

RT-400-B

Rough Terrain Industrial Crane

The RT-400-B is a self-propelled cab down rough terrain crane designed for lifting and material handling and features 4-wheel steer and 4-wheel drive. It is designed to be used in applications where the easy “stair step” entry and exit of a cab down rough terrain crane is desired. The 20 US ton lifting capacity and the 72’ 6” telescopic boom provides superior lifting capacity and reach envelope to other units in cab-down rough terrain category. The RT-400-B incorporates an Electro-Hydraulic controls and configurable control modes to provide superior controllability during crane function movement.

- US EPA Tier 4 final/
Euromot Stage V compliant.
- Air Conditioning & Heating
- Spacious, comfortable cab

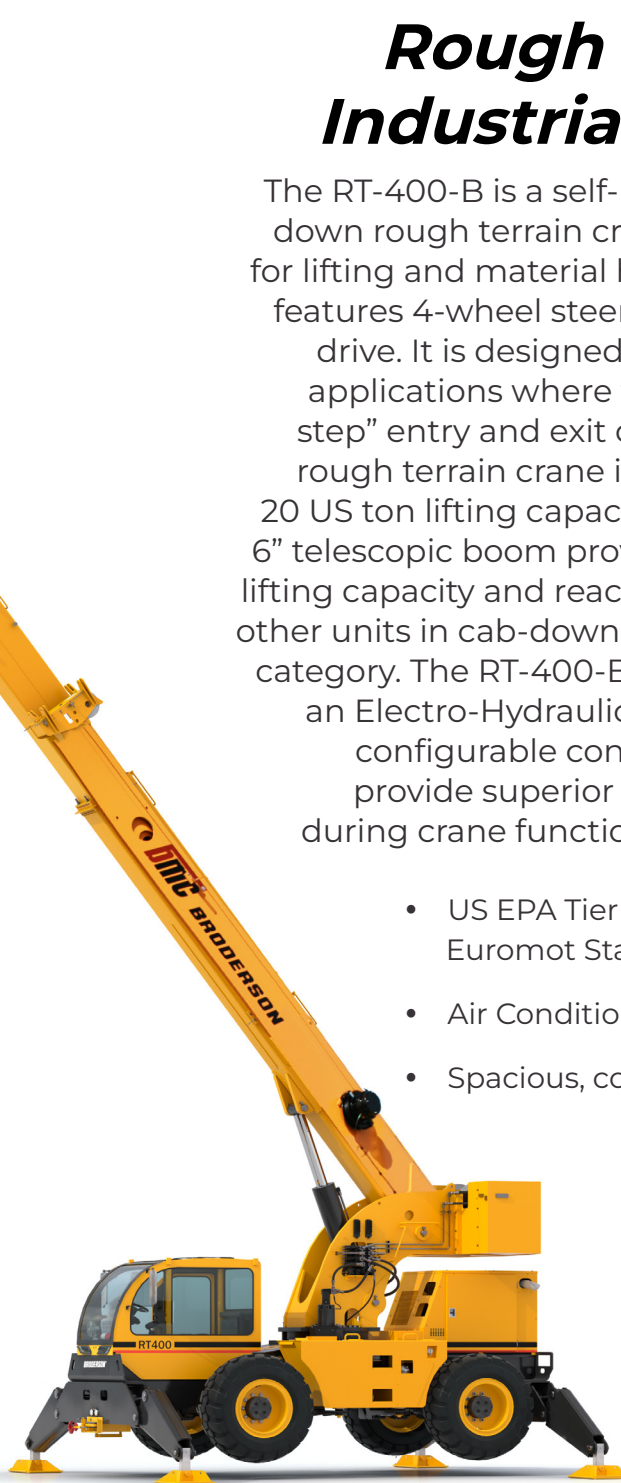
Capacity
40,000 lbs. (18,143 kg)

Sheave Height
90’ 1” (30.2m)
(with boom extension)

Horizontal Reach
89’ 6” (27.3 m)
(with boom extension)

Height
11’ 2” (3.4 m)

Width
8’ 6” (2.6 m)



BMC[®] BRODERSON[®]
Manufacturing Corp.

