |     |
|                                                     | 36                                          | 200           | 1250       | 550           | 1650  |      |     |
|                                                     | 38                                          | 150           | 1100       | 450           | 1500  |      |     |
|                                                     | 40                                          | 100           | 1000       | 400           | 1400  |      |     |
|                                                     | 10-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET |               |            |               |       |      |     |
|                                                     | MAIN BOOM ANGLE                             |               |            |               |       |      |     |
|                                                     | 0°                                          | 30°           |            | 45°           |       | 60°  | 70° |
|                                                     | *1 0°                                       | 2250          | 2600       | 3200          | 5000  | 7000 |     |
|                                                     | 115°                                        | ---           | 2400       | 2700          | 3500  | 4200 |     |
| 130°                                                | ---                                         | 2250          | 2500       | 3000          | 3300  |      |     |

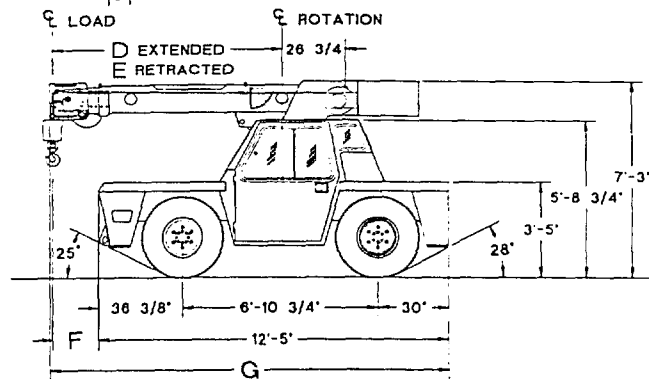
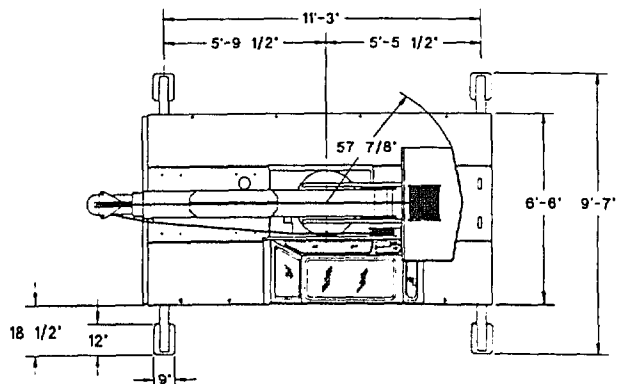
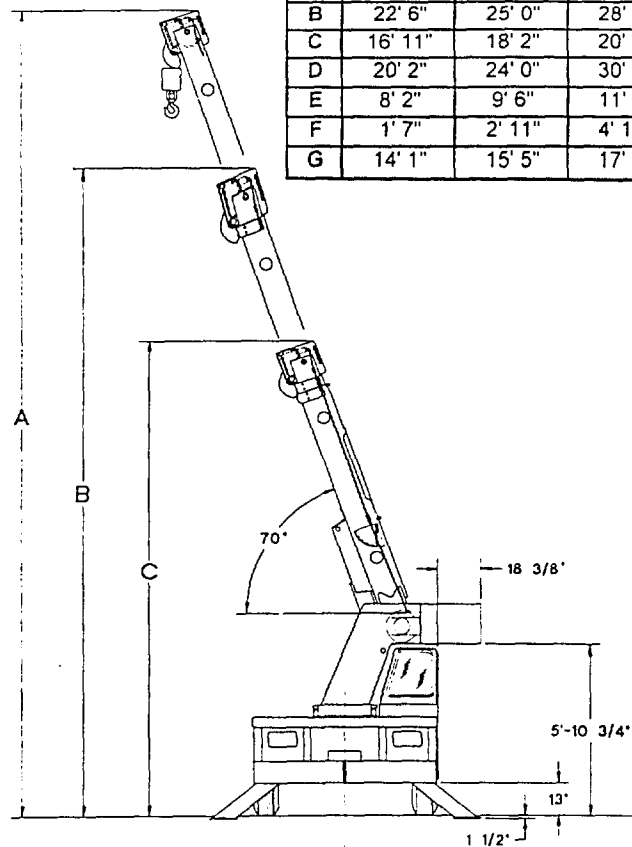
\* USE 0° FOR STRAIGHT BOOM EXTENSION

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

BOOM EXT. LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

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 capabilities. Deduct 120 pounds with Boom Extension in stowed position.

|   | IC-80-1E | IC-80-2E | IC-80-3E |
|---|----------|----------|----------|
| A | 28' 2"   | 31' 9"   | 37' 5"   |
| B | 22' 6"   | 25' 0"   | 28' 9"   |
| C | 16' 11"  | 18' 2"   | 20' 0"   |
| D | 20' 2"   | 24' 0"   | 30' 0"   |
| E | 8' 2"    | 9' 6"    | 11' 6"   |
| F | 1' 7"    | 2' 11"   | 4' 11"   |
| G | 14' 1"   | 15' 5"   | 17' 5"   |





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

#### MODELS:

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

#### ENGINE:

5. **LP Gas Fuel System**  
Contains all necessary components for LP gas operations.
6. **Dual Fuel System**  
Contains all necessary components to burn LP gas and gasoline.
- Diesel Engines:**
  7. **Cummins**  
4-cylinder, Model 4B3.9 7.
  8. **Perkins**  
4-cylinder, Model D4.236
  9. **John Deere**  
4-cylinder, Model 4239D
10. **Spark Arrester Muffler**  
Installed in addition to std. muffler.
11. **Catalytic Converter**  
Reduces engine emissions, Diesel only.
- Engine Heater**  
Engine coolant heater installed to circulate warm water through engine, plugs into 120 volt AC.
13. **Ether Injection System**  
Ether starting aid controlled by switch in operator compartment and injects ether directly into intake manifold.
14. **Engine Shut Down Gauges**  
Shuts engine off when high water temperature or low engine oil pressure occurs.

