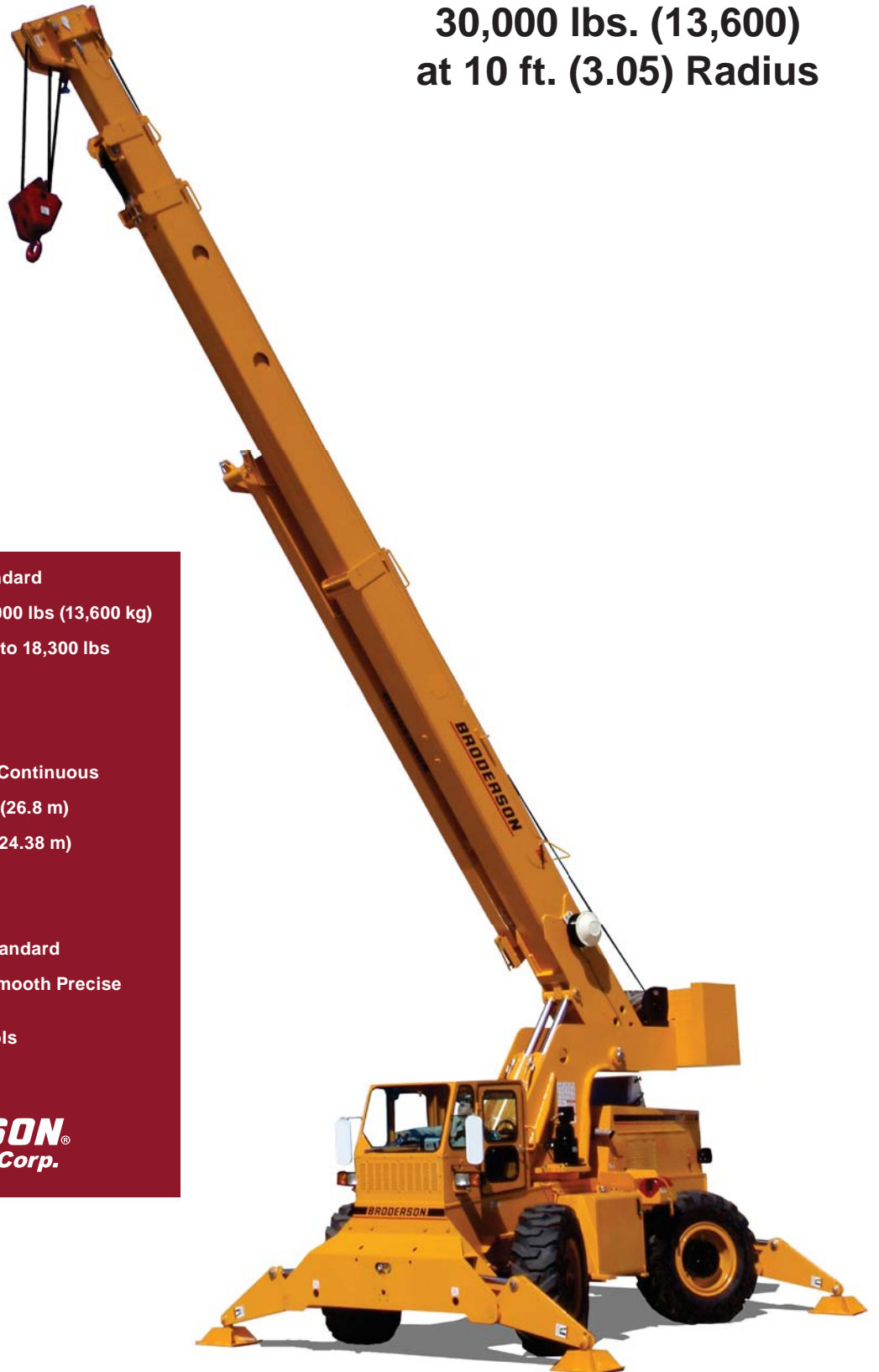


**bmc**  
*Tech Spec*

# **RT-300-2G**

## **Rough Terrain Crane**

**30,000 lbs. (13,600)  
at 10 ft. (3.05) Radius**



- Rated Capacity Limiter ... Standard
- Capacity on Outriggers ... 30,000 lbs (13,600 kg)
- Pick and Carry Capacity ... up to 18,300 lbs (8,300 kg)
- Height ... 11' 2" (3.4 m)
- Width ... 8' 4" (2.54 m)
- Boom Rotation ... 360 Degree Continuous
- Sheave Height ... up to 87' 11" (26.8 m)
- Horizontal Reach ... up to 80' (24.38 m)
- 4-Wheel Steer ... Standard
- 4-Wheel Drive ... Standard
- Powershift Transmission ... Standard
- Fully Hydraulic Controls for Smooth Precise Operations
- Independent Outrigger Controls
- Diesel Engine... Standard

**BRODERSON**  
*Manufacturing Corp.*

# RT-300-2G

## Specifications

### GENERAL:

<b>Weight</b>	
<b>Total</b>	44,800 pounds (20,320 kg)
<b>Front Axle</b>	23,730 pounds (10,310 kg)
<b>Rear Axle</b>	22,070 pounds (10010 kg)
<b>Angle of Approach</b>	24 degrees
<b>Angle of Departure</b>	22 degrees
<b>Gradeability</b>	70% grade (35 degrees)
<b>Turning Radius: 4-Wheel Steer:</b> (Min.)	
<b>Outside Tire C/L Radius</b>	15' 7" (4.75 m)
<b>Vehicle Clearance Circle (Dia.)</b>	35' 2" (10.72 m)
<b>Drawbar Pull</b>	30,000 pounds (13,600 kg)
<b>Road Speed</b>	23 miles per hour (37 km/h)

### ENGINE:

<b>Make</b>	Cummins
<b>Model</b>	QSB4.5L Tier 4i
<b>Type</b>	Turbo Diesel, Charge Air Cooled
<b>C.I.D.</b>	4.5L
<b>Max. Torque</b>	468 ft lbs (635 Nm) @ 1500 rpm
<b>Rated HP</b>	163 hp (125 kW) @ 2500 rpm
<b>Fuel Tank</b>	50 Gallon (190L) Capacity

### TRANSMISSION:

6-Speed Powershift with Torque Converter, Oil Cooler and Oil Filter

### AXLES:

<b>Front and Rear Axles:</b>	
Gear Ratio	16.42:1

### BRAKES:

- Service** - 4-Wheel Hydraulic Disc Brakes
- Parking** - Disc-type spring-applied and hydraulically-released

### STEERING:

Hydraulic steering unit with two 3.5 inch (8.9 cm) cylinders attached to each axle. Allows limited steering when engine is not running. A switch on the control panel is used to select front-wheel steering, 4-wheel steering or crab steering. Electronic sensors and control box automatically align the steering when a new mode is selected.

### TIRES:

**Standard** - 17.5 x 25, 20-ply rating, Mud Lug.

### CHASSIS:

#### Outriggers:

Four independently controlled outriggers of swing-down design. Hydraulic cylinders are equipped with direct connected holding valves.

### OPERATOR COMPARTMENT:

Operator control station provides one-position access to all chassis and crane controls.

#### All Weather Cab:

Consists of rigid-mounted canopy section and two removable hinged doors with safety glass. Includes heater with two-speed fan, 12-volt power outlet and defroster fan.

### ELECTRICAL SYSTEM:

#### 12-VOLT DC SYSTEM

##### Instrument Group:

Fuel, transmission oil temperature, voltmeter, engine oil pressure, water & hydraulic oil temperature gauges, & hourmeter.

##### Lighting Kit

Includes dual-beam headlights with turn signal lights. Taillights with brake & turn signal light. Back-up lights.

##### Outrigger Alarm System:

102 dB alarm with alternating two-tone sound is activated when "outrigger down".

### HYDRAULIC SYSTEM:

Triple gear pump, mounted on and driven by the main transmission, delivers 14, 28 and 40 gpm (53, 106 and 151 L/min) at 3,000 psi (207 bar) and 2,500 rpm engine speed. Hydraulic oil tank capacity of 70 gallons (265L).

### BOOM ASSEMBLY:

	Boom Movement	Boom Speeds
<b>Rotation</b>	Continuous	3.5 RPM
<b>Elevation</b>	0-70 Degrees	22 Seconds
<b>Extension</b>	40 ft (12.19 m)	25 Seconds

#### Boom Assembly:

Boom assembly equipped with bearing pads. Double-acting hydraulic cylinders, equipped with a holding valve, extend & retract the second and third boom sections. Double runs of high strength leaf chain extend & retract the fourth section. Boom angle indicator included on left side of boom. Twin, double-acting hydraulic cylinders control the boom elevation & are equipped with direct-connected holding valves.

#### Boom Rotation:

Heavy-duty ball bearing with external teeth rotation gear. Rotation is by hydraulic motor and compound planetary gear drive. A spring-applied hydraulically released brake and an over-running load valve are provided. Hydraulic centerpost and electric slip rings allow continuous rotation.

#### Boom Hoist:

##### Turret Mounted

##### Hydraulic Powered

<b>Bare Drum Line Pull</b>	13,100 lbs (5,940 kg)
<b>Wire Rope</b>	350 ft (107 m) of 9/16 in (14 mm) dia

##### Line Speed:

Bare Drum	185 fpm (56 m/min)
Full Drum	240 fpm (73 m/min)

#### 4-Part-Line Sheave Block:

Double sheave block for four-part-line requirement. Downhaul weight and hook also included.

#### Anti-Two-Block Device:

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

#### Rated Capacity Limiter:

Warns operator of impending overload with audible & visual signals. In the event of overload, stops boom functions that increase overloads. Displays boom length, angle, load radius, load & capacity.

# **RT-300-2G**

## **Options**

Listed below are brief descriptions of options available for this product.  
Consult the RT-300-G Engineering Spec for additional information.

### **TIRE OPTIONS:**

Spare Wheel & Tire:  
17.5 x 25, 20-Ply Tire

### **CHASSIS OPTIONS:**

#### **Fenders:**

Four bolt on steel fenders over tires

#### **Auxiliary Front Winch:**

Planetary gear winch mounted on front outrigger frame, with single-lever control on the operator console. Operator Guard required.

#### **Lifting Eyes**

Lifting eyes on corners of the chassis and the turntable so slings can be attached for lifting crane.

#### **Towing Eyes**

Consists of four eyes, two on the front and two on the rear for towing.

#### **Pintle Hook, Front**

Pintle hook mounted on the front outrigger housing, 24-ton capacity.

#### **Pintle Hook, Rear**

Pintle hook mounted on the rear outrigger housing, 24-ton capacity.

### **OPERATOR COMPARTMENT OPTIONS:**

#### **Window Wiper - Top Window**

12-volt electric wiper on top window operated with its own switch.

#### **Operator Guard**

Tubular steel weldment with heavy expanded steel mesh top & grille front section

#### **Operator Suspension Seats**

##### **Seats Inc. - Cloth**

Full-suspension with adjustments for height, tilt, fore/aft, operator weight with armrest adjustment.

##### **Seats Inc. - Vinyl**

Full-suspension with adjustments for height, tilt, fore/aft, operator weight with armrest adjustment.

#### **Floor Mat**

Vinyl mat with foam backing

#### **Air Conditioning**

Air Conditioning with R134 coolant.

### **ELECTRICAL OPTIONS:**

#### **Strobe Light**

Yellow strobe light mounted on top of engine hood for high visibility.

#### **Boom Work Lights**

One halogen work light mounted to boom to light boom tip and one work light mounted to turret to light ground under boom tip.

### **BOOM ATTACHMENT OPTIONS:**

20-Ft Offsettable Boom Extension. Boom stowable. Offsets include 0 (in-line), 15 or 30 degree

Should you require an option or special equipment not listed please consult your dealer salesperson or BMC®.

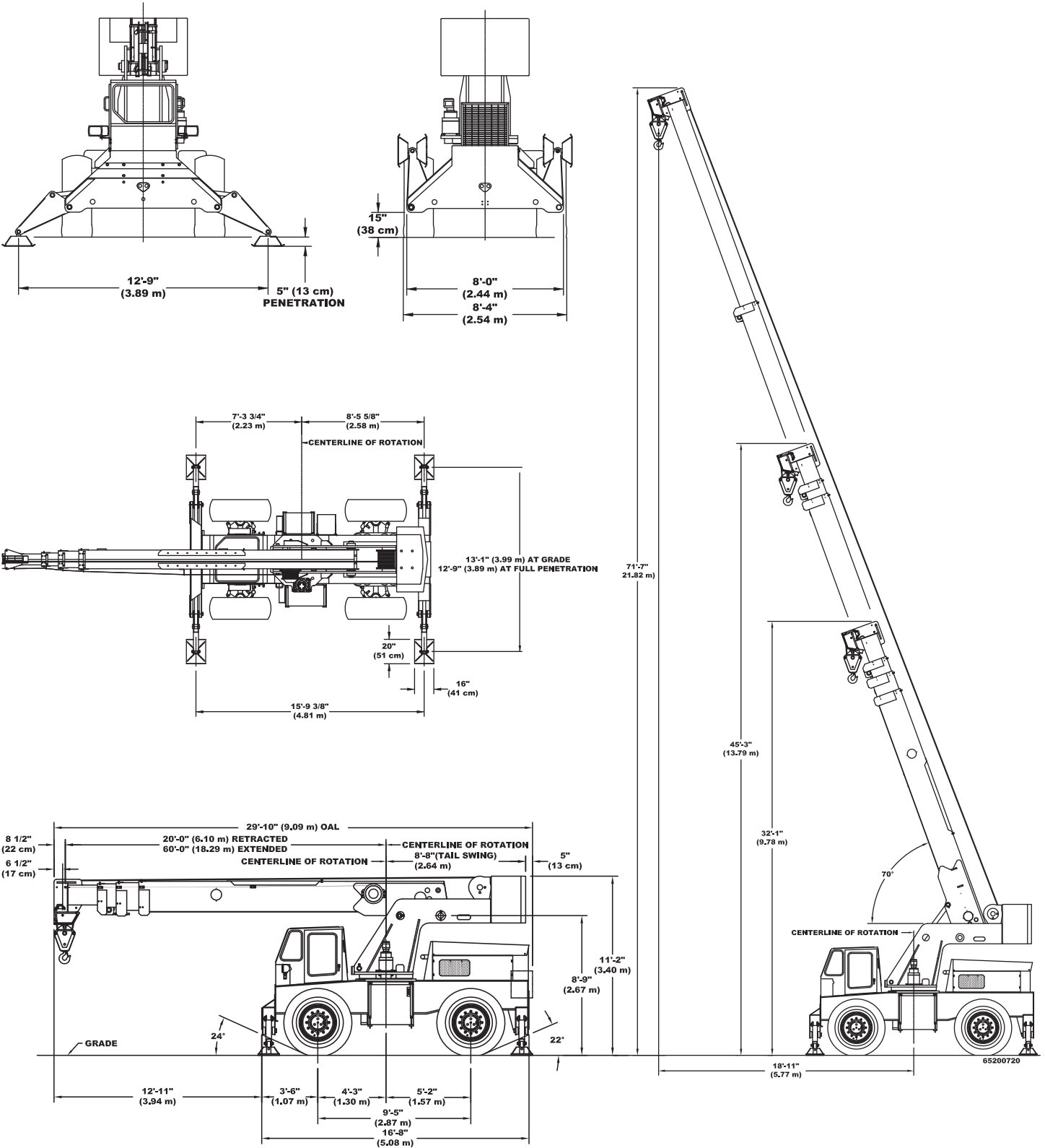
**BRODERSON**  
Manufacturing Corp.  
14741 West 106th Street  
Lenexa, KS 66215 USA

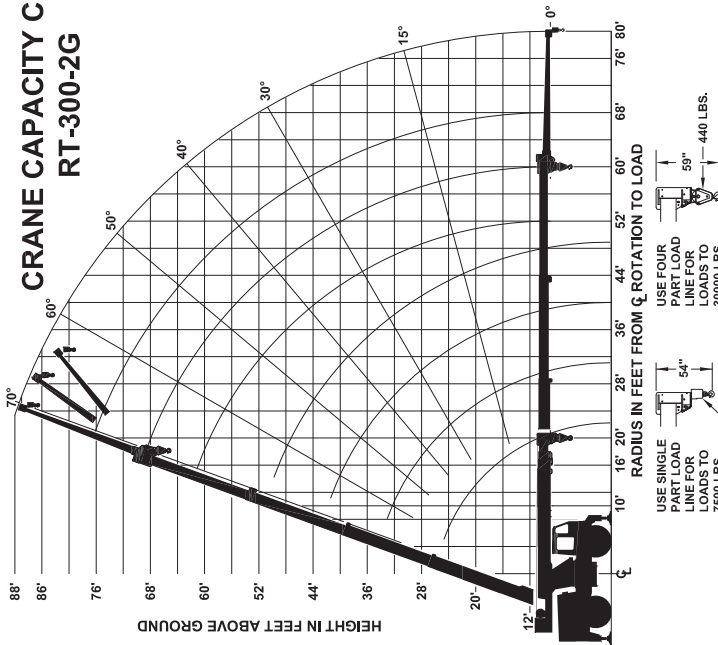
Tel (913) 888-0606  
Fax (913) 888-8431  
www.bmccranes.com

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



# RT-300-2G





LOAD RADIUS FEET	CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.							
	360° ROTATION		OVER FRONT		OVER FRONT ON CR'S			
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS		
10	18300	30000	26300	30000	28500	28500		
12	13500	28500	22500	22500	21600	21600		
14	10400	25900	17600	17600	16700	16700		
16	8300	22500	14000	14000	13100	13100		
18	6700	19500	11400	11400	10500	10500		
20	5500	16900	9400	9400	8600	8600		
22	4500	14200	7900	7900	7100	7100		
24	3700	12100	6800	6800	6000	6000		
26	3100	10500	5700	5700	4900	4900		
28	2500	9100	4800	4800	4000	4000		
30	2000	7900	4200	4200	3400	3400		
32	1600	6900	3600	3600	2800	2800		
34	1400	6300	3200	3200	2400	2400		
36	1200	5700	2900	2900	2000	2000		
38	900	5200	2600	2600	1600	1600		
40	800	4800	2400	2400	1400	1400		
44	600	4100	1900	1900	1000	1000		
48	---	3500	1600	1600	800	800		
52	---	3100	1300	1300	600	600		
56	---	2700	1000	1000	400	400		
60	---	2300	800	800	300	300		
64	---	1950	---	---	---	---		
68	---	1750	---	---	---	---		
72	---	1500	---	---	---	---		
76	---	1300	---	---	---	---		
80	---	1000	---	---	---	---		
BOOM EXTENSION	20-FOOT BOOM EXTENSION CAPACITIES							
	ANGLE	MAIN BOOM ANGLE				20-FOOT BOOM EXTENSION CAPACITIES		
		0°	15°	30°	40°	50°	60°	70°
	0°	2300	2400	2700	3100	3700	4800	6200
	15°	---	2300	2400	2600	2900	3400	4100
	30°	---	---	2300	2400	2500	2700	3100
---	---	---	---	---	---	---	---	

LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION OF THE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED. CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINES ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPACITY.

PICK AND CARRY WITH THE SHORTEST PRACTICAL BOOM, CENTERED OVER THE FRONT. OPERATE WITH BOOM AS LOW AS POSSIBLE, WITH THE LOAD CLOSE TO THE GROUND. PICK AND CARRY CAPACITIES ARE FOR SMOOTH, LEVEL PAVED SURFACE. FOR UNPAVED SURFACE REDUCE CAPACITY BY AT LEAST 25%. SPEED MUST BE LESS THAN 3 MPH.

THE BOOMS ON THIS UNIT ARE ALL STEEL AND HAVE NO LINE VOLTAGE RATING - NO ELECTRICAL INSULATION VALUE.

MAXIMUM HYDRAULIC PRESSURE: 3000 PSI

BOOM EXTENSION DEDUCT: 500 LBS WHEN STOWED ON BASE BOOM.

ENSURE ANTI-TWO-BLOCK SWITCH IS FUNCTIONAL AFTER DEPLOYING OR STOWING BOOM EXTENSION.

OPERATION:

1. READ AND UNDERSTAND OPERATION MANUAL BEFORE OPERATING CRANE.
2. CHECK LEVEL OF HYDRAULIC OIL AND ENGINE OIL DAILY.
3. CHECK UNIT FOR VISIBLE DEFECTS AND LOOSE PARTS.
4. SET VEHICLE PARK BRAKE SECURELY.
5. EXTEND OUTRIGGERS TO SOLID FOOTING AND LEVEL CRANE.
6. OPERATE ALL HYDRAULIC CONTROLS SLOWLY AND SMOOTHLY. AVOID SUDDEN STOPS AND STARTS.

THE LOAD HOIST LINE ON THIS UNIT MUST BE 9/16" DIA. 6X36-EIP-RR-L-IMRC WIRE ROPE (OR EQUIVALENT) WITH A MINIMUM BREAKING STRENGTH OF 33,600 LBS.

TORQUE WHEEL NUTS TO 475 FT. LBS. (THESE CONDITIONS MUST BE MAINTAINED TO HANDLE RATED LOADS ON THIS CRANE.)

MODEL NO. SERIAL NO. DATE OF MFR.

DO NOT POSITION BOOM AT LOAD RADII WHERE NO LOAD CAPACITIES ARE SHOWN.

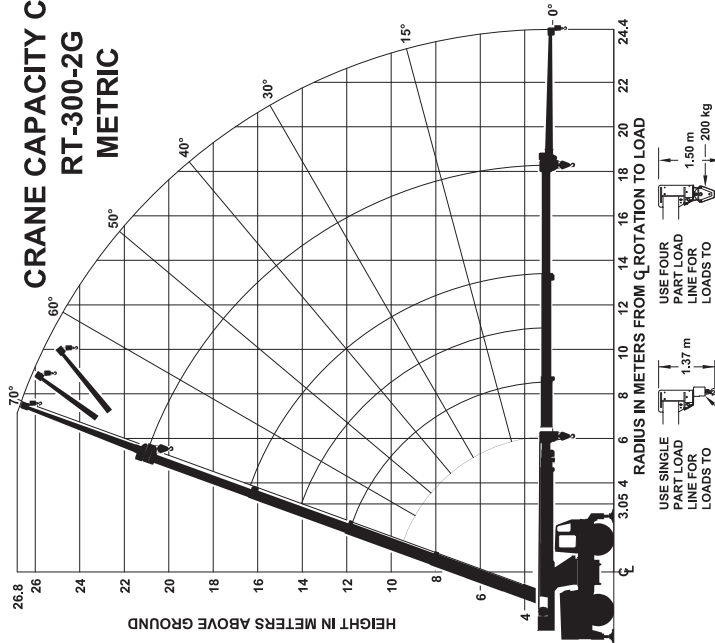
EXCEEDING CAPACITY RATINGS OR APPLYING SIDE LOADS TO THE BOOM OR BOOM EXTENSION IS MISUSE, IS HAZARDOUS, AND Voids WARRANTY.

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

**RT-300-2G**

**BRODERSON MANUFACTURING CORP.**  
LENEXA, KANSAS

65400936



RADIUS METERS	CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.			
	360° ROTATION		OVER FRONT	
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS
3.05	8300	13600	11900	13600
3.5	6540	13160	10700	13160
4	5310	12260	8940	12260
4.5	4320	11160	7280	11160
5	3600	9920	6080	9920
5.5	3020	8820	5150	8820
6	2570	7850	4390	7870
7	1850	5930	3340	6410
8	1370	4680	2520	5320
9	960	3700	1970	4460
10	690	3020	1540	3770
11	540	2570	1310	3390
12	370	2230	1120	3000
13	300	1960	930	2670
13.44	270	1860	860	2540
14	—	1720	780	2380
15	—	1530	680	2120
16	—	1360	570	1870
17	—	1230	460	1690
18	—	1080	360	1500
18.29	—	1040	360	1450
19	—	940	300	1190
20	—	840	—	1040
22	—	670	—	1010
24	—	500	—	770
24.38	—	450	—	720

BOOM EXTENSION ANGLE	6.1 METER BOOM EXTENSION CAPACITIES						
	0°	15°	30°	40°	50°	60°	70°
0°	1040	1090	1220	1400	1680	2170	2810
15°	—	1040	1090	1160	1310	1540	1860
30°	—	—	1040	1090	1130	1220	1400

DO NOT POSITION BOOM AT LOAD RADII WHERE NO LOAD CAPACITIES ARE SHOWN.

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

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

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

CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINES ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPACITY.

PICK AND CARRY WITH THE SHORTEST PRACTICAL BOOM, CENTERED OVER THE FRONT. OPERATE WITH BOOM AS LOW AS POSSIBLE, WITH THE LOAD CLOSE TO THE GROUND. PICK AND CARRY CAPACITIES ARE FOR SMOOTH, LEVEL PAVED SURFACE. FOR UNPAVED SURFACE REDUCE CAPACITY BY AT LEAST 25%. SPEED MUST BE LESS THAN 5 km/h.

THE BOOMS ON THIS UNIT ARE ALL STEEL AND HAVE NO LINE VOLTAGE RATING - NO ELECTRICAL INSULATION VALUE.

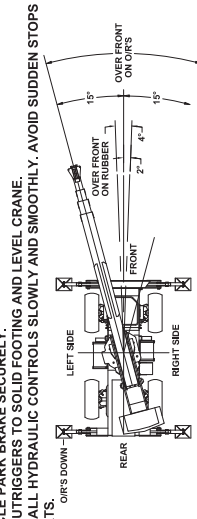
MAXIMUM HYDRAULIC PRESSURE: 207 bar

BOOM EXTENSION DEDUCT: 230 kg WHEN STOWED ON BASE BOOM

ENSURE ANTI-TWO-BLOCK SWITCH IS FUNCTIONAL AFTER DEPLOYING OR STOWING BOOM EXTENSION.

OPERATION:

1. READ AND UNDERSTAND OPERATION MANUAL BEFORE OPERATING CRANE.
2. CHECK LEVEL OF HYDRAULIC OIL AND ENGINE OIL DAILY.
3. CHECK UNIT FOR VISIBLE DEFECTS AND LOOSE PARTS.
4. SET VEHICLE PARK BRAKE SECURELY.
5. EXTEND OUTRIGGERS TO SOLID FOOTING AND LEVEL CRANE.
6. OPERATE ALL HYDRAULIC CONTROLS SLOWLY AND SMOOTHLY. AVOID SUDDEN STOPS AND STARTS.



THE LOAD HOIST LINE ON THIS UNIT MUST BE 14 mm DIA. 6X36-EIP-PRL-1WRC WIRE ROPE (OR EQUIVALENT) WITH A MINIMUM BREAKING STRENGTH OF 149 kN.

APPROVED TIRES: 17.5-25 20 PR - 690 kPa

TORQUE WHEEL NUTS TO 845 Nm (THESE CONDITIONS MUST BE MAINTAINED TO HANDLE RATED LOADS ON THIS CRANE).

MODEL NO. **RT-300-2G** SERIAL NO. \_\_\_\_\_ DATE OF MFR. \_\_\_\_\_

**BRODERSON MANUFACTURING CORP.**  
LENEXA, KANSAS 65400942