SECTION 12

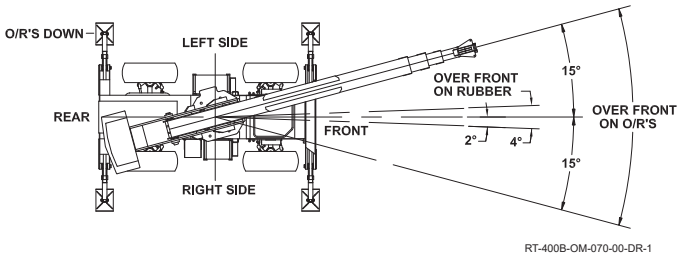
CAPACITY CHART

OPERATION GUIDELINES

- 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 the boom as low as possible, with the load close to the ground. Pick and carry capacities are for smooth, level paved surfaces. