



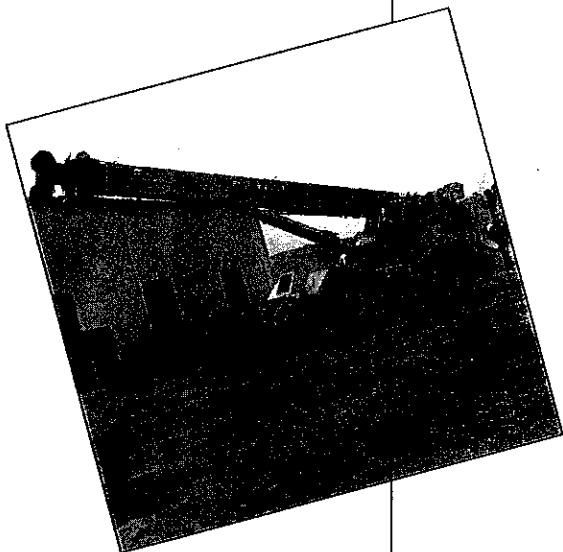
SPECIFICATIONS

RT 190

90 Ton (82 tonne) Capacity
Century Series Rough Terrain Crane

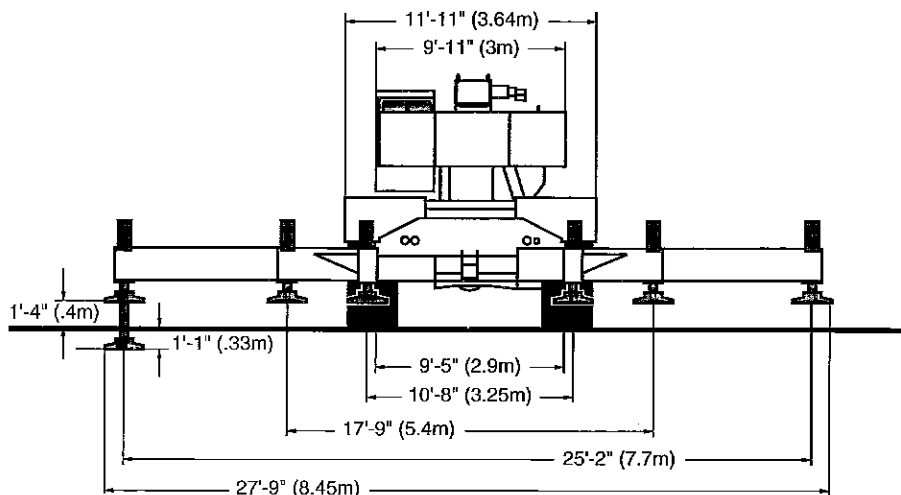


 **TEREX CRANES, INC.**



RT 190 FEATURES

- **Full Power 4-Section Boom:**
124 ft. 8 in. (38 m) makes it the longest in its class.
- **Lattice Extensions:**
A telescopic lattice extension plus a lattice extender insert yields a maximum tip height of 205 ft. (62.5 m).
- **Moveable:**
Can be brought to transport weight without removing the boom. Swingaway, tires and rims, and counterweight are all easily removed to reduce the overall weight to under 90,000 lbs. (40824 kg).
- **Matched Winches:**
Bent axis motors give you smooth operation and the highest maximum line pull of any rough terrain crane.
- **Three Outrigger Positions:**
Set the outriggers straight down, at the mid-point, or fully extended for optimum set-up on a congested work site.
- **Pride Plus Warranty:**
The most comprehensive warranty in the business. Covers the entire crane for 12 months or 2,000 hours of operation. Plus, major weldment structures are covered for 5 years or 10,000 hours.



This crane meets the requirements of ANSI B30.5. The machine structure has been tested per SAE J1063. The machine stability has been tested per SAE J765.

BOOM

39 ft. 4 in. to 124 ft. 8 in. (12 m to 38 m) four-section full-power telescopic boom. Boom point has six non-metallic main sheaves and two non-metallic idler sheaves. Metallic sheaves are available. A mechanical boom angle indicator is provided.

Boom Telescope:

One two-stage double-acting cylinder and a chain crowd mechanism. Fully synchronous operation in three- or four-section modes.

Boom Hoist:

Two-double-acting cylinders provide elevation from -2 degrees to 82 degrees. Easy Ride, a boom stabilizing system to reduce machine bounce during travel, is an option.

BOOM OPTIONS

Lattice Extension:

Swingaway, 32 ft. 10 in. (10 m), self-storing on base section of main boom. Offsetable to 30 degrees.

Telescopic Lattice Extension:

Swingaway 32 ft. 10 in. to 57 ft. 5 in. (10 m to 17.5 m), self-storing on the base section of main boom. Offsetable to 30 degrees.

Lattice Extender Insert:

16 ft. 5 in. (5 m) insert mounts between boom point and swingaway.

Auxiliary Boom Point:

Mounted at boom point with single sheave.

COUNTERWEIGHT

18,500 lbs. (8392 kg) bolt on type.

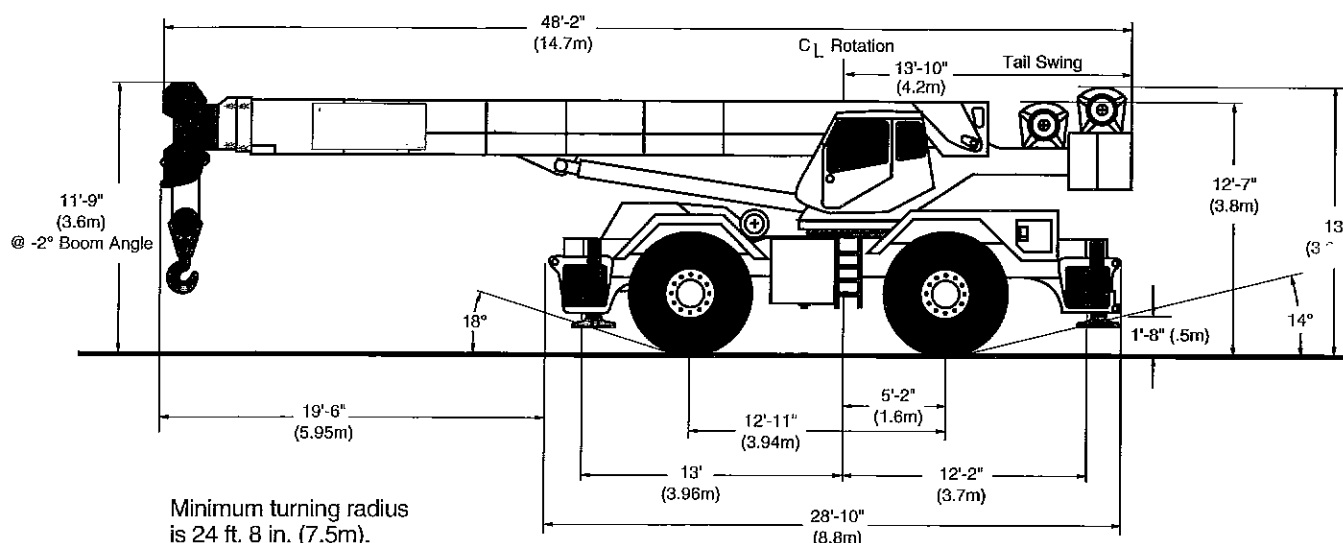
COUNTERWEIGHT OPTION

Self-removable style, for reducing overall weight for transport.

CAB

All-weather environmental cab of steel has locking door and opening ceiling, side, and rear windows with tinted safety glass throughout. Operator's cloth-covered seat is fully adjustable and has shock-absorbing suspension and seat belt. Steering column tilts and telescopes for comfort. Cab is cushion-mounted for vibration dampening and noise reduction. Contains all roading and crane function controls including armrest-mounted joystick or twin lever controls for swing, auxiliary winch, main winch, and boom hoist. Foot pedals for swing brake, boom telescope, service brakes and engine throttle.

Front console includes gauges for engine water temperature, engine oil pressure, hydraulic oil temperature, transmission oil temperature, air pressure and fuel. Also includes hourmeter, speedometer, tachometer, voltmeter, winch high speed indicator, rear steer centering light, engine condition warning system, anti-two block warning device and electronic LMI. Additional cab equipment includes windshield wiper and washer, defroster fan, interior cab light, fire extinguisher, machine level gauge, electric horn and hand throttle.



With 29.5 X 29 tires, add 2" to height dimensions.

With 33.25 X 29 tires, add 4" to height dimensions and 4" to overall width.

WINCH

2080:

Two-speed with bent axis piston motor, planetary gearing with equal speed power raising and lowering, and infinitely variable speed control. Has automatic multi-disc brake and drum turn indicator.

Drum Capacity:

780 ft. (238 m) of 3/4 in. (19 mm) wire rope.

Wire Rope:

690 ft. (210 m) of 3/4 in. (19 mm) diameter, 6x37 EIPS with 7x7 IWRC.

Strength Limit:

16,800 lbs. (7620 kg) with 3.5:1 safety factor.

Line Pull (Max):

22,410 lbs. (10165 kg) first layer, low speed.

Line Pull (Permissible):

16,000 lbs. (7256 kg) per part of line.

Line Speed (Max):

441 fpm (134 mpm) fifth layer, high speed.

HOISTING OPTIONS

Auxiliary Winch:

Same as main winch. Wire rope is optional.

Auxiliary Winch:

1580 two-speed with bent axis piston motor, planetary gearing with equal speed power raising and lowering, and infinitely variable speed control. Has automatic multi-disc brake and drum turn indicator. Wire rope is optional.

Drum Capacity:

554 ft. (168 m) of 3/4 in. (19 mm) wire rope.

Strength Limit:

16,800 lbs. (7620 kg) with 3.5:1 safety factor on 3/4 in. (19 mm) diameter, 6x37 EIPS with 7x7 IWRC wire rope.

Line Pull (Max):

17,100 lbs. (7757 kg) first layer, low speed.

Line Pull (Permissible):

11,000 lbs. (4990 kg) per part of line.

Line Speed (Max):

631 fpm (192 mpm) fifth layer, high speed.

Auxiliary Winch Wire Rope:

3/4 in. (19 mm) diameter, 6x37 EIPS with 7x7 IWRC or rotation-resistant 8x19 EIPS with 7x7 IWRC. Length is 690 ft. (210 m) with 2080 winch and 550 ft. (168 m) with 1580 winch.

Cable Spooling Device:

For main or auxiliary winches.

Hook Blocks:

90 ton (82 tonne) with six sheaves, or 20 ton (18 tonne) with one sheave.

Headache Ball:

15 ton (13.5 tonne) weighted hook.

SWING UNIT

360 degree continuous rotation to 1.5 rpm with disc brake, integral with swing reducer.

House Lock:

Manually engaged 360 degree house lock.

HYDRAULIC SYSTEM

System uses two tandem gear-type pumps with a total flow of 145 gpm (547 lpm). Filtration is by two 10-micron return line filters externally mounted to the reservoir and one 20-micron pressure line filter. An oil cooler and manual disconnect are standard.

Oil Reservoir:

330 gallon (1250 liter) capacity.

CARRIER

Outriggers:

Independent, out and down type with control from the cab. The outriggers may be set in three positions for optimum setup on congested job sites with a full extension of 25 ft. 2 in. (7.6 m). Front to rear spread is the same.

Outrigger Floats:

30 in. (762 mm) in diameter with storage on carrier.

Front Axle:

Planetary drive/steer, rigid mounted.

Rear Axle:

Planetary drive/steer, mounted on oscillating cradle with hydraulic lockout cylinders. Oscillation is ± 5.5 in. (140 mm). Oscillation lockout override control. Drive disconnect for two-wheel drive operation.

Service Brakes:

Dual circuit, full air operating drum brakes at each wheel.

Parking Brakes:

Spring set/air released drum brakes at each wheel.

(continued on back)

**Steering:**

Hydrostatic power steering, front and rear axles. Control modes for front only, four-wheel crab and crab steering, all controlled by the steering wheel. Switch for independent rear steer. Minimum turning radius is 24 ft. 8 in. (7.5 m).

Tires:

29.5x25-28PR tubeless with rock tread (E-3).

