

**bmc**  
*Tech Spec*

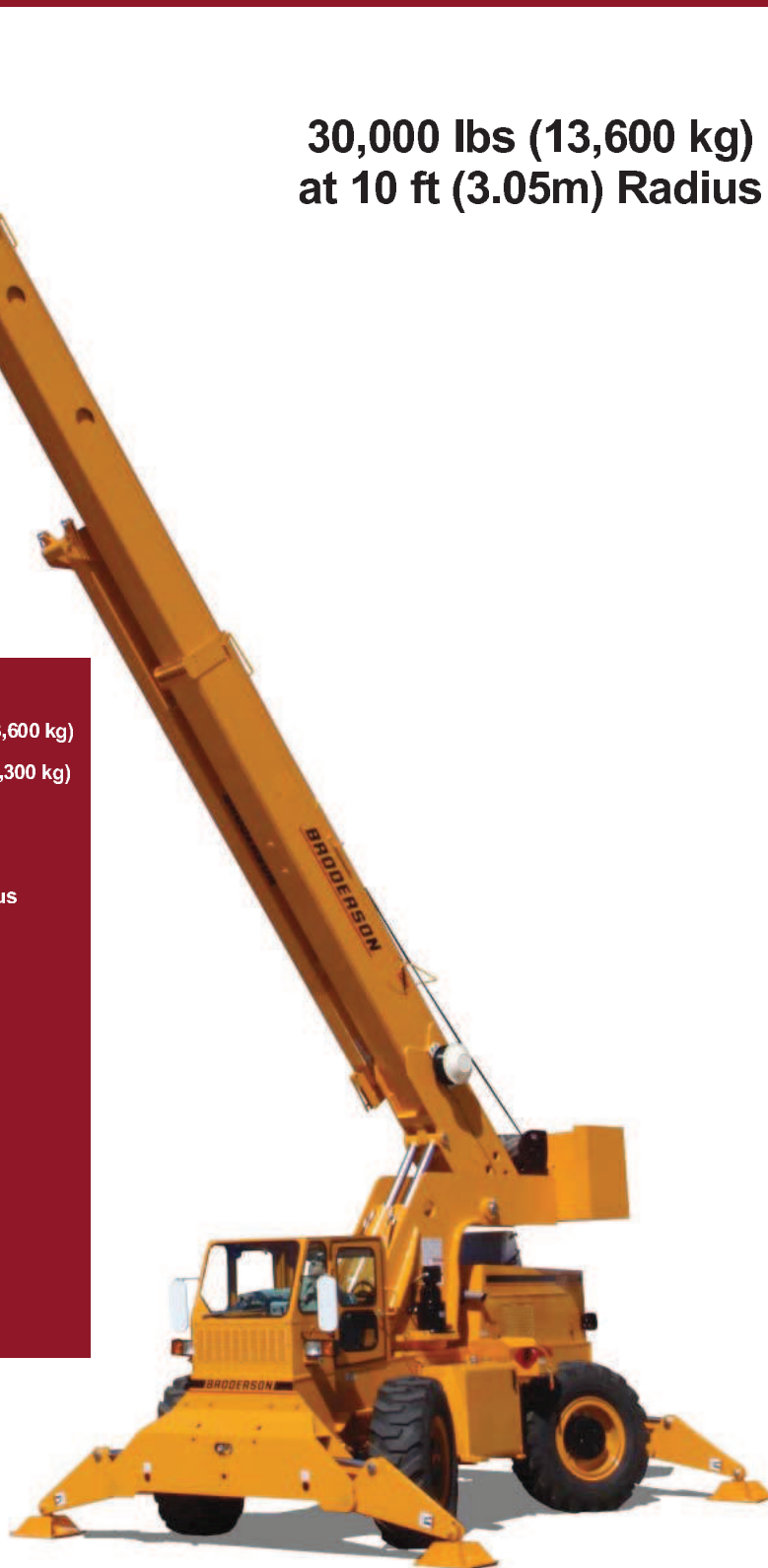
# **RT-300-F**

*Rough Terrain Crane*

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

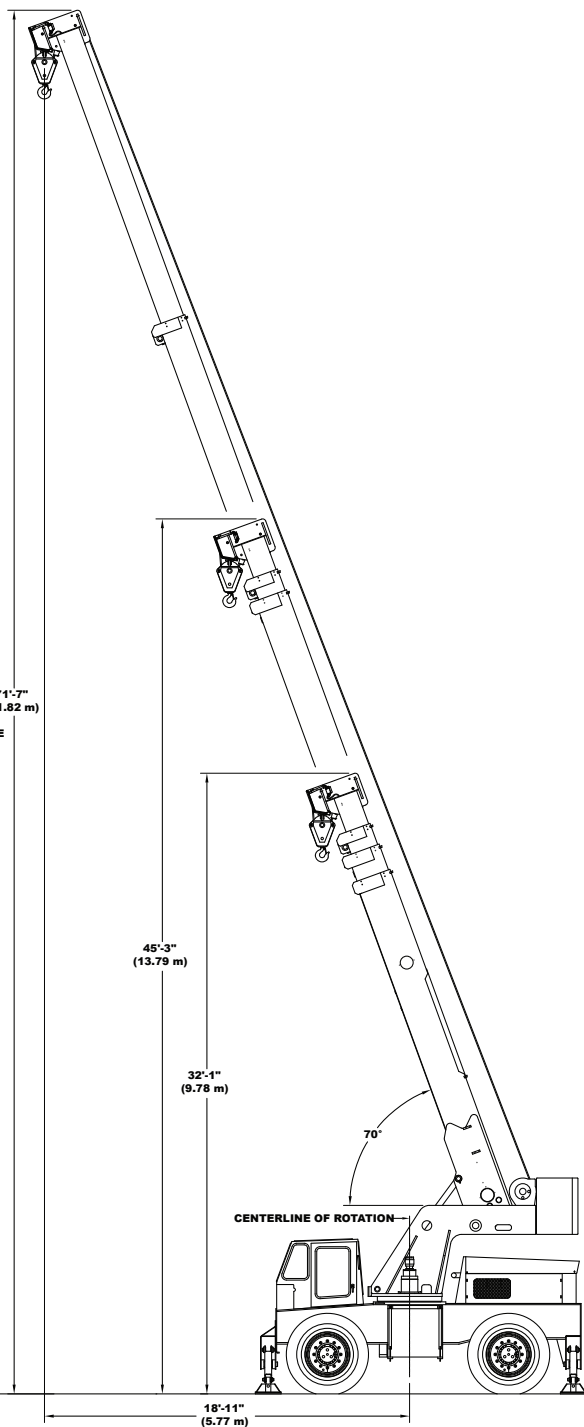
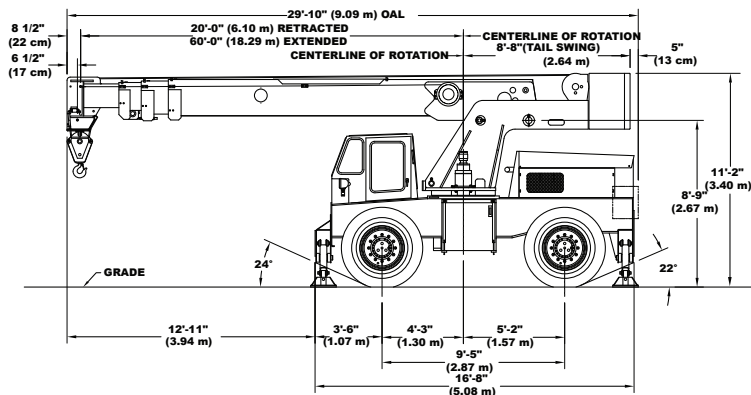
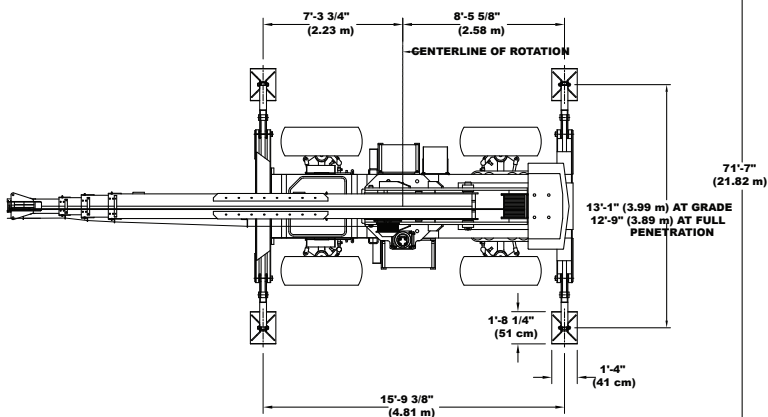
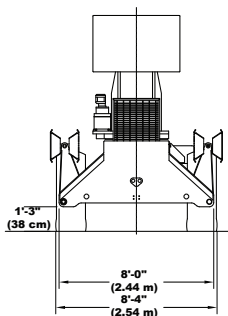
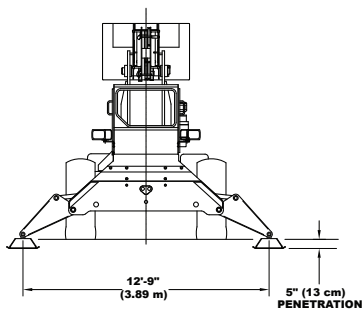
- Rated Capacity Limiter ... Standard
- Capacity on Outriggers ... 30,000 lbs (13,600 kg)
- Pick and Carry Capacity ... 18,300 lbs (8,300 kg)
- Height ... 11' 2" (3.4 m)
- Width ... 8' 2" (2.49 m)
- Boom Rotation ... 360 Degree Continuous
- Sheave Height ... up to 87' 11" (26.8 m)
- Horizontal Reach ... 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-300-2F





