

## ***IC-280-A*** ***Industrial Crane***

The 20 USt (18 t) capacity IC-280-A crane features a 63' 10" (19.5 m) four section boom, direct operated hydraulic controls, 3-position out-and-down outriggers, and 4-wheel steer/2-wheel drive standard configuration. This crane has the versatility to perform construction, maintenance, upgrade and expansion projects.

### ***Capacity***

40,000 lbs (18,100 kg)

### ***Sheave Height***

88' 9" (27 m)  
(with boom extension)

### ***Horizontal Reach***

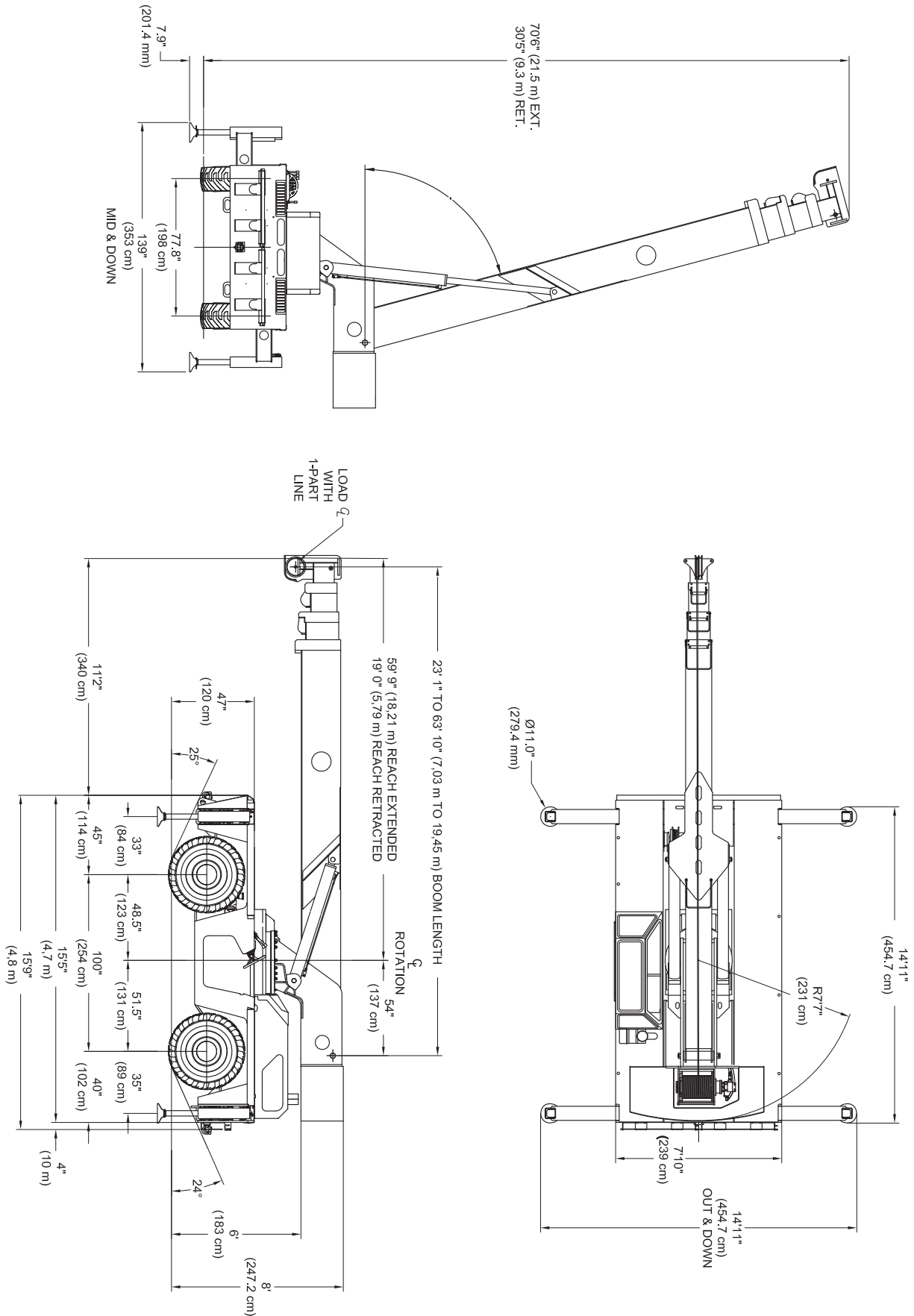
80' 6" (24.5 m)  
(with boom extension)