#### FRONT AXLE OPTIONS:

16. **Four-Wheel Steering**  
Hurth drive/steer axle for four-wheel steering, differential equipped with Limited Slip Differential.

#### TIRE OPTIONS:

##### Solid Rubber Tires:

18. 8.25 x 15
19. Low Profile
20. 10.00 x 15, 14-Ply Rating, Mining & Industrial Tires
21. 10.00 x 15 Tires, Foam Filled

##### SPARE TIRE AND WHEELS:

22. 10.00 x 15, 14-ply, Highway Tread
23. 10.00 x 15 Mining & Industrial

#### CHASSIS OPTIONS:

- Outrigger Control - Selector**  
Provide electric selector valves with existing two controls for individual operation.

#### CHASSIS OPTIONS: Cont'd

26. **Outrigger Control - Individual**  
Provides four controls for individual outrigger operations.
27. **Auxiliary Winch**  
Mounted behind front bumper, hydraulically driven with control in operator's console.
- Pintle Hook:**
  28. **Pintle Hook, Rear**
  29. **Pintle Hook, Front**
30. **Headlight and Taillight Grilles**  
Welded steel protective grilles for headlights and taillights.
31. **Rearview Mirrors**  
One mounted on right-hand deck stake and 1 mounted on left-hand deck stake.
32. **Lifting Rings**  
Lifting rings at each corner of carry deck so sling can be attached for lifting crane.

#### OPERATOR COMPARTMENT OPTIONS:

33. **Operator Guard**  
Tubular steel weldment with heavy expanded steel mesh top section.
34. **Operator Guard Cover**  
Clear vinyl cover to go over Operator Guard, for inclement weather operations.
35. **Operator Guard Door**  
Hinged door covers operator compartment side opening.
36. **All-Weather Cab**  
Rigid-mounted canopy section and removable hinged door. Includes heater, electric windshield wiper, one sliding glass window in the door & one in the right side of canopy. Defroster fan included.
37. **Cab Heater**  
Heater with two-speed fan for units without All Weather Cab.
38. **Windshield Washer**  
Includes reservoir pump and nozzle.
39. **Floor Mat**  
Vinyl mat with foam backing.
40. **Operator Suspension Seat**  
Provides additional operator comfort.
41. **Noise Reduction Kit**  
Includes floor mat, control valve and side panels of foam backed vinyl for noise reduction.

#### ELECTRICAL OPTIONS:

42. **Outrigger Warning System**  
Two-tone alarm is activated when "outrigger down" controls are operated.
43. **Strobe Lights**  
Yellow strobe light mounted on each side of turret weight box.

#### ELECTRICAL OPTIONS: Cont'd

44. **Lighted Instrument Gauges**  
Instrument gauges equipped with lights for night operations.
45. **Amber Rotating Beacons**  
Amber rotating beacon mounted on each side of turret weight box.
46. **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.
47. **Boom Work Lights and Beacons**  
Boom work lights and amber rotating beacons installed.
48. **Boom Work Lights and Strobe**  
Boom work lights and strobe lights installed.
49. **Dome Light**  
Interior light installed for units equipped with an All Weather Cab.
50. **Work Lights - Rear**  
Two rectangular work lights in the rear panel of the chassis.

#### HYDRAULIC OPTIONS:

51. **Boom Structural Protection System**  
Important to understand fully the description of the Boom Structural Protection System described in the IC-80 Engineering Spec. This option is not intended to and will not replace an LMI.

#### BOOM ATTACHMENTS:

53. **Boom Extension, 10 Foot**  
Boom stowable.
54. **Boom Extension, 10 Foot, Offsettable**  
Same as item 53, except the boom extension is offsettable to 3 different positions; 0 degree (inline), 15 degree and 30 degree offset.
- Searcher Hook:**
  55. **Link Under Boom**
  56. **Nose Mount**
57. **Load Moment Indicator-Krueger or PAT**  
Warns operator of impending overload with audible and visual signals. Prevents overload by stopping boom functions that cause overloads. Readouts for load, boom angle, boom length, and load radius.
58. **Load Indicator - Krueger or PAT**  
Includes 3-sheave load sensor on top of boom and readout box on top of instrument panel.