# RT-300-2F Specifications

**GENERAL:**

**Weight:**  
 Total 45,330 lbs (20,560 kg)  
 Front Axle 22,930 lbs (10,400 kg)  
 Rear Axle 22,400 lbs (10,160 kg)  
**Angle of Approach** 24 Degrees  
**Angle of Departure** 22 Degrees  
**Gradeability** 70 Percent Grade (35 degrees)  
**Turning Radius: 4-Wheel Steer:** (Min.)  
 Outside Tire C/L Radius 15 Feet 7 Inches (4.75 m)  
 Vehicle Clearance Circle (Dia.) 35 Feet 2 Inches (20.73 m)  
**Drawbar Pull** 30,000 pounds (13,600 kg)  
**Road Speed** 23 Miles Per Hour (37 km/h)

**ENGINE:**

**Make** Cummins  
**Model** QSB 4.5 Turbo, U.S. EPA Tier 3 Certified  
**Type** Turbo Diesel, Charge Air Cooled  
**C.I.D.** 4.5L  
**Max. Torque** 460 ft lbs ( 624 Nm) @ 1500 rpm  
**Rated HP** 160 hp (119 kw) @ 2500 rpm  
**Fuel Tank** 50-Gallon (190L) Capacity

**TRANSMISSION**

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

**AXLES:**

**Front and Rear Axles:**  
 Gear Ratio 16.42:1

**BRAKES:**

**Service** - 4-Wheel drum type with hydraulic booster  
**Parking** - Spring-applied and hydraulically-released mounted on transmission

**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 swingdown design outriggers. The 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. Includes heater with 2-speed fan, 12-volt electric windshield wiper. Defroster fan included.

**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 lights. Back-up lights.

**Back-Up Alarm:**

Provides pulsating sound from 97 dB alarm when ignition is on & transmission is in reverse.

**Outrigger Alarm System:**

112 dB alarm with alternating two-tone alarm is activated when "outrigger down" controls are operated.

**HYDRAULIC SYSTEM:**

Triple vane pump, mounted & driven by main transmission. Rated 9, 26 & 44 gpm (53, 106 & 151L/min) at 3,000 psi (207 bar) at 2,500 RPM engine speed. Hydraulic oil tank capacity of 70 gallons (265 L).

**BOOM ASSEMBLY:**

	Boom Movement	Boom Speeds
<b>Rotation</b>	Continuous	3.3 RPM
<b>Elevation</b>	0 - 70 Degrees	19 Seconds
<b>Extension</b>	40 ft (12.19 m)	24 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:**

A heavy-duty ball bearing rotation gear with external teeth. Rotation is powered by the hydraulic motor and compound planetary gear drive. Spring-applied, hydraulically released brake and an overrunning load valve are provided. Hydraulic centerpost and electric slip rings allow continuous rotation.

**Boom Hoist:**

**Turret Mounted  
Hydraulic Powered**  
**Bare Drum Line Pull** 13,100 lbs (5,940 kg)  
**Wire Rope** 350 ft (107 m) of 9/16 in (14.3 mm) dia.

**Line Speed:**  
 Bare Drum 185 fpm (56 m/min)  
 Full Drum 240 fpm (72 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-300-2F**

## **Options**

Listed below are brief descriptions of options available for this product.  
Consult the RT-300-2F 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 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 Seat**

**Seats Inc. - Cloth**

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

**Operator Suspension Seat**

**Seats Inc. - Vinyl**

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

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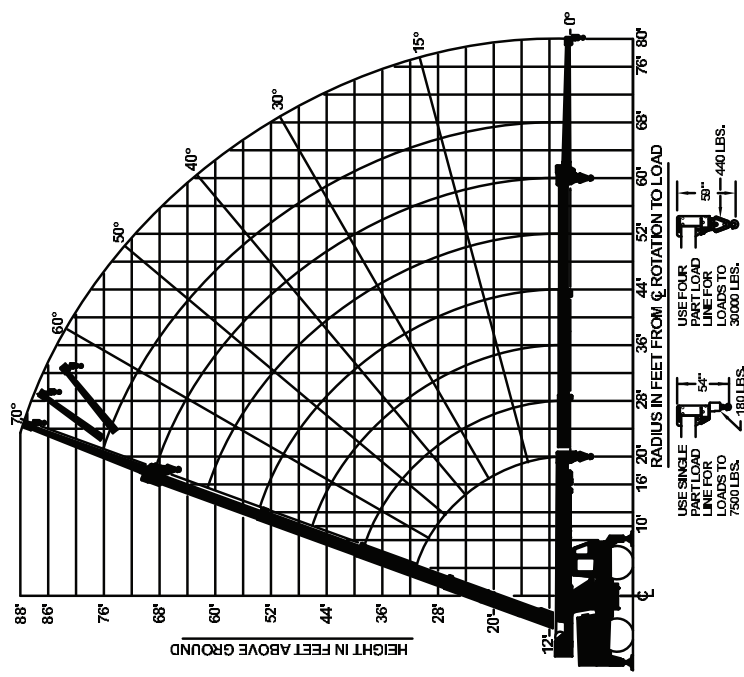
Dimensions and values shown are for reference purposes only. Specifications subject to change.