### ***Height***

8' (2.4 m)

### ***Width***

7' 10" (2.39 m)



# IC-280-A

## GENERAL SPECIFICATIONS



### GENERAL

	ROTATION	ELEVATION	EXTENSION
Boom Movement	Continuous	0° to 75°	40'9" (14.5 m)
Boom Speeds	1.4 RPM	60 sec	26 sec

Weight Total	41,340 lbs (18,790 kg)		
Front Axle	19,870 lbs (9,010 kg)		
Rear Axle	21,470 lbs (9,740 kg)		
Gradeability	64% (33°)		
Turning Radius	14' 4" (4.37 m)		

### ENGINE

Make	Cummins	GM
Model	QSF3.8 T4F	5.7 L V8 (T2)
Type	Turbo-Diesel	LPG
Cylinder	4	8
Displacement	3.8 L	5.7 L
HP @ Gov. Speed	120HP (89kW)	135HP (101kW)
Fuel Tank Capacity	30 gal (113 L)	Dual 43 lbs (19.5 kW)

### TRANSMISSION

**POWERSHIFT TRANSMISSION** with 4-speeds forward and reverse. Provides power shifts 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 valves provide reverse, neutral, forward and speed selection. Equipped with torque converter and transmission oil cooler.

#### GEAR RATIOS:

1st	5.72:1
2nd	3.23:1
3rd	1.77:1
4th	1.00:1

#### FRONT

Planetary drive/steer front axle with 16:42 to 1.0 ratio. Differential equipped with "limited slip" feature. Front axle mounted rigidly to frame.

TRANS. GEAR	SPEED	DRAWBAR PULL*
1st	3 MPH	18,100 lbs (8,200 kg)
2nd	5 MPH	10,600 lbs (4,800 kg)
3rd	10 MPH	6,000 lbs (2,700 kg)
4th	18 MPH	3,200 lbs (1,450 kg)

\* Drawbar pull is calculated for QSF 3.8 L Tier 4F Diesel engine.

#### REAR

##### Standard (2-Wheel Drive):

Steering axle with 1-1/2 degree oscillation in either direction.

##### Optional (4-Wheel Drive):

Planetary drive/steer axle with 15.78 to 1.0 ratio. Differential is not "limited slip" in rear axle. 1-1/2 degree oscillation in either direction. Axle ratio compatible with 4-wheel drive transmission rear output ratio to match front axle speed.

### AXLES

Hydraulic steering unit with two cylinders attached to each axle. Allows limited steering when engine is not running. A switch on the control panel is used to select rear-wheel steering or four-wheel (round) steering or crab steering.

### STEERING

**Service:** Split-system, 4-wheel hydraulic-boosted multiple plate wet disc brakes.

**Parking:** Hand lever actuated disc-type parking brake on transmission.

### BRAKES

#### Standard:

385/65-22.5/16PR OTR.

### TIRES

### CHASSIS

#### CARGO DECK

80 square feet (7.4 m) of deck area. 14,800 lbs (6,713 kg) capacity on deck when load is centered over or between axles.

#### OUTRIGGERS

Four hydraulic in-and-down, mid-and-down, and out-and-down outrigger positions of box construction with hydraulic load holding valves. Independent controls for each outrigger. Outrigger pad dimension: 11" (30 cm) diameter

#### ACCESSORY STORAGE BOX

Storage box is 14" (35 cm) deep x 12 1/2" (32 cm) long x 36 1/2" (93 cm) wide, located in front cargo deck.

#### LIFTING RINGS

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

### OPERATOR COMPARTMENT

Provides one-position access to all chassis and crane functions. Includes adjustable operator's seat, retracting seat belts, fire extinguisher and bubble level.

#### LIGHTING PACKAGE

Consists of two 12V-lamps, with high and low beams for driving; tail, brake and turn signal lights and backup lights in rear; front turn signals and emergency flasher switch at operator's station.

#### INSTRUMENT PACKAGE

Fuel gauge and hourmeter which records hours only during actual engine operation. Also included are warning lights for low oil and transmission pressure, check engine, high coolant and transmission temperature, turn signals, high beams, hazard lights, parking brake and four-wheel drive.

#### BACK-UP ALARM

Provides pulsating sound from 102 dB alarm when transmission is in reverse. Conforms to SAE J994B.

#### OUTRIGGER ALARM SYSTEM

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

#### TELEMATICS

Owners will be able to access location, operating hours, utilization, engine and maintenance information through both online and mobile platforms.

### ELECTRICAL (12-VOLT SYSTEM)

### HYDRAULIC

#### TANDEM PUMP

direct-driven by engine, delivers 61 GPM (231L/min) at rated RPM. 54-gallon capacity. 3,000 PSI (206 bar) maximum pressure.

#### FOUR-SECTION BOOM ASSEMBLY

Equipped with bearing pads, double acting hydraulic cylinder and chain system telescopes booms proportionally. Telescope and boom elevation cylinders equipped with cylinder-mounted 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.

#### TWO-SPEED BOOM HOIST

Turret-mounted planetary gear hoist, is hydraulically powered to provide a bare-drum line pull of 12,500 lbs (5,670 kg) and a speed of 186 fpm (57 m/min), includes 320 feet (97 m) of 9/16 inch (14 mm) wire rope, 170 pound (77 kg) downhaul weight, swivel hook, sheave block for 4-part line.

#### ANTI-TWO-BLOCK DEVICE

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

#### RATED CAPACITY LIMITER

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

### BOOM ASSEMBLY

CONSULT THE IC-280-A ENGINEERING SPEC FOR ADDITIONAL INFORMATION.

## Main Features

**RATED CAPACITY LIMITER**  
Standard

**CAPACITY ON OUTRIGGERS**  
40,000 lbs (18,100 kg)

**PICK AND CARRY CAPACITY**  
14,800 lbs (6,713 kg)

**HEIGHT**  
8' (2.4 m)

**WIDTH**  
7' 10" (2.39 m)

**BOOM ROTATION**  
360°

**SHEAVE HEIGHT**  
up to 88' 9" (27 m)

**HORIZONTAL REACH**  
up to 80' 6" (24.5 m)

**FOUR-WHEEL STEER**  
Standard

**FOUR-WHEEL DRIVE**  
Optional

**POWERSHIFT TRANSMISSION**  
Standard

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

**INDEPENDENT OUTRIGGER  
CONTROLS**

**DIESEL TF4 ENGINE**

## ENGINE

**Spark Arrester Muffler**  
Installed in addition to standard muffler.  
(LPG only.)

**Engine Heater**  
Engine coolant heater installed to circulate warm  
water through engine, plugs into 120 volt AC.

**AXLE AND STEERING**  
4-Wheel Steer and 2-Wheel Drive  
4-Wheel Steer and 4-Wheel Drive

**TIRE**  
Non Marking Pneumatic Tires  
Foam Filling of Tires  
Spare Tire and Wheel

**CHASSIS**  
**Auxiliary Winch**  
Mounted on front outrigger bumper, hydraulically  
driven with control in operator's console.

**Pintle Hook**  
Rear and Front

**Rearview Mirrors**  
One mounted on right-hand deck stake and one  
mounted on left-hand deck stake.

**Outrigger Shoes**  
Polymer outrigger shoes, 20" (510 mm) diameter  
round shoes with storage on rear bumper.

**OPERATOR COMPARTMENT**  
**Operator Guard**  
Tubular steel weldment with heavy expanded  
steel mesh top section.

**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 in the right side of canopy. Defroster fan and  
dome light included.

## Options

**Cab Heater Only**  
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.

**Noise Reduction Kit**  
Includes floor mat, control valve cover and side  
panels of foam backed vinyl for noise reduction.

**Air Conditioning**  
Air Conditioner with 134 coolant.

## ELECTRICAL

**Strobe Lights**  
Yellow strobe light mounted on each side of turret  
weight box.

**Boom Work Lights**  
One worklight mounted to boom to light boom  
tip, and one work light mounted to turret to light  
ground under boom tip.

**Work Lights—Rear**  
Two work lights recessed in rear bumper.

**RCL Light Bar**  
3 color light bar for external indication of load status.

## BOOM ATTACHMENTS

**Boom Extension**  
20 ft (6.1 m) Offset. Boom stowable. Boom  
extension is offsettable to 3 different positions;  
0 degree (in line), 15 degree and 30 degree offset.

**Sheave Block**  
2 part and 4 part available

**Searcher Hook**  
Nose mount 5,000 lbs (2,270 kg) capacity.

Broderson Cranes are manufactured to ISO 9001:2015 certified standards and have a market leading reputation for quality and reliability. Broderson Cranes are engineered for operating efficiency and are easy to operate and maintain.

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

(913) 888-0606  
[www.BMCcranes.com](http://www.BMCcranes.com)

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