Tire Options:

29.5x29-34PR tubeless with rock tread (E-3).

33.25x29-26PR tubeless with rock tread (E-3).

Spare tires with rims.

Tire inflation kit.

Tire and rim removal device.

ENGINE

Cummins 6CTA8.3, 4-cycle, turbo-charged and aftercooled diesel with a displacement of 505 cu. in. (8.3 liters). Output is 250 HP (187 kw) @ 2,500 rpm with maximum torque of 650 ft. lbs. (881 Nm) @ 1,800 rpm.

ENGINE OPTION

Detroit Diesel 6V53T, 2-cycle, turbo-charged and aftercooled diesel with a displacement of 318 cu. in. (5.2 liters). Output is 250 HP (187 kw) @ 2,500 rpm with maximum torque of 593 ft. lbs. (804 Nm) @ 1,600 rpm.

Electrical:

24 volt system with negative ground, two 8D batteries, and a 70 amp alternator.

Fuel Tank:

80 gallon (303 liter) capacity.

TRANSMISSION

Powershift with hi/lo range and torque convertor, eight speeds forward, six reverse.

Max Speed:

24 mph (39 km/h).

Max Grade:

97% @ stall.

Miscellaneous Equipment (Standard):

Sliding engine hood, front and rear tow lugs, automatic moisture ejector, air dryer, headlights, taillights, turn signals and flashers, back-up alarm, rearview mirrors, storage compartments, and hook block tie down (D hook).

Miscellaneous Equipment (Optional):

Engine starting aid, pintle hooks, floodlights, amber beacon, roof wiper, hydraulic air conditioner, and choice of propane, diesel, or hydraulic (c/w AC) heater.

PCSA Rating Class 8-404

Capacity charts and related lifting data can be found in a separate publication.

RT 190 WEIGHT DISTRIBUTION	POUNDS			KILOGRAMS		
	GROSS	FRONT	REAR	GROSS	FRONT	REAR
Basic Machine	110,644	51,205	59,439	50188	23226	26962
Reductions for Transport						
Removable Counterweight	-17,500	9,545	-27,045	-7938	4330	-12268
29.5x25 Standard Tires	-6,887	-3,444	-3,443	-3124	-1562	-1562
Additions for Options						
Lattice Extension	1,477	2,507	-1,030	670	1137	-467
Telescopic Lattice Extension	3,053	5,182	-2,129	1385	2351	-966
Lattice Extender Insert	772	1,310	-538	350	594	-244
Auxiliary Boom Point	148	216	-68	67	98	-31
Auxiliary Winch Wire Rope	642	-374	1,016	291	-170	461
90 Ton Hook Block (travel)	1,226	2,104	-878	556	954	-398
20 Ton Hook Block (travel)	580	995	-415	263	451	-188
15 Ton Headache Ball (boom)	467	802	-335	212	364	-152
Detroit Diesel 6V53T Engine	273	235	38	124	107	17
29.5x29 Tires	1,080	540	540	490	245	245
33.25x29 Tires	1,777	889	888	806	403	403

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NOTE: All designs, specifications, and components of the equipment described are subject to change at the manufacturer's sole discretion at any time and without advance notice. Capacity charts and information printed here are only a guide and may not be complete. They should not be relied upon to operate the crane. The individual load charts and related lifting data on each crane must be understood and govern operation of the crane. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular purpose as performance may vary with conditions encountered. The only warranty applicable is our standard warranty for this machine.



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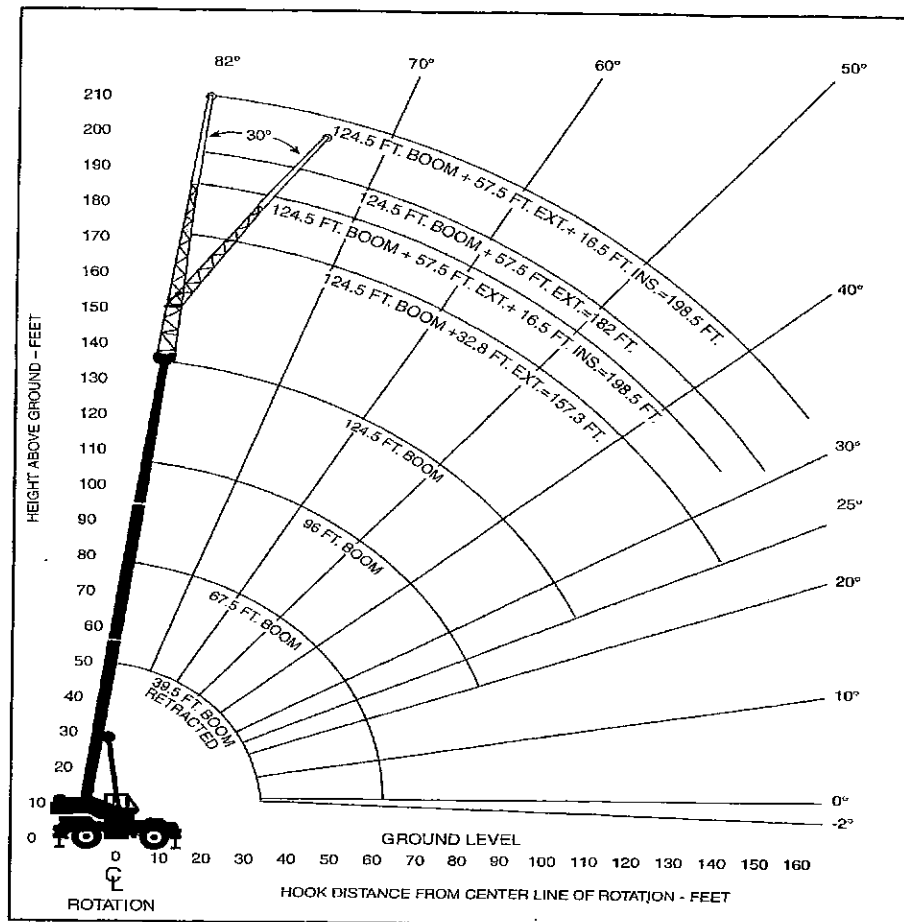