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RT-400-B SPECIFICATIONS

GENERAL

	ROTATION	ELEVATION	EXTENSION
Boom	Continuous	0° to 75°	47' (14.3m)
Boom Speeds	2.23 RPM	28 sec	57 sec

Weight Total	51,900 lbs. (23,500 kg.)
Front Axle	30,000 lbs. (13,600 kg.)
Rear Axle	21,900 lbs. (9,900 kg.)
Drawbar Pull	33,500 lbs. (15,100 kg.)
Gradeability	70% (34°)
	4-Wheel Steer: (Min.)
Turning Radius	Outside Tire C/L Radius: 14' 5" (4.4 m) Vehicle Clearance Circle (Radius): 17' 2" (5.23

EXPORT ONLY

Make	Cummins	Cummins
Model	QSF3.8L (Tier 4 Final)	QSF3.8L Tier 4
Type	Turbo Diesel, Charge Air Cooled	Diesel, Turbo charged, Air Cooled
C.I.D.	3.8L	3.8L
Max Torque	460 ft. lbs. (620Nm) @1500 RPM	459 ft. lbs. (620 Nm) @ 1500 RPM
HP @ Gov. Speed	163 HP (122 kW) @ 2600	160 HP (119 kW) @ 2500 RPM
Fuel Tank	70 gal. (265L)	17.6 gal. (66.6L)
Emissions	U.S. EPA T4F/EU Stage V	EU Stage 2

ENGINE

TRANSMISSION

AXLES

BRAKES

STEERING

TIRES

CHASSIS

Dana 13.5 T Powershift transmission with 2 ranges and 3 speeds in FORWARD and REVERSE, Oil Cooler and Oil Filter. The transmission includes a front axle disconnect for 2-wheel drive. Maximum Speed Forward and Reverse: 22.3 mph (36 km/h)

DANA FRONT & REAR AXLES

Gear Ratio: 19.333 : 1, Rigid mounted, 30% limited slip differential

Service: 4-wheel hydraulic internal wet disc brakes

Parking: Internal wet disc, spring-applied/ hydraulically released, integral to rear axle.

Hydraulic steering unit with a 4 inch (10.1cm) bore cylinder attached to each axle. Allows limited steering when engine is not running. Push button operator interface to select between 4 steer modes: front-wheel, 4-wheel, rear-wheel, or crab.

Standard:

17.5 x 25, 20-ply rating, mud lug, bi-directional.

OUTRIGGERS

Four independently controlled outriggers of swing-down design. Hydraulic cylinders are equipped with integral holding valves. Outrigger pad dimensions: 19in x 25in (480)mm x 64mm)

OPERATOR COMPARTMENT

Spacious, comfortable operator's cab with suspension seat, seat belt, tilting steering column, and arm rest mounted pilot control levers. Equipped with driver's side sliding door. Air conditioning, heater, defroster, front and top windshield wiper and sliding sun shade. Integrally designed air conditioning is standard.

DASH DISPLAY

In-dash LCD screen shows engine RPM, voltage, fuel level, oil pressure, DEF level and engine hours. Display also shows engine fault codes, control system faults, engine warnings, engine shutdown indication and diagnostic information.

LIGHTING KIT

Includes LED headlights with LED turn signal lights. Taillights with LED brake & turn signal lights. LED Back-up lights, and one emergency flasher.

OUTRIGGER ALARM SYSTEM

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

ELECTRICAL (12-VOLT SYSTEM)

HYDRAULIC

Load sensing hydraulic control system with dual redundant piston pumps delivering 95 GPM (360L/min) combined flow to support full multi-function demand. 20 micron pressure filtration and 10 micron return filtration Large 110-gallon (416L) equipped with 10-micron breather filter on top and oil level gauge on side.

Four-section high strength steel construction. Single, telescopic hydraulic cylinders, equipped with with wire rope and sheave system that extends and retracts the second, third, and fourth stages. The telescope cylinder and the boom elevation cylinder are equipped with cylinder-mounted holding valves. Boom angle indicator is provided on the left side of the boom

BOOM ROTATION

Heavy-duty ball bearing with external teeth rotation gear. Rotation is by hydraulic motor and planetary drive with integral spring applied, hydraulic released brake. Rotation gearbox may be adjusted as wear occurs, to minimize backlash.