# RT-3000-2F

## Rough Terrain Crane

# Load Chart



LOAD RADIUS FEET	CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE		MAIN BOOM EXTENSION CAPACITIES	
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS
10	18300	30000	26300	30000
12	13500	28500	22800	28500
14	10400	25900	17600	25900
16	8300	22500	14000	22500
18	6700	19500	11400	19500
20	5500	16900	9400	17000
22	4500	14200	7900	15000
24	3700	12100	6800	13300
26	3100	10500	5700	11900
28	2500	9100	4800	10600
30	2000	7900	4200	9600
32	1600	6900	3600	8800
34	1400	6300	3200	8000
36	1200	5700	2900	7500
38	900	5200	2600	6900
40	800	4800	2400	6500
42	800	4100	1900	5600
44	800	3500	1600	4900
46	800	3100	1300	4200
48	800	2700	1000	3700
50	800	2300	800	3200
52	800	1950	800	2300
54	800	1750	800	2300
56	800	1500	800	2250
58	800	1300	800	1950
60	800	1000	800	1600

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

BOOM EXTENSION FEET	20-FOOT BOOM EXTENSION CAPACITIES						
	0°	15°	30°	40°	50°	60°	70°
0°	2300	2400	2700	3100	3700	4600	6200
15°	—	2300	2400	2800	2900	3400	4100
30°	—	—	2300	2400	2500	2700	3100

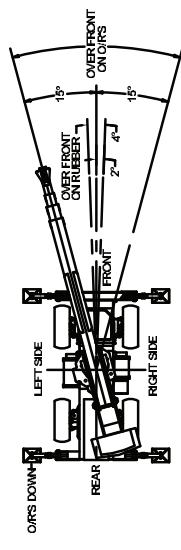
CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM CENTER OF ROTATION TO THE VERTICAL LOAD LINE WITH LOAD APPLIED. LOAD HOOKS, DOWNHAUL WEIGHTS, HOOK BLOCKS AND OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED PART OF THE LOAD EXCEPT FOR HOIST ROPE.

BOOM EXTENSION DEDUCT: 500 LBS. WHEN STOWED ON BASE BOOM. CAPACITIES ON OUTRIGGERS ARE 88% 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.

THE BOOMS ON THIS UNIT ARE ALL STEEL AND HAVE NO LINE VOLTAGE RATING - NO ELECTRICAL INSULATION VALUE. MAXIMUM HYDRAULIC PRESSURE - 3000 PSI.

- OPERATION:
1. READ AND UNDERSTAND OWNERS MANUAL BEFORE OPERATING.
  2. CHECK LEVEL OF HYDRAULIC OIL AND ENGINE OIL DAILY.
  3. CHECK UNIT FOR VISIBLE DEFECTS AND LOOSE PARTS DAILY.
  4. OUTRIGGERS MUST ALL BE SET ON SOLID SURFACE.
  5. AVOID QUICK STARTS AND STOPS WITH HYDRAULIC CONTROLS.
- PICK AND CARRY ON RUBBER CAPACITIES ARE FOR SMOOTH, LEVEL PAVED SURFACE. FOR UNPAVED SURFACE REDUCE CAPACITY BY AT LEAST 25%.



THE LOAD HOIST LINE ON THIS UNIT MUST BE 9/16" DIA. 6 X 36-EP-RRL-WRC WIRE ROPE (OR EQUIVALENT) WITH A MINIMUM BREAKING STRENGTH OF 33,600 LBS. TIRE PRESSURE 100 PSI FOR 17.5-25 20PR.

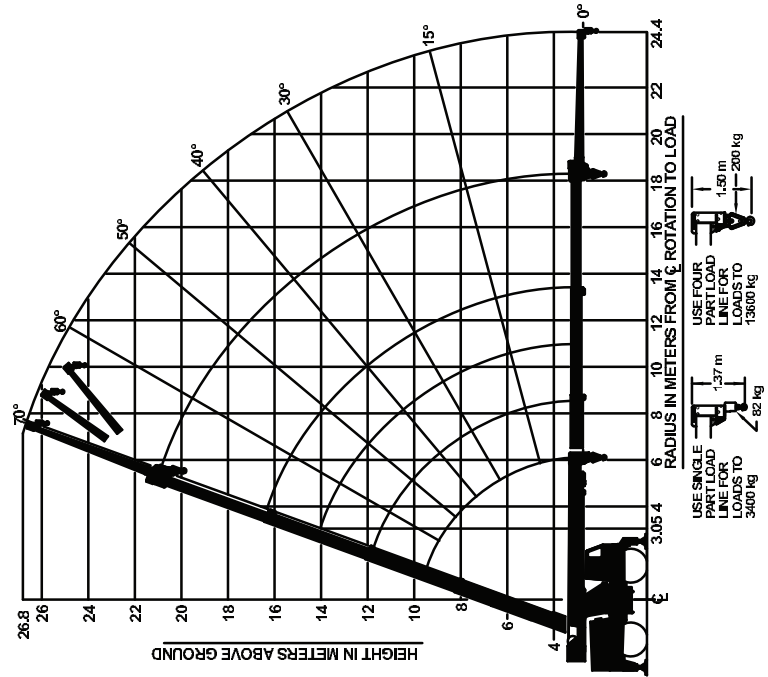
# RT-300-2F

## Rough Terrain Crane

# bmc®

## Load Chart

# Metric



LOAD RADIUS METERS	CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE			
	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	12290	8940	12290
4.5	4320	11160	7290	11160
5	3600	10080	6080	9920
5.5	3020	8820	5150	8820
6	2570	7860	4390	7870
7	1850	5920	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
13.4	270	1860	860	2540
14	—	1720	790	2380
15	—	1530	690	2120
16	—	1380	570	1870
17	—	1220	460	1690
18	—	1080	380	1500
18.3	—	1040	360	1450
19	—	940	—	1190
20	—	840	—	1040
22	—	670	—	1010
24	—	500	—	770
24.4	—	450	—	720

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

BOOM EXTENSION OFFSET ANGLE	6.1 m BOOM EXTENSION CAPACITIES						
	0°	15°	30°	40°	50°	60°	70°
0°	1040	1090	1220	1400	1680	2170	2870
15°	—	1040	1090	1180	1310	1540	1860
30°	—	—	1040	1090	1130	1220	1400

CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM CENTER OF ROTATION TO THE VERTICAL LOAD LINE WITH LOAD APPLIED. LOAD HOOKS, DOWNHAUL WEIGHTS, HOOK BLOCKS AND OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED PART OF THE LOAD EXCEPT FOR HOIST ROPE.

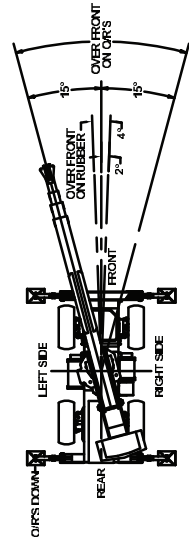
BOOM EXTENSION DEDUCT: 225 kg WHEN STOWED ON BASE BOOM.

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

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

MAXIMUM HYDRAULIC PRESSURE - 207 bar

- OPERATION:
1. READ AND UNDERSTAND OWNERS MANUAL BEFORE OPERATING.
  2. CHECK LEVEL OF HYDRAULIC OIL AND ENGINE OIL DAILY.
  3. CHECK UNIT FOR VISIBLE DEFECTS AND LOOSE PARTS DAILY.
  4. OUTRIGGERS MUST ALL BE SET ON SOLID SURFACE.
  5. AVOID QUICK STARTS AND STOPS WITH HYDRAULIC CONTROLS.
- PICK AND CARRY ON RUBBER CAPACITIES ARE FOR SMOOTH, LEVEL PAVED SURFACE. FOR UNPAVED SURFACE REDUCE CAPACITY BY AT LEAST 25%.



THE LOAD HOIST LINE ON THIS UNIT MUST BE 14.3 mm DIA. 6X36 EP MRC WIRE ROPE (OR EQUIVALENT) WITH A MINIMUM BREAKING STRENGTH OF 120 kN. TIRE PRESSURE 688 kPa FOR 17.5-25 20PR.

# Metric