TEREX RT190

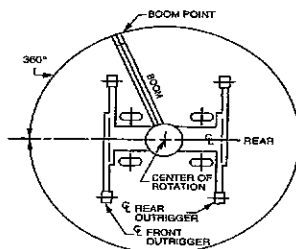
Range diagram & lifting capacities

ROUGH TERRAIN CRANE
90 Ton Capacity

RT 190 RANGE DIAGRAM

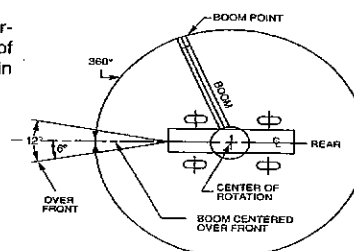


AREAS OF OPERATION

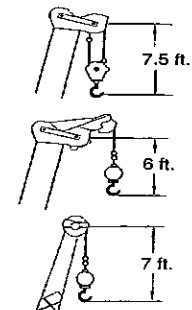


ON OUTRIGGERS

NOTE: These lines determine the limiting position of any load for operating within working areas indicated.



ON TIRES



**LOAD RATINGS OVER 360° WITH OUTRIGGERS FULLY EXTENDED****Powered Boom - 3 Section Mode**

POWERED BOOM LENGTH IN FEET											
RADIUS IN FEET	39.5		53.5		67.5		81.5		96		RADIUS IN FEET
	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	
8	71	180000									8
10	68	160000	74	137100	78	102700					10
12	64	144000	72	136200	76	94900	79	80900			12
15	59	125000	69	124600	74	84300	77	72300	79	56200	15
20	50	102000	63	101500	69	72400	73	62200	77	51600	20
25	39	78000	56	77800	64	63000	70	54100	74	47400	25
30	25	63200	49	62900	60	55900	66	48100	71	43900	30
35			41	50800	54	50200	62	43500	67	40800	35
40			32	39300	49	39200	58	38900	64	38500	40
45			18	30900	43	30800	53	30500	60	30200	45
50					35	25200	49	24900	57	24600	50
55					27	20800	43	20600	53	20300	55
60							38	16900	49	16600	60
65							31	14200	44	13900	65
70							23	12000	40	11700	70
75									34	9800	75
80									28	8200	80
85									20	6900	85
	0	15000	0	8500	0	2000					

3232U280

Powered Boom - 4 Section Mode**PCSA Rating Class 8-404**

POWERED BOOM LENGTH IN FEET															
RADIUS IN FEET	39.5		53.5		67.5		81.5		96		110		124.5		RADIUS IN FEET
	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	
8	71	180000													8
10	68	160000	74	45400	78	45400									10
12	64	144000	72	45400	76	45400	79	45400							12
15	59	125000	68	45400	73	45400	77	45400	79	44300					15
20	50	102000	62	45400	69	45400	73	45400	76	37300	79	36000	80	28500	20
25	39	78000	56	45400	64	45400	70	43800	73	32300	76	31700	78	28500	25
30	24	63200	49	45400	59	45400	66	40100	70	28200	73	27800	76	27300	30
35			41	45400	54	45100	62	34700	67	25200	71	24800	74	24500	35
40			32	40400	49	40900	58	31300	63	22700	68	22400	71	21700	40
45			18	31300	42	31800	53	30500	60	20500	65	20400	68	18000	45
50					35	26300	49	26400	56	18800	62	18700	66	16400	50
55					27	22000	43	22200	53	17300	59	17200	63	15200	55
60							38	18500	49	15900	56	15900	61	14000	60
65							31	15800	44	14800	52	14800	58	13000	65
70							23	13600	40	13800	49	13800	55	12200	70
75									34	12000	45	12100	52	11300	75
80									28	10400	41	10500	49	10600	80
85									20	9000	37	9100	46	9200	85
90											32	7900	42	8000	90
95											26	6800	38	6900	95
100											18	5900	34	6000	100
105													29	5100	105
110													24	4400	110
	0	15000	0	8500	0	2000									

3232U281A

**LOAD RATINGS OVER 360° WITH OUTRIGGERS FULLY EXTENDED****32.8 Ft. Extension**

3 Section Mode						4 Section Mode					
96 + 32.8 = 128.8 FT. TOTAL						124.5 + 32.8 = 157.3 FT. TOTAL					
RADIUS IN FEET	0° △°	POUNDS	30° △°	POUNDS	RADIUS IN FEET	0° △°	POUNDS	30° △°	POUNDS	RADIUS IN FEET	0° △°
20	80	25800			20					20	
25	77	23700			25					25	
30	75	21800			30					30	
35	73	20000			35	77	13700			35	
40	71	18500	77	11100	40	76	13600			40	
45	69	17300	75	10700	45	74	13100	79	10400	45	
50	66	16200	72	10300	50	72	11900	77	9800	50	
55	64	15100	70	9900	55	70	10800	75	9200	55	
60	61	14200	67	9500	60	68	9900	73	8600	60	
65	59	13400	65	9100	65	66	9000	71	8000	65	
70	56	12600	62	8700	70	64	8300	69	7500	70	
75	54	11400	59	8900	75	62	7600	67	7000	75	
80	51	9800	56	8600	80	60	7100	65	6500	80	
85	48	8400	53	8500	85	58	6500	63	6000	85	
90	44	7200	50	8300	90	56	6100	61	5700	90	
95	41	6100	46	7100	95	54	5600	58	5400	95	
100	37	5100	42	5900	100	51	5300	56	5100	100	
105	33	4300	38	4900	105	49	4900	53	4700	105	
110	29	3500	33	4000	110	46	4400	51	4500	110	
115	23	2800	26	3100	115	43	3700	48	4200	115	
120	16	2200			120	40	3100	45	3700	120	
125					125	37	2500	41	3000	125	
130					130	34	2000	37	2400	130	
135					135	30	1500	33	1800	135	
140					140			28	1300	140	

3232U189/193

32.8 Ft. Extension with 16.5 Ft. Insert

3 Section Mode						4 Section Mode					
96 + 16.5 + 32.8 = 145.3 FT. TOTAL						124.5 + 16.5 + 32.8 = 173.8 FT. TOTAL					
RADIUS IN FEET	0° △°	POUNDS	30° △°	POUNDS	RADIUS IN FEET	0° △°	POUNDS	30° △°	POUNDS	RADIUS IN FEET	0° △°
25	79	19400			25					25	
30	77	19000			30					30	
35	75	18400			35					35	
40	73	17300	79	11300	40	77	10600			40	
45	71	16100	77	10900	45	76	10500			45	
50	69	15100	75	10600	50	74	10200	79	8600	50	
55	67	14300	73	10200	55	72	10000	77	8000	55	
60	65	13400	71	10000	60	71	9200	76	7600	60	
65	63	12500	68	9700	65	69	8400	74	7100	65	
70	61	11900	66	9300	70	67	7900	72	6700	70	
75	59	11200	64	9100	75	66	7300	70	6300	75	
80	56	10400	61	8700	80	64	6800	68	5900	80	
85	54	9000	59	8400	85	62	6300	66	5600	85	
90	51	7800	56	8200	90	60	6000	64	5300	90	
95	48	6700	53	7800	95	58	5500	62	5000	95	
100	45	5700	50	6700	100	56	5300	60	4800	100	
105	42	4900	47	5700	105	54	4900	58	4600	105	
110	39	4100	44	4800	110	52	4700	56	4300	110	
115	36	3400	40	4000	115	49	4000	54	4100	115	
120	32	2800	36	3300	120	47	3300	51	3900	120	
125	28	2200	31	2600	125	45	2800	49	3400	125	
130	23	1700	25	1900	130	42	2200	46	2800	130	
135	16	1200			135	39	1700	43	2300	135	
140					140	36	1300	40	1800	140	

3232U209/213

57.5 Ft. Extension

3 Section Mode						4 Section Mode					
96 + 57.5 = 153.5 FT. TOTAL						124.5 + 57.5 = 182 FT. TOTAL					
RADIUS IN FEET	0° △°	POUNDS	30° △°	POUNDS	RADIUS IN FEET	0° △°	POUNDS	30° △°	POUNDS	RADIUS IN FEET	0° △°
30	78	10800			30					30	
35	76	9800			35					35	
40	74	9000			40	78	9300			40	
45	72	8300			45	76	8600			45	
50	70	7700			50	75	8100			50	
55	68	7200			55	73	7700			55	
60	66	6800			60	72	7200			60	
65	64	6400	74	4300	65	70	6800	78	4300	65	
70	62	6000	72	4200	70	68	6500	76	4200	70	
75	60	5700	69	4000	75	67	6200	75	4100	75	
80	58	5400	67	3900	80	65	5900	73	4000	80	
85	56	5100	65	3800	85	64	5600	71	3900	85	
90	53	4900	63	3700	90	62	5400	69	3800	90	
95	51	4700	60	3700	95	60	5200	67	3800	95	
100	49	4500	57	3600	100	58	4900	65	3700	100	
105	46	4400	55	3500	105	56	4600	64	3700	105	
110	43	4200	52	3500	110	54	4300	62	3600	110	
115	41	4000	49	3500	115	52	4100	59	3500	115	
120	38	3800	45	3400	120	50	3800	57	3500	120	
125	34	3300	42	3400	125	48	3600	55	3500	125	
130	31	2800	37	3400	130	46	3200	53	3400	130	
135	26	2300	32	2800	135	43	2700	50	3200	135	
140	21	1900	25	2200	140	41	2300	47	3000	140	
145					145	38	1900	44	2600	145	
150					150	35	1500	41	2100	150	
155					155			37	1700	155	
160					160			33	1200	160	

3232U191/195

57.5 Ft. Extension with 16.5 Ft. Insert

3 Section Mode						4 Section Mode					
96 + 16.5 + 57.5 = 170 FT. TOTAL						124.5 + 16.5 + 57.5 = 198.5 FT. TOTAL					
RADIUS IN FEET	0° △°	POUNDS	30° △°	POUNDS	RADIUS IN FEET	0° △°	POUNDS	30° △°	POUNDS	RADIUS IN FEET	0° △°
35	77	10400			35					35	
40	76	9600			40					40	
45	74	8900			45					45	
50	72	8300			50	76	7600			50	
55	71	7700			55	75	7600			55	
60	69	7300	78	4500	60	74	7400			60	
65	67	6900	76	4400	65	72	7200			65	
70	65	6500	74	4300	70	71	6800	78	4300	70	
75	63	6200	72	4100	75	70	6400	76	4200	75	
80	62	5900	70	4100	80	68	6000	75	4100	80	
85	60	5600	68	4000	85	67	5600	73	4000	85	
90	58	5400	66	3800	90	65	5300	72	3900	90	
95	56	5100	64	3800	95	63	5000	70	3800	95	
100	54	4900	62	3700	100	62	4700	68	3800	100	
105	52	4700	59	3600	105	60	4400	67	3700	105	
110	49	4600	57	3600	110	58	4200	65	3700	110	
115	47	4400	55	3500	115	57	3900	63	3600	115	
120	45	4200	52	3500	120	55	3700	61	3500	120	
125	42	3600	49	3500	125	53	3600	59	3300	125	
130	39	3100	47	3400	130	51	3300	57	3100	130	
135	36	2600	43	3400	135	49	2900	55	3000	135	
140	33	2100	40	2900	140	47	2400	53	2900	140	
145	30	1700	36	2300	145	44	2000	51	2800	145	
150	26	1300	31	1800	150	42	1600	48	2400	150	
155					155	39	1200	45	2000	155	
160					160			43	1600	160	

3232U210/214

**LOAD RATINGS OVER 360° WITH OUTRIGGERS EXTENDED TO THE MID POSITION****Powered Boom - 3 Section Mode****80% of Stability**