BOOM HOIST

Turret Mounted / Hydraulic Powered
Bare Drum Line Pull: 13,800 lbs (6520 kg) (first layer)
Wire Rope: 425 ft (130 m) of 5/8 in (16 mm) dia
Line Speed: 209 FPM (63.7 m/min)
Grooved drum, cable follower and 3rd wrap indicator.

4-PART-LINE SHEAVE BLOCK:

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

ANTI-TWO-BLOCK DEVICE:

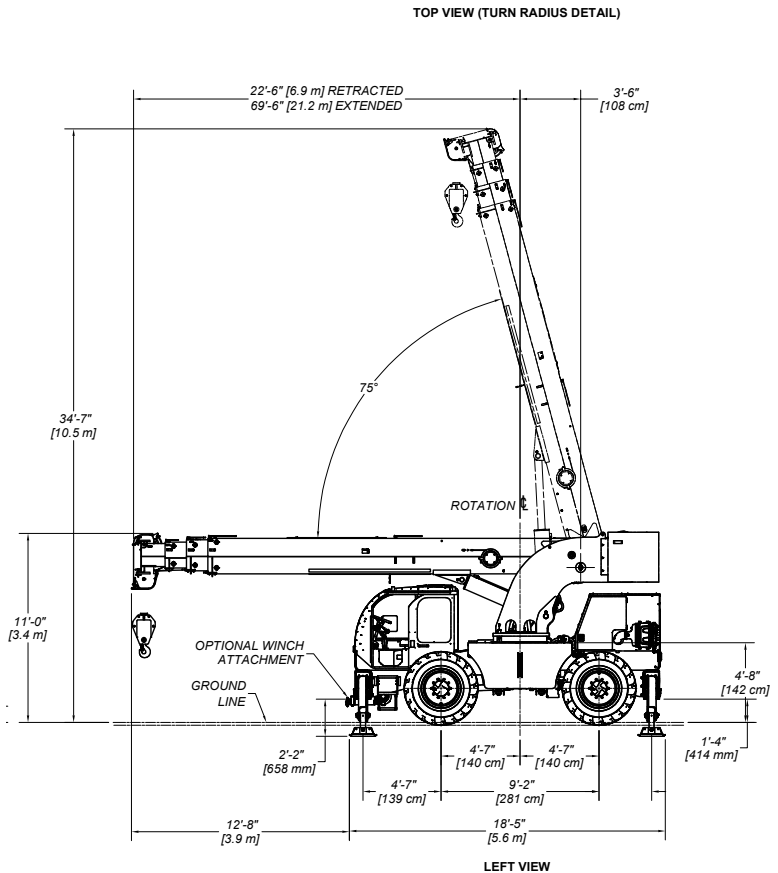
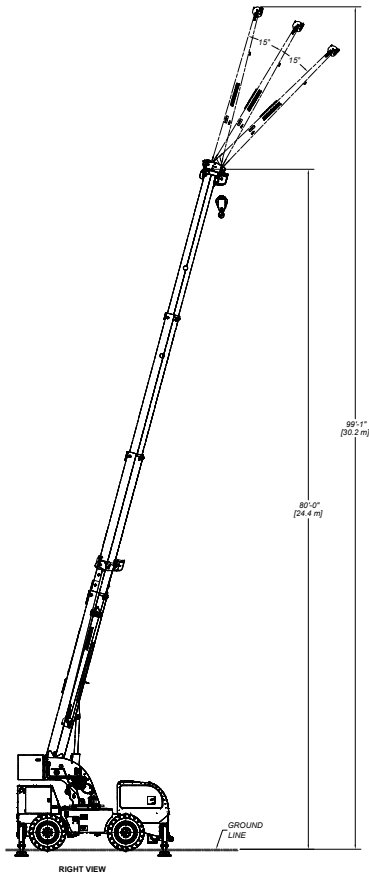
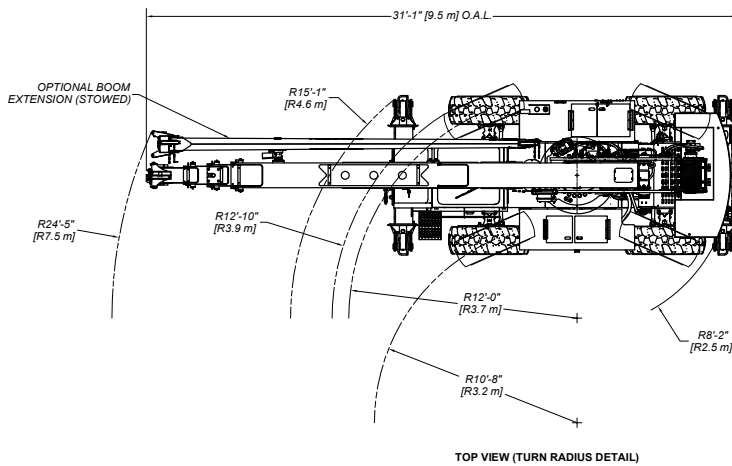
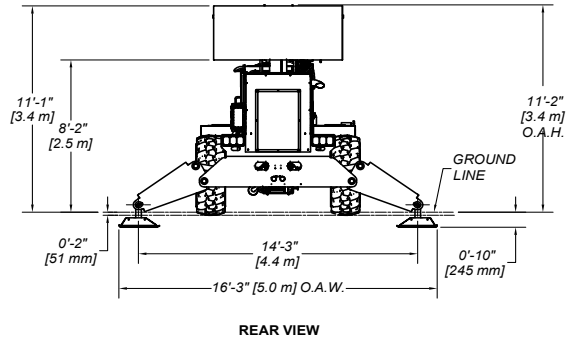
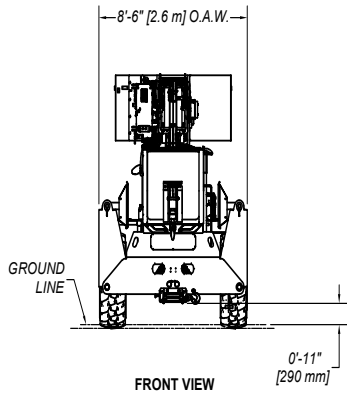
Prevents damage to hoist rope and/or machine components from accidentally pulling sheave block or downhaul weight against boom tip.

BRODERSON® 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. bOperator configurable working range limits. Real time display of outrigger ground bearing pressure.

RT-400-B

SPECIFICATIONS





Main Features

RATED CAPACITY LIMITER
Standard

CAPACITY ON OUTRIGGERS
40,000 lbs. (18,143 kg)

PICK AND CARRY CAPACITY
up to 26,300 lbs. (11,955 kg)

HEIGHT
11' 3" (3.4 m)

WIDTH
8' 5" (2.6 m)

BOOM ROTATION
360° Continuous

SHEAVE HEIGHT
up to 98' (30 m)

HORIZONTAL REACH
up to 85' (26 m)

FOUR-WHEEL STEER
Standard

FOUR-WHEEL DRIVE
Standard

POWERSHIFT TRANSMISSION
Standard

**ELECTRONIC CONTROLS FOR
SMOOTH, PRECISE OPERATIONS**

**INDEPENDENT OUTRIGGER
CONTROLS**

TIER 4 FINAL DIESEL ENGINE
Standard

Additional Features

TIRE OPTIONS

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

CHASSIS OPTIONS

Auxiliary Front Winch

Planetary gear winch with manual free spool drum disconnect, mounted beneath chassis frame, with push-button control on the operator console.

Pintle Hook, Front

Pintle hook mounted on the front outrigger housing, 30,000lb capacity.

Pintle Hook, Rear

Pintle hook mounted on the rear outrigger housing, 30,000lb capacity.

ELECTRICAL OPTIONS

Strobe Lights

Two amber LED strobe light mounted on each side of counterweight for high visibility.

Boom Work Lights

Two LED work light mounted to boom to light boom tip and one work light mounted to turret to light ground under boom tip.

OPERATOR COMPARTMENT - STANDARD

Window Wiper - Top Window

12-volt electric wiper on front and top window.

Air Conditioning

Integrally designed air conditioning system.

Spacious Operator's Cab

Arm rest mounted crane function levers, sliding driver's side door, retractable sunshade

BOOM ATTACHMENTS:

20-Ft Offsettable Boom Extension

Boom stowable. Offsets include 0 degree (in line), 15 degree or 30 degree.

MAIN HOIST:

Hydraulic powered 2-speed (12 VDC solenoid at motor for speed selection) planetary gear hoist with spring set, hydraulically released brake and load holding valve. Grooved drum, spring applied cable follower and 3rd wrap indicator. Maximum bare drum line pull of 13,792 lbs and maximum line speed of 297 ft/min (5th layer).

CONSULT THE RT-400-B ENGINEERING SPEC FOR ADDITIONAL INFORMATION.

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.

An extensive network of full-service dealers offer parts and service support.

For additional options or special equipment not listed, please consult your dealer salesperson or contact **BroderSON Manufacturing Corp.**



14741 West 106th Street
Lenexa, KS 66215 USA

(913) 888-0606
www.BroderSON.com

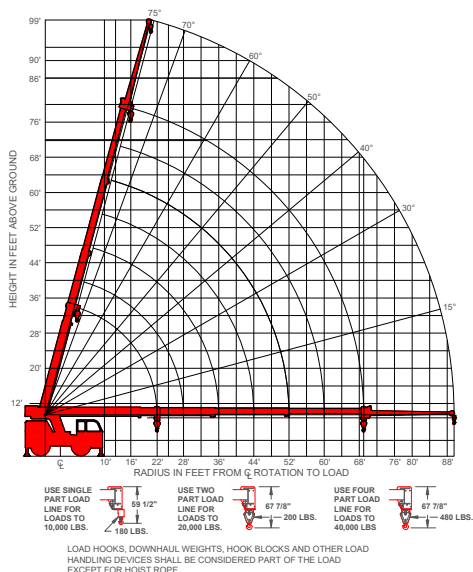
Dimensions and
values shown are for
reference purposes only.
Specifications subject to
change.



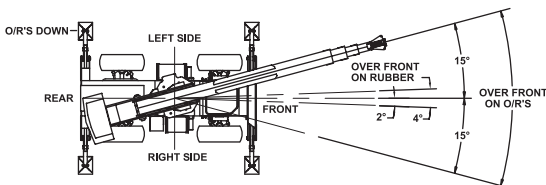
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Crane Capacity Chart: US Standard

WORKING RANGE CHART



Load hooks, downhaul weights, hook blocks and other load handling devices except hoist rope shall be considered part of the load.



The load hoist line on this unit must be 5/8" dia. (16 Mm) 425 foot (130m) long compact 35x7 class grade 2160 wire rope (or equivalent) with a minimum breaking strength of 56,400 lbs (251 kn).

Capacities Apply to Operation on Firm Level Surface					
Load Radius (Feet)		Main Boom or Extension Capacities (Pounds)			
		360° Rotation		Over Front	
					
Main Boom	10	18300	40000	26300	40000
	12	13900	34100	22000	34100
	14	10900	29200	18000	29200
	16	8600	25500	14800	25500
	18	7300	23200	12400	22700
	20	6000	22000	10000	22000
	22	5000	19000	8300	20000
	24	4200	17800	7000	18300
	26	3600	16100	6100	16900
	28	3000	13300	5200	15700
	30	2500	12000	4600	14600
	32	2200	10700	4000	13700
	34	1800	9700	3500	12900
	36	1500	8900	3100	11900
	38	1300	8000	2700	10900
	40	1000	7300	2400	9900
	42	800	6700	2000	9200
	46	-	5600	1600	8100
	50	-	4700	1200	7000
	54	-	4000	800	6100
	58	-	3400	500	5300
Boom Extension	62	-	2900	-	4600
	66	-	2400	-	4000
	68	-	2300	-	3600
	72	-	2500	-	2800
	76	-	2000	-	2800
	80	-	1600	-	2800
	84	-	1300	-	2800
	88	-	1100	-	2000

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.

RT-400-B Rough Terrain Crane

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. SPEED MUST BE LESS THAN 2 MPH (3.2 kph).

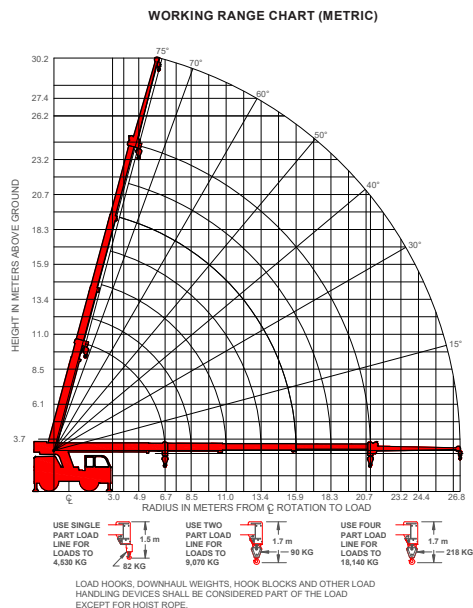
THE BOOMS ON THIS UNIT ARE ALL STEEL AND HAVE NO LINE VOLTAGE RATING - NO ELECTRICAL INSULATION VALUE.

MAXIMUM HYDRAULIC PRESSURE: 4000 PSI (280 bar)

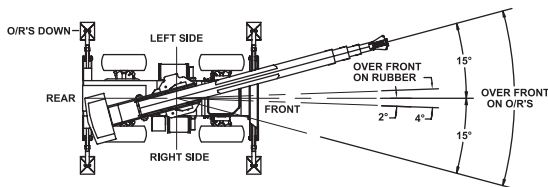
BOOM EXTENSION DEDUCT: 500 LBS (220 kg) WHEN STOWED ON BASE BOOM.

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

Crane Capacity Chart: Metric



Load hooks, downhaul weights, hook blocks and other load handling devices except hoist rope shall be considered part of the load.



The load hoist line on this unit must be 16 mm (5/8") dia. 130m (425 foot) long compact 35x7 class grade 2160 wire rope (or equivalent) with a minimum breaking strength of 251 kn (56,400 lbs).

Capacities Apply to Operation on Firm Level Surface					
Load Radius (Meter)		Main Boom or Extension Capacities (Kilograms)			
		360° Rotation		Over Front	
					
Main Boom	3.0	8300	18140	11920	18140
	3.7	6300	15460	9970	15460
	4.3	4940	13240	8160	13240
	4.9	3900	11560	6710	11560
	5.5	3310	10520	5620	10290
	6.1	2720	9970	4530	9970
	6.7	2260	8610	3760	9070
	7.3	1900	8070	3170	8300
	7.9	1630	7300	2760	7660
	8.5	1360	6030	2350	7120
	9.1	1130	5440	2080	6620
	9.8	990	4850	1810	6210
	10.4	810	4390	1580	5850
	11.0	680	4030	1400	5390
	11.6	580	3620	1330	4940
	12.2	450	3310	1080	4490
	12.8	360	3030	900	4170
	14.0	-	2540	720	3670
Boom Extension	15.2	-	2130	540	3170
	16.5	-	1810	360	2760
	17.7	-	1540	220	2400
	18.9	-	1310	-	2080
	20.1	-	1080	-	1810
	20.7	-	1040	-	1630
	22.0	-	1130	-	1270
	23.2	-	900	-	1270
	24.4	-	720	-	1270
	25.6	-	580	-	1270
	26.8	-	490	-	900

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.

RT-400-B Rough Terrain Crane

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. SPEED MUST BE LESS THAN 3.2 kph (2 MPH).

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

MAXIMUM HYDRAULIC PRESSURE: 280 bar (4000 PSI)

BOOM EXTENSION DEDUCT: 220 kg (500 LBS) WHEN STOWED ON BASE BOOM.

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