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



**GENERAL:**

|                                                       | Standard          | Optional                |                 |
|-------------------------------------------------------|-------------------|-------------------------|-----------------|
| Weight:                                               | <u>Drive Axle</u> | <u>Drive Steer Axle</u> |                 |
| IC-80-1E                                              | 14,600 lbs.       | 14,800 lbs.             |                 |
| IC-80-2E                                              | 14,800 lbs.       | 15,000 lbs.             |                 |
| IC-80-3E                                              | 15,100 lbs.       | 15,300 lbs.             |                 |
| Gradeability:                                         | 71%               | 71%                     |                 |
| Turning Radius:<br>(C/L of Outside<br>Steering Wheel) | 15' 0"            | 10' 6"                  |                 |
| Aisle Width for 90° Turn:                             | 11' 0"            | 9' 9"                   |                 |
| Boom Movement:                                        | <u>IC-80-1E</u>   | <u>IC-80-2E</u>         | <u>IC-80-3E</u> |
| Rotation                                              | Continuous        | Continuous              | Continuous      |
| Elevation                                             | 0° to 70°         | 0° to 70°               | 0° to 70°       |
| Extension                                             | 12'               | 14' 6"                  | 18' 6"          |
| Boom Speeds:                                          |                   |                         |                 |
| Rotation                                              | 1.7 RPM           | 1.7 RPM                 | 1.7 RPM         |
| Elevation                                             | 10.0 sec.         | 10.0 sec.               | 10.0 sec.       |
| Extension                                             | 28.0 sec.         | 34.0 sec.               | 43.0 sec.       |

**ENGINE:**

|                     | Standard    | Optional | Optional | Optional   |
|---------------------|-------------|----------|----------|------------|
| <b>Make</b>         | Continental | Cummins  | Perkins  | John Deere |
| <b>Model</b>        | TM27        | 4B3.9    | D4.236   | 4.239      |
| <b>Type</b>         | Gas         | Diesel   | Diesel   | Diesel     |
| <b>No. Cyl.</b>     | 4           | 4        | 4        | 4          |
| <b>Displacement</b> | 165 CID     | 239 CID  | 236 CID  | 239 CID    |
| <b>HP @ Gov.</b>    |             |          |          |            |
| Speed               | 64          | 80       | 80       | 76         |

Fuel Tank Capacity: 20 Gallons

**TRANSMISSION:**

**Make:** Borg Warner  
**Model:** 72T/T18  
**Type:** Reversing gearbox and manual shift 4-speed gearbox.  
 Equipped with torque converter and transmission oil cooler. Torque converter has stall ratio of 2.15:1.

| <b>Gear Ratio:</b> | <b>Forward</b> | <b>Reverse</b> |
|--------------------|----------------|----------------|
| First              | 6.324:1        | 6.956:1        |
| Second             | 3.092:1        | 3.401:1        |
| Third              | 1.686:1        | 1.855:1        |
| Fourth             | 1.000:1        | 1.000:1        |

**AXLES:**

| <b>Drive Axle:</b> | <b>Standard</b>     | <b>Optional</b>      |
|--------------------|---------------------|----------------------|
| <b>Make</b>        | Hurth               | Hurth                |
| <b>Model</b>       | 172                 | 272A                 |
| <b>Gear Ratio</b>  | 11.98:1             | 11.98:1              |
| <b>Location</b>    | Front               | Front                |
| <b>Gear</b>        | <b>Travel Speed</b> | <b>Drawbar Pull*</b> |
| First              | 3 MPH               | 11,900**             |
| Second             | 7 MPH               | 5,820**              |
| Third              | 12 MPH              | 3,170                |
| Fourth             | 21 MPH              | 1,880                |

\*Drawbar pull is calculated, based on Continental TM27 engine.

\*\*Wheels will spin before these values are reached.

**Steering Axle: (Non-Driving)**

|                 |          |
|-----------------|----------|
| <b>Make</b>     | Rockwell |
| <b>Model</b>    | FF-931   |
| <b>Location</b> | Rear     |

**STEERING:****Standard:**

Full hydraulic orbitrol unit with two double-acting hydraulic cylinders attached to rear axle.

**Optional:**

Full hydraulic orbitrol unit with two double-acting hydraulic cylinders attached to both front and rear axles. Steering modes include: Rear wheel steer &amp; round steer.

**BRAKES:****Service:**

|                |                                   |
|----------------|-----------------------------------|
| <b>Front</b>   | Internal wet disc brakes          |
| <b>Rear</b>    | Drum type brakes                  |
| <b>Parking</b> | Band type mounted on transmission |

**TIRES:**

|                 |                                           |
|-----------------|-------------------------------------------|
| <b>Standard</b> | 10.00 x 15, 14-Ply, Highway Tread         |
| <b>Optional</b> | Grizzly Supersoft XS250 x 15 Solid Rubber |
| <b>Optional</b> | Foam filling of the above pneumatic tires |

**CHASSIS:****CARGO DECK:**

62 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 carry deck. Steps located on front corners.

\*52 square feet with Cummins or John Deere 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 left and right-hand outriggers. Outrigger pad dimension 9" x 12".

**ACCESSORY STORAGE BOX:**

Storage box is 14" deep x 10-1/2" long x 27" wide, located in front carry deck.

**ELECTRICAL:****12 Volt System****Lighting Package:**

One pair headlights with Hi and Low beams, back-up lights, integral tail, brake and turn signals and front turn signals.

**Instrument Package:**

Fuel, ammeter, oil pressure, water temperature, converter oil temperature gauges and hourmeter.

**Back-Up Alarm:**

Provides pulsating sound when transmission is in reverse.

**HYDRAULIC SYSTEM:**

Tandem pump, direct-driven by engine crankshaft, rated at 16 and 32.5 GPM at rated RPM. Hydraulic oil tank capacity of 16 gallons.

**BOOM ASSEMBLY:**

Three-section boom assembly equipped with bearing pads, double acting hydraulic cylinders with direct-connected holding valves and 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 and 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.



## Tech Spec

# IC-80-F

### 2-WHEEL DRIVE

- \* 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 optional
- \* 4-Wheel drive optional
- \* Powershift transmission
- \* Fully hydraulic controls for smooth precise operations
- \* Independent outrigger controls



**BMC BRODERSON**  
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Website: [brodercranes.com](http://brodercranes.com)



## Tech Spec

### 4-Wheel Drive 4-Wheel Steer

- \* 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...11' 8"
- \* 4-Speed synchromesh transmission
- \* Independent outrigger controls
- \* 4-Wheel hydraulic internal wet disc brakes
- \* Independent outrigger controls





# IC-80-1F

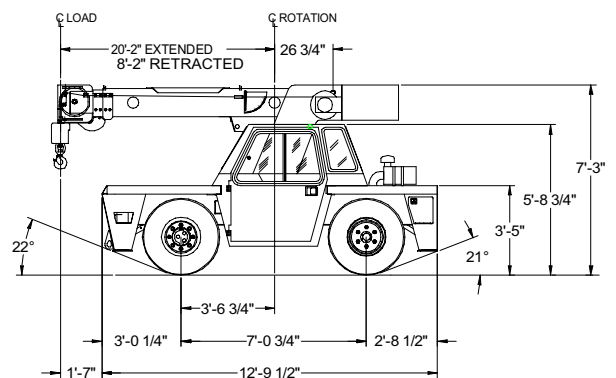
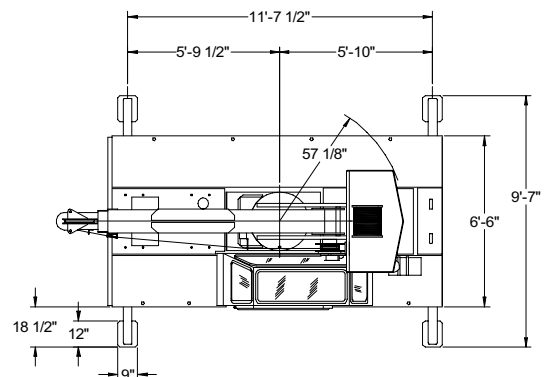
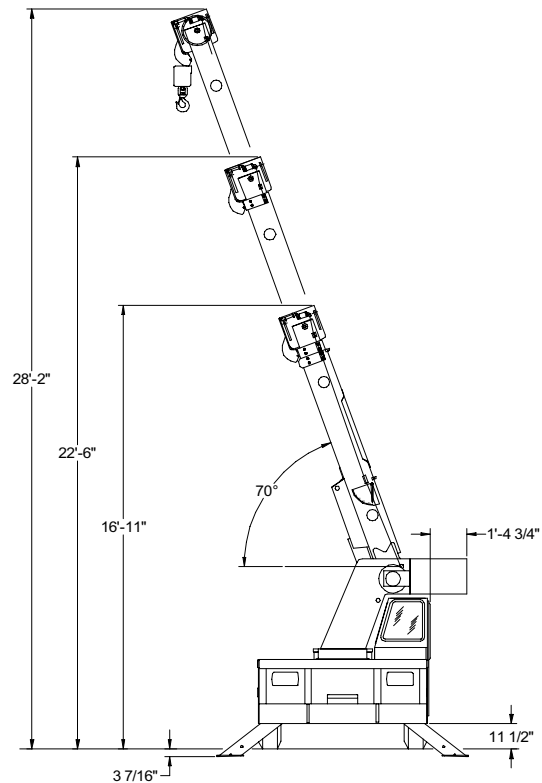
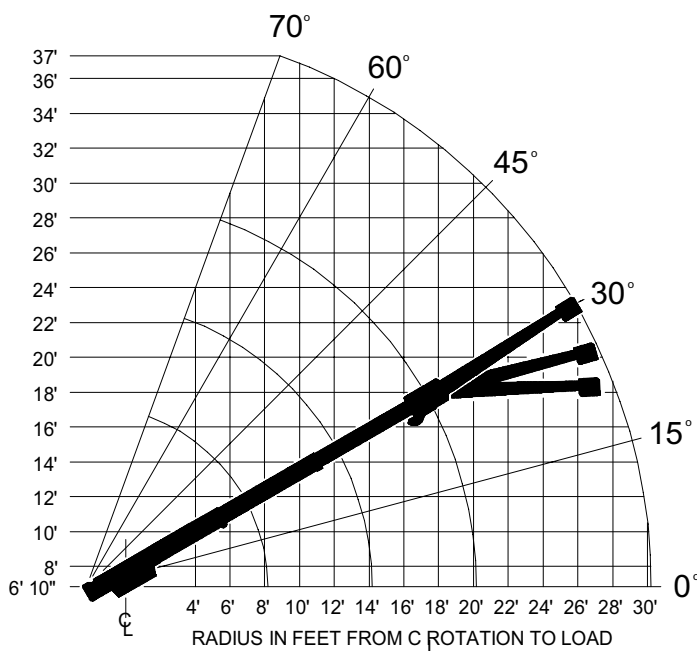
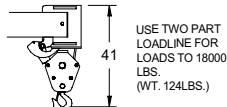
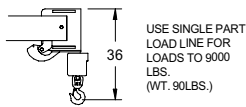
## IC-80-1F 8'-2" - 20'-2" BOOM

| CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE |                        |                                             |               |            |               |      |      |
|-----------------------------------------------------|------------------------|---------------------------------------------|---------------|------------|---------------|------|------|
|                                                     | LOAD<br>RADIUS<br>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      | 18000         |      |      |
|                                                     | 6                      | 7900                                        | 14500         | 10400      | 14500         |      |      |
|                                                     | 8                      | 5750                                        | 10250         | 8400       | 10250         |      |      |
|                                                     | 10                     | 4150                                        | 7700          | 6300       | 7700          |      |      |
|                                                     | 12                     | 3100                                        | 6550          | 4650       | 6550          |      |      |
|                                                     | 14                     | 2425                                        | 5550          | 3650       | 5550          |      |      |
|                                                     | 16                     | 1975                                        | 4650          | 3000       | 4650          |      |      |
|                                                     | 18                     | 1625                                        | 3950          | 2500       | 4150          |      |      |
|                                                     | 20                     | 1400                                        | 3550          | 2150       | 3800          |      |      |
| 10' BOOM EXT.                                       | 22                     | 1275                                        | 3000          | 1900       | 3000          |      |      |
|                                                     | 24                     | 1075                                        | 2750          | 1650       | 2800          |      |      |
|                                                     | 26                     | 925                                         | 2450          | 1425       | 2600          |      |      |
|                                                     | 28                     | 775                                         | 2150          | 1250       | 2400          |      |      |
|                                                     | 30                     | 675                                         | 1950          | 1100       | 2250          |      |      |
|                                                     | BOOM<br>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.

BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.





# IC-80-2F

## IC-80-2F 9'-6" - 24'-0" BOOM

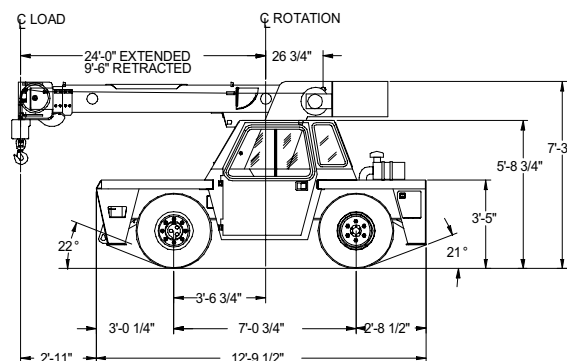
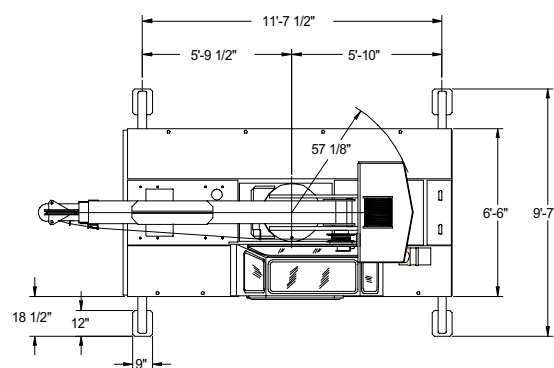
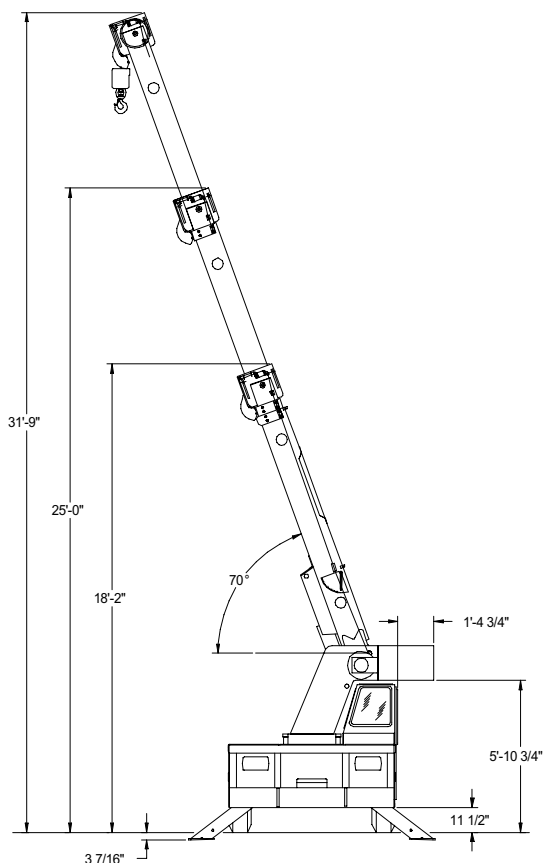
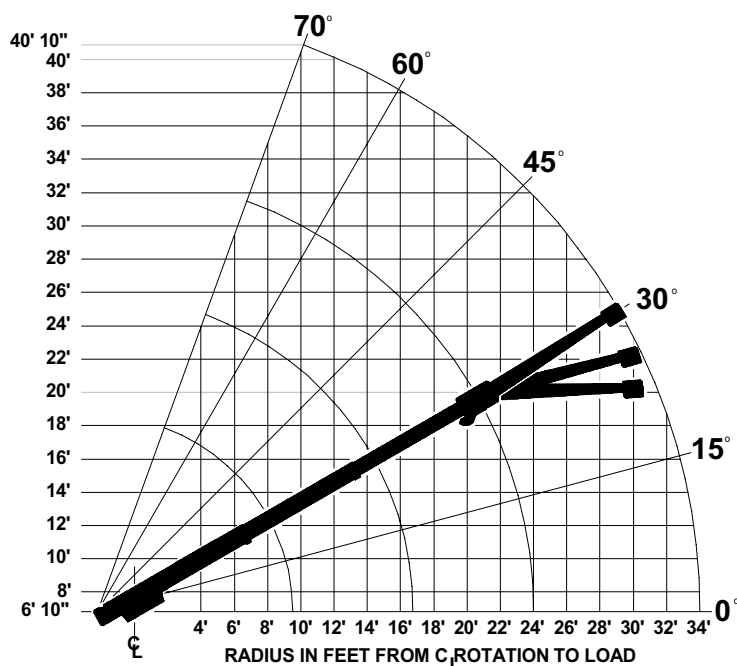
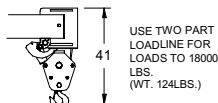
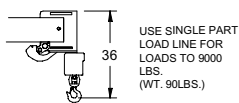
CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE

| CAPACITIES AT 15° OF OPERATION ON FIRM LEVEL SURFACE |                                             |               |           |               |      |
|------------------------------------------------------|---------------------------------------------|---------------|-----------|---------------|------|
| LOAD<br>RADIUS<br>FEET                               | MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS |               |           |               |      |
|                                                      | 360° ROTATION                               |               |           | OVER FRONT    |      |
|                                                      | ON RUBBER                                   | ON OUTRIGGERS | ON RUBBER | ON OUTRIGGERS |      |
| 5                                                    | 9500                                        | 17000         | 11600     | 18000         |      |
| 6                                                    | 7800                                        | 14500         | 10200     | 14500         |      |
| 8                                                    | 5500                                        | 10250         | 8250      | 10250         |      |
| 10                                                   | 3900                                        | 7700          | 6200      | 7700          |      |
| 12                                                   | 2900                                        | 6550          | 4550      | 6550          |      |
| 14                                                   | 2300                                        | 5550          | 3550      | 5550          |      |
| 16                                                   | 1850                                        | 4550          | 2850      | 4550          |      |
| 18                                                   | 1550                                        | 3950          | 2400      | 4050          |      |
| 20                                                   | 1300                                        | 3250          | 2050      | 3650          |      |
| 22                                                   | 1100                                        | 2875          | 1750      | 3300          |      |
| 24                                                   | 925                                         | 2475          | 1550      | 3100          |      |
| 26                                                   | 850                                         | 2250          | 1350      | 2750          |      |
| 28                                                   | 700                                         | 2000          | 1175      | 2500          |      |
| 30                                                   | 600                                         | 1775          | 1025      | 2300          |      |
| 32                                                   | 500                                         | 1625          | 900       | 2100          |      |
| 34                                                   | 425                                         | 1400          | 800       | 1950          |      |
| BOOM<br>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.

BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.





# IC-80-3F

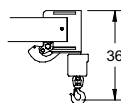
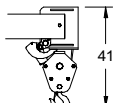
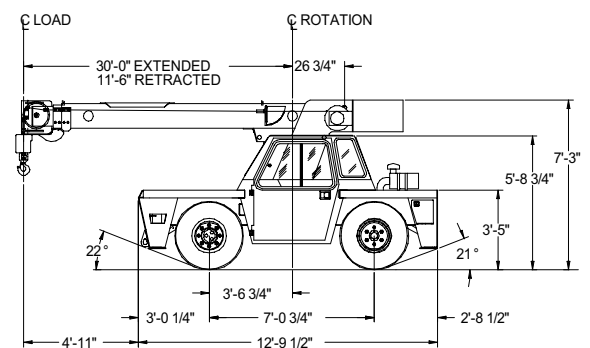
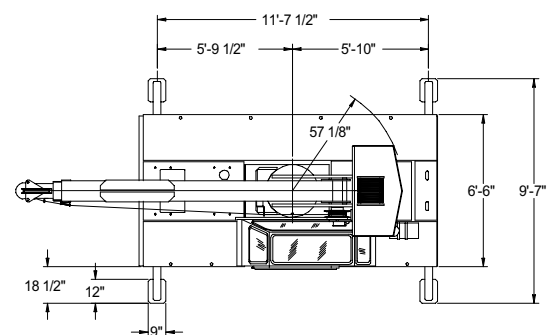
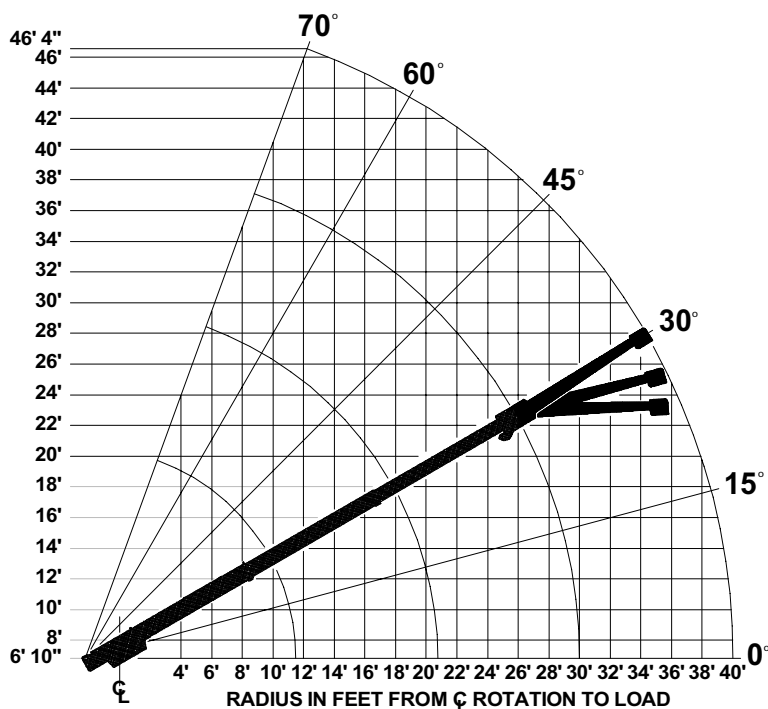
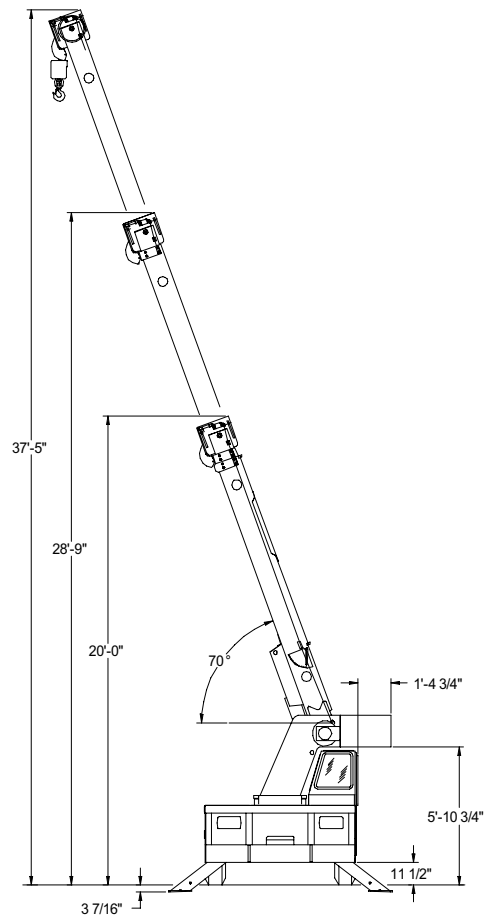
## IC-80-3F 11'-6" - 30'-0" BOOM

| CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE |                                             |               |            |               |       |      |
|-----------------------------------------------------|---------------------------------------------|---------------|------------|---------------|-------|------|
| LOAD<br>RADIUS<br>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                                           | 5250          | 10000      | 8100          | 10000 |      |
|                                                     | 10                                          | 3600          | 7700       | 6100          | 7700  |      |
|                                                     | 12                                          | 2650          | 6100       | 4450          | 6100  |      |
|                                                     | 14                                          | 2050          | 5200       | 3400          | 5200  |      |
|                                                     | 16                                          | 1600          | 4400       | 2700          | 4400  |      |
|                                                     | 18                                          | 1250          | 3650       | 2200          | 3900  |      |
|                                                     | 20                                          | 1050          | 3050       | 1800          | 3400  |      |
|                                                     | 22                                          | 850           | 2650       | 1550          | 3050  |      |
|                                                     | 24                                          | 750           | 2300       | 1350          | 2800  |      |
|                                                     | 26                                          | 650           | 2050       | 1150          | 2550  |      |
|                                                     | 28                                          | 550           | 1850       | 1000          | 2350  |      |
|                                                     | 30                                          | 450           | 1650       | 900           | 2150  |      |
| 10' BOOM EXT.                                       | 32                                          | 350           | 1550       | 750           | 1950  |      |
|                                                     | 34                                          | 250           | 1400       | 650           | 1800  |      |
|                                                     | 36                                          | 200           | 1250       | 550           | 1650  |      |
|                                                     | 38                                          | 150           | 1100       | 450           | 1500  |      |
|                                                     | 40                                          | 100           | 1000       | 400           | 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  |      |

\* USE 0° FOR STRAIGHT BOOM EXTENSION.

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

BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

USE SINGLE PART  
LOAD LINE FOR  
LOADS TO 9000  
LBS.  
(WT. 90LBS.)USE TWO PART  
LOADLINE FOR  
LOADS TO 18000  
LBS.  
(WT. 124LBS.)



# IC-80-F

## GENERAL:

| Weight:       | IC-80-1F    | IC-80-2F    | IC-80-3F    |
|---------------|-------------|-------------|-------------|
| 2-Wheel Steer | 15,400 lbs. | 15,600 lbs. | 15,900 lbs. |
| 4-Wheel Steer | 15,600 lbs. | 15,800 lbs. | 16,100 lbs. |
| 4-Wheel Drive | 16,400 lbs. | 16,600 lbs. | 16,900 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:                 | Standard             | Optional             | Optional             |
|---------------------------------|----------------------|----------------------|----------------------|
| (C/L of Outside Steering Wheel) | <u>2-Wheel Steer</u> | <u>4-Wheel Steer</u> | <u>4-Wheel Drive</u> |
|                                 | 15 ft. 4 in.         | 10 ft. 9 in.         | 11 ft. 8 in.         |

| Aisle Width for 90° Turn: | 11 ft. 0 in. | 9 ft. 7 in. | 9 ft. 9 in. |
|---------------------------|--------------|-------------|-------------|
|---------------------------|--------------|-------------|-------------|

| ENGINE:         | Standard    | Optional |
|-----------------|-------------|----------|
| Make            | Continental | Cummins  |
| Model           | TM27        | 4B3.9    |
| Type            | Gas         | Diesel   |
| No. Cyl.        | 4           | 4        |
| Displacement    | 165 CID     | 239 CID  |
| HP @ Gov. Speed | 66          | 80       |

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 & speed selection. Equipped with oil cooler and filter. Torque converter has stall ratio of 2.2:1.