POWERED BOOM LENGTH IN FEET											
RADIUS IN FEET	39.5		53.5		67.5		81.5		96		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	145600	74	137100	78	102700					10
12	64	129700	72	129300	76	94900	79	80900			12
15	59	111000	69	110800	74	84300	77	72300	79	56200	15
20	50	76500	63	76200	69	72400	73	62200	77	51600	20
25	39	49700	56	49500	64	49400	70	49100	74	47400	25
30	25	35500	49	35400	60	35300	66	35000	71	34700	30
35			41	26700	54	26600	62	26300	67	26000	35
40			32	20800	49	20700	58	20500	64	20100	40
45			18	16500	43	16400	53	16200	60	15900	45
50					35	13200	49	13000	57	12700	50
55					27	10600	43	10400	50	10100	55
60							38	8400	49	8100	60
65							31	6700	44	6400	65
70							23	5300	40	5000	70
75									34	3800	75
80									28	2800	80
85									20	1900	85
	0	12000	0	5500							

3232U194

Powered Boom - 4 Section Mode**80% of Stability**

POWERED BOOM LENGTH IN FEET															
RADIUS IN FEET	39.5		53.5		67.5		81.5		96		110		124.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	145600	74	45400	78	45400									10
12	64	129700	72	45400	76	45400	79	45400							12
15	59	111000	68	45400	73	45400	77	45400	79	44300					15
20	50	76400	62	45400	69	45400	73	45400	76	37300	79	36000	80	28500	20
25	39	49600	56	45400	64	45400	70	43800	73	32300	76	31700	78	28500	25
30	24	35500	49	36400	59	36800	66	36900	70	28200	73	27800	76	27300	30
35			41	27600	54	28000	62	28100	67	25200	71	24800	74	24500	35
40			32	21700	49	22000	58	22200	63	22400	68	22400	71	21700	40
45			18	17300	42	17700	53	17800	60	18000	65	18200	68	18000	45
50					35	14400	49	14600	56	14800	62	14900	66	15000	50
55					27	11900	43	12000	53	12200	59	12300	63	12400	55
60					13	9800	38	9900	49	10100	56	10200	61	10300	60
65							31	8200	44	8400	52	8500	58	8600	65
70							23	6800	40	7000	49	7100	55	7200	70
75									34	5800	45	5900	52	6000	75
80									28	4700	41	4800	49	4900	80
85									20	3800	37	3900	46	4000	85
90											32	3100	42	3200	90
95											26	2400	38	2500	95
100											18	1800	34	1900	100
	0	10000	0	5000											

NOTE: Charts for the extensions with the outriggers at the mid position are available.

3232U203

**LOAD RATINGS OVER 360° WITH OUTRIGGERS IN THE FULLY RETRACTED POSITION****Powered Boom - 3 Section Mode****75% of Stability**

POWERED BOOM LENGTH IN FEET											
RADIUS IN FEET	39.5		53.5		67.5		81.5		96		RADIUS IN FEET
	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	
10	68	119500	74	119300	78	102700					10
12	64	87200	72	86900	76	86800	79	80900			12
15	59	57400	69	57200	74	57000	77	56700	79	56200	15
20	50	34800	63	34600	69	34400	73	34100	77	33800	20
25	39	23600	56	23400	64	23300	70	23000	74	22700	25
30	25	16900	49	16800	60	16700	66	16400	71	16100	30
35			41	12400	54	12300	62	12000	67	11700	35
40			32	9200	49	9100	58	8900	64	8600	40
45			18	6800	43	6800	53	6500	60	6300	45
50					35	4900	49	4700	57	4500	50
55					27	3500	43	3300	53	3000	55
60							38	2100	49	1800	60
	0	3000									

3232U196

Powered Boom - 4 Section Mode**75% of Stability**

POWERED BOOM LENGTH IN FEET															
RADIUS IN FEET	39.5		53.5		67.5		81.5		96		110		124.5		RADIUS IN FEET
	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	△°	POUNDS	
10	68	119500	74	45400	78	45400									10
12	64	86500	72	45400	76	45400	79	45400							12
15	59	57000	68	45400	73	45400	77	45400	79	44300					15
20	50	34500	62	35200	69	35600	73	35700	76	36000	79	36000	80	28500	20
25	39	23400	56	24100	64	24400	70	24500	73	24700	76	24900	78	25000	25
30	24	16800	49	17500	59	17800	66	17900	70	18000	73	18200	76	18300	30
35			41	13000	54	13300	62	13400	67	13600	71	13700	74	13800	35
40			32	9900	49	10200	58	10300	63	10400	68	10500	71	10600	40
45			18	7500	42	7800	53	7900	60	8100	65	8200	68	8300	45
50					35	6000	49	6100	56	6200	62	6300	66	6400	50
55					27	4500	43	4600	53	4800	59	4800	63	4900	55
60							38	3400	49	3600	56	3600	61	3700	60
65							31	2400	44	2500	52	2600	58	2700	65
70							23	1500	40	1700	49	1800	55	1900	70
	0	3000													

3232U204

**LOAD RATINGS ON 29.5 x 25 TIRES****Stationary Over Front ($\pm 6^\circ$)**

POWERED BOOM LENGTH IN FEET									
RADIUS IN FEET	39.5		53.5		67.5		81.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	85100	74	82000	78	79100			10
12	65	75100	72	72500	76	70100	79	67800	12
15	60	63500	69	61500	74	59800	77	57800	15
20	50	49800	63	48300	69	47000	73	45700	20
25	40	36000	56	35900	64	35800	70	35500	25
30	25	25800	49	25700	60	25600	66	25300	30
35			41	19200	54	19100	62	18800	35
40			32	14700	49	14600	58	14400	40
45			18	11400	43	11400	53	11100	45

3232U499

Stationary Over 360°

POWERED BOOM LENGTH IN FEET									
RADIUS IN FEET	39.5		53.5		67.5		81.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	57400	74	56700	78	55900			10
12	65	49200	72	48800	76	48100	79	47400	12
15	60	40000	69	39700	74	39200	77	38800	15
20	50	29400	63	29200	69	28900	73	28500	20
25	40	19900	56	19800	64	19800	70	19400	25
30	25	14100	49	14000	60	13800	66	13600	30
35			41	10100	54	10000	62	9700	35
40			32	7300	49	7200	58	6900	40
45			18	5100	43	5100	53	4900	45

3232U500

Pick and Carry Over Front - Creep

POWERED BOOM LENGTH IN FEET									
RADIUS IN FEET	39.5		53.5		67.5		81.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	67000	74	64500	78	62200			10
12	65	58900	72	56900	76	54900	79	53100	12
15	60	49400	69	47800	74	46300	77	44900	15
20	50	38200	63	37100	69	36000	73	35000	20
25	40	30500	56	29600	64	28800	70	28000	25
30	25	24900	49	24100	60	23500	66	22800	30
35			41	19200	54	19300	62	18800	35
40			32	14700	49	14600	58	14400	40
45			18	11400	43	11400	53	11100	45

3232U498

Pick and Carry Over Front to 2.5 mph

POWERED BOOM LENGTH IN FEET									
RADIUS IN FEET	39.5		53.5		67.5		81.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	50400	74	48500	78	46700			10
12	65	44000	72	42400	76	40900	79	39500	12
15	60	36500	69	35300	74	34100	77	33000	15
20	50	27700	63	26800	69	26000	73	25100	20
25	40	21500	56	20900	64	20200	70	19800	25
30	25	17100	49	16500	60	16000	66	15400	30
35			41	13200	54	12700	62	12200	35
40			32	10500	49	10100	58	9700	40
45			18	8300	43	8000	53	7800	45

3232U497

LOAD RATINGS ON 29.5 x 29 or 33.25 x 29 TIRES**Stationary Over Front ($\pm 6^\circ$)**

POWERED BOOM LENGTH IN FEET									
RADIUS IN FEET	39.5		53.5		67.5		81.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	95400	74	95100	78	94800			10
12	64	82400	72	82200	76	81900	79	80900	12
15	59	68000	69	67600	74	67400	77	67100	15
20	50	51800	63	51400	69	51200	73	50800	20
25	39	35900	56	35700	64	35800	70	35300	25
30	25	25700	49	25500	60	25400	66	25200	30
35			41	19100	54	19000	62	18700	35
40			32	14600	49	14500	58	14300	40
45			18	11300	43	11300	53	10600	45

3232U514

Stationary Over 360°

POWERED BOOM LENGTH IN FEET									
RADIUS IN FEET	39.5		53.5		67.5		81.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	59900	74	59500	78	59200			10
12	64	51300	72	50900	76	50800	79	50300	12
15	59	41600	69	41300	74	41000	77	40700	15
20	50	29900	63	29500	69	29300	73	29000	20
25	39	20700	56	20600	64	20400	70	20200	25
30	25	14700	49	14600	60	14500	66	14200	30
35			41	10600	54	10500	62	10200	35
40			32	7700	49	7600	58	7400	40
45			18	5500	43	5400	53	5200	45

3232U515

Pick and Carry Over Front - Creep

POWERED BOOM LENGTH IN FEET									
RADIUS IN FEET	39.5		53.5		67.5		81.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	78000	74	77600	78	77300			10
12	64	67500	72	67200	76	66900	79	66600	12
15	59	55700	69	55400	74	55100	77	54800	15
20	50	42300	63	42000	69	41700	73	41400	20
25	39	33000	56	33000	64	32700	70	32400	25
30	25	25700	49	25600	60	25400	66	25200	30
35			41	19100	54	19000	62	18700	35
40			32	14600	49	14500	58	14300	40
45			18	11300	43	11100	53	10600	45

3232U513

Pick and Carry Over Front to 2.5 mph

POWERED BOOM LENGTH IN FEET									
RADIUS IN FEET	39.5		53.5		67.5		81.5		RADIUS IN FEET
	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	Δ°	POUNDS	
10	68	66000	74	65800	78	65500			10
12	64	57000	72	56600	76	56400	79	56100	12
15	59	46800	69	46400	74	46100	77	45800	15
20	50	35100	63	34800	69	34500	73	34200	20
25	39	27300	56	27000	64	26700	70	26400	25
30	25	21700	49	21400	60	21200	66	20900	30
35			41	17200	54	17000	62	16700	35
40			32	14000	49	13700	58	13400	40
45			18	11300	43	11100	53	10600	45

3232U512



GENERAL NOTES

GENERAL

1. Rated loads as shown on lift charts pertain to this machine as originally manufactured and equipped. Modifications to the machine or use of optional equipment other than that specified can result in a Reduction of capacity.
2. Construction equipment can be hazardous if improperly operated or maintained. Operation and maintenance of this machine shall be in compliance with the information in the Operators, Parts and Safety Manuals supplied with this machine. If these manuals are missing, Order replacements from the manufacturer thru your distributor.
3. These warnings do not constitute all of the operating conditions for the crane. The operator and job site supervision must read the OPERATORS MANUAL, CIMA SAFETY MANUAL. APPLICABLE OSHA REGULATIONS, AND SOCIETY OF MECHANICAL ENGINEERS (ASME) SAFETY STANDARDS FOR CRANES.
4. This crane and its load ratings are in accordance with POWER CRANE & SHOVEL ASSOCIATION, STANDARD NO. 4 SAE CRANE LOAD STABILITY TEST CODE J765A, SAE METHOD OF TEST FOR CRANE STRUCTURE J1063 AND APPLICABLE SAFETY CODE FOR CRANE, DERRICKS AND HOISTS, ASME/ANSI B30.5.

DEFINITIONS

1. **LOAD RADIUS**- The horizontal distance from the axis of rotation Before loading to the center of the vertical hoist line or tackle with a Load applied.
2. **LOADED BOOM ANGLE**- It is the angle between the boom base Section and the horizontal, after lifting the rated load at the rated Radius. The boom angle before loading should be greater to account for deflections. The loaded boom angle combined with boom length give only an approximation of the operating radius.
3. **WORKING AREA**- Areas measured in a circular arc about the centerline of rotation as shown in the diagram.
4. **FREELY SUSPENDED LOAD**- Load hanging free with no direct External force applied except by the hoist rope.
5. **SIDE LOAD**- Horizontal force applied to the lifted load either on the ground or in the air.
6. **NO LOAD STABILITY LIMIT**- The stability limit radius shown on the range diagrams is the radius beyond which it is not permitted to position the boom, when the boom angle is less than the minimum shown on the applicable load chart, because the machine can overturn without any load.

SET-UP

1. Crane load ratings are based on the crane being leveled and standing on a firm, uniform supporting surface.
2. Crane load ratings on outriggers are based on all outrigger beams being fully extended or in the case of partial extension ratings mechanically pinned in the appropriate position, and the tires free of the supporting surface.
3. Crane load ratings on tires depend on appropriate inflation pressure and the tire conditions. Caution must be exercised when increasing air pressure in tires. Consult operator's manual for precautions.
4. Use of jibs, lattice-type boom extensions, our fourth section pullouts extended is not permitted for pick and carry operations.
5. Consult appropriate section of the Operator's and Service manual for more exact descriptions of hoist line reeving.
6. The use of more parts of line than required by the load may result in having insufficient rope to allow the hook block to reach the ground.
7. Properly maintained wire rope is essential for safe crane operation. Consult Operator's Manuals for proper maintenance and inspection requirements.

8. When spin resistant wire rope is used, the allowable rope loading shall be the breaking strength divided by 5, unless otherwise specified by the wire rope manufacturer.

OPERATION

1. **CRANE LOAD RATINGS MUST NOT BE EXCEEDED. DO NOT ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.**
2. When either radius or boom length, or both, are between listed values, The smaller of the two listed load ratings shall be used.
3. Do not operate at longer radii than those listed on the applicable load rating chart (cross hatched areas shown on range diagrams).
4. The boom angles shown on the capacity chart give an approximation of the operating radius for a specified boom length. The boom angle before loading, should be greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.
5. Power telescoping boom sections must be extended equally.
6. Rated loads include the weight of hook block, slings, and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted.
When lifting over the jib the weight of any hook block, slings, and auxiliary lifting devices at the boom head must be added to the load. When jibs are erected but unused add 2 times the weight of any Hook block, slings, and auxiliary lifting devices at the jib head to the loads.
7. Rated loads do not exceed 85% on outriggers or 75% on tires, of the tipping loads as determined by SAE Crane Stability Test Code J765A. Rated loads for partially extended outriggers are determined from the Formula. $\text{Rated Load} = (\text{Tipping Load} - 0.1 \times \text{Tip Reaction}) / 1.25$. Structural strength ratings in chart are indicated with an asterisk *.
8. Rated loads are based on freely suspended loads. No attempt shall be made to drag a load horizontally on the ground in any direction.
9. The user shall operate at reduced ratings to allow for adverse job conditions, such as soft or uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, two machine lifts, traveling with loads, electric wires, etc. (side pull on boom or jib is hazardous) Derating of the cranes lifting capacity is required when wind speed exceeds 20-mph. The center of the lifted load must never be allowed to move more than 3* ft. off the center line of the base boom section due to effects of wind, inertia, or both.
**Use 2 feet off the center line of the base boom for a two section boom, 3 feet for a three section boom, or 4 feet for a four section boom.
10. The maximum load that can be telescoped is not definable, because of variations in loadings and crane maintenance, but it is Permissible to attempt retraction and extension if load ratings are not exceeded.
11. Load ratings are dependent upon the crane being maintained according to manufacturers specifications.
12. It is recommended that load handling devices, including hooks, and hook blocks, be kept away from boom head at all times.
13. **FOR TRUCK ONLY:** 360 deg. capacities apply only to machines equipped with a front outrigger jack and all 5 outrigger jacks properly set. If the front (5) outrigger jack is not properly set, the work area is restricted to the over side and over rear areas as shown on the crane Working positions diagram. Use the 360 deg. Load ratings in the overside work areas.



DEDUCTIONS TO MADE FROM LOAD RATINGS

Lifting from the main boom, on fully extended outriggers.

90 ton hook block	1,250 lbs.
20 ton hook block	600 lbs.
9.2 ton headache ball	467 lbs.
Auxiliary boom point sheave	150 lbs.
Stowed extensions	600 lbs.
32.8 ft. extension erected	5,350 lbs.
15 ton headache ball on 32.8 ft. extension	1,200 lbs.
57.5 ft. extension erected	6,850 lbs.
15 ton headache ball on 57.5 ft. extension	1,800 lbs.
57.5 ft. extension erected on 16.5 ft. extender insert	10,200 lbs.
15 ton headache ball on 57.5 ft. extension and insert	2,150 lbs.

NOTE: These load deductions only apply to equipment supplied by PPM Cranes, Inc.

OPERATION ON OUTRIGGERS

1. Crane lifting capacities on fully extended outriggers do not exceed 85% of the tipping load.
2. Rated lifting capacities above the bold line are based on the machines' hydraulic or structural competence. Rated lifting Capacities below the bold line are based on the machines' stability.
3. Rated lifting capacities include the weight of hook block, slings, and auxiliary lifting devices. Their weight must be subtracted from the listed rated lifting capacity to obtain the net load to be lifted. Also see deductions for auxiliary sheave, stowed or erected extensions and jibs.
4. Extension rated lifting capacity is based on loaded main boom angle with reference to horizontal, regardless of main boom length. Reference radius is for fully extended main boom. For angles not shown, use the next lower boom angle to determine the allowable capacity.
5. Do not tip machine to determine allowable lifting capacities.

OPERATION ON TIRES

1. Crane lifting capacities on tires do not exceed 75% of the tipping load.
2. Crane lifting capacities on tires depend on tire capacity, condition of tires and tire air pressure. Tires must be inflated to the recommended pressure before lifting.
3. Rated lifting capacities above the bold line are based on the machines' hydraulic or structural competence. Rated lifting capacities below the bold line are based on the machines' stability.
4. Rated lifting capacities include the weight of hook block, slings and auxiliary lifting devices. Their weight must be subtracted from the listed rated lifting capacity to obtain the net load that can be Lifted. Also see deductions for auxiliary sheave, stowed extensions and jibs.
5. For pick and carry operations, the boom must be centered over the front of the machine, the mechanical swing lock engaged and the load must be restrained from swinging.

NOTE: All designs, specifications, and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time and without advance notice. Capacity charts and information printed here are only a guide and may not be complete. They should not be relied upon to operate the crane. The individual load charts and related lifting data on each crane must be understood and govern operation of the crane. Data published herein is informational in nature and shall not be construed to warrant suitability of the machine for any particular purpose as performance may vary with conditions encountered. The only warranty applicable is our standard warranty for this machine.

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