### Gradeability 70 percent.

| Gear   | Forward/Reverse Gear Ratios | Travel Speed | Drawbar Pull |
|--------|-----------------------------|--------------|--------------|
| First  | 5.72:1                      | 4 MPH        | 10,900 lbs.  |
| Second | 3.23:1                      | 7 MPH        | 6,090 lbs.   |
| Third  | 1.77:1                      | 12 MPH       | 3,270 lbs.   |
| Fourth | 1.00:1                      | 22 MPH       | 1,780 lbs.   |

## TRANSMISSION: (Cont'd)

### 4-Wheel Drive:

Remote mounted synchromesh 4-speed. Forward, neutral and reverse control mounted on steering column. 4-speed control has side lever & push button knob for electric declutching. Can be shifted while in motion. Equipped with oil cooler and filter. Torque converter has stall ratio of 2.2:1.

### Gradeability 72 percent.

| Gear   | Forward/Reverse Gear Ratios | Travel Speed | Drawbar Pull |
|--------|-----------------------------|--------------|--------------|
| First  | 4.29:1                      | 5 MPH        | 11,500 lbs.  |
| Second | 2.66:1                      | 8 MPH        | 7,070 lbs.   |
| Third  | 1.41:1                      | 15 MPH       | 3,670 lbs.   |
| Fourth | 0.77:1                      | 27 MPH       | 1,930 lbs.   |

## AXLES:

### Front:

#### 2-Wheel Steer:

Planetary drive axle with 11.98:1 ratio. Differential is "Limited Slip." Axle mounted rigidly to frame.

#### 4-Wheel Steer:

Planetary drive/steer axle with 11.98:1 ratio. Differential is "Limited Slip." Axle mounted rigidly to frame.

### Rear:

#### 2-Wheel Drive:

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

#### 4-Wheel Drive:

Planetary drive/steer axle with 11.98:1 ratio. Differential is "Limited Slip." 1-1/2 degree oscillation in either direction.

## STEERING:

### 2-Wheel Steer:

Hydraulic steering unit with two cylinders attached to rear axle.

### 4-Wheel Steer:

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 or four-wheel round steering.



## Tech Spec

| <b>BRAKES:</b> | <b><u>2-Wheel Drive</u></b> | <b><u>4-Wheel Drive</u></b> |
|----------------|-----------------------------|-----------------------------|
| <b>Front</b>   | Internal wet disc brakes    | Internal wet disc brakes    |
| <b>Rear</b>    | Drum type                   | Internal wet disc brakes    |
| <b>Parking</b> | Disc type                   | Disc type                   |

### **TIRES:**

|                      |                                                      |
|----------------------|------------------------------------------------------|
| <b>2-Wheel Drive</b> | 10.00 x 15, load range J radial, highway type tread. |
| <b>4-Wheel Drive</b> | 10.00 X 15, mining & industrial, 16 ply rating.      |

### **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.

#### **Fire Extinguisher:**

1A:10B:C, 2-1/2 pound dry chemical. Mounted on dashboard.

#### **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" x 12".

#### **Accessory Storage Box:**

Storage box located in front cargo deck.

### **OPERATOR COMPARTMENT:**

Operator's control station provides one-position access to all operating functions. Includes adjustable operator's seat & retracting seat belt.

### **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.

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

#### **Lighting Package:**

One pair headlights with Hi and Low beams, back-up lights, integral tail, brake, front and rear turn signals & 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.

### **HYDRAULIC SYSTEM:**

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



# IC-80-F

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

**MODELS:**

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

**ENGINE:****LP Gas Fuel System**

Contains all necessary components for LP gas operations.

**Dual Fuel System**

Contains all necessary components to burn LP gas and gasoline.

**GM 3.0 L EFI Gasoline Engine**

with dual fuel

**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.

**AXLE & STEERING OPTIONS:**

- 2-Wheel Steer & 2-Wheel Drive**
- 4-Wheel Steer & 2-Wheel Drive**
- 4-Wheel Steer & 4-Wheel Drive**

**TIRE OPTIONS:****Solid Rubber Tires:**

8.25 x 15

8.25 x 15 Non-Marking

**Mining & Industrial Tires**

10.00 x 15 , 16-Ply Rating

**Foam Filling of Tires****Spare Tire & Wheel**

Highway Tread, 10.00 x 15

Mining & Industrial, 10.00 x 15

**CHASSIS OPTIONS:****Auxiliary Winch**

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

**CHASSIS OPTIONS: (Cont'd)****Auxiliary Winch Plumbing**

Quick-connect fittings at front of chassis for front auxiliary winch previously listed.

**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.

**Lifting Rings**

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

**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:****Outrigger Alarm System**

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

**CHASSIS OPTIONS: (Cont'd)****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.

**Boom Work Lights and Beacons**

Boom work lights and amber rotating beacons installed.

**Boom Work Lights and Strobes**

Boom work lights and strobe lights installed.

**Work Lights**

Two work lights recessed in rear bumper.

**Boom Structural Protection System:**

Important to understand fully the description of the Boom Structural Protection System described in the IC-80 Engineering Spec. This option is not intended to and will not replace an LMI.

**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: (Two Types)****Link Under Tip****Nose Mount****Load Moment Indicator**

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

**Load Indicator**

Includes 3-sheave load sensor on top of boom and readout box on top of instrument panel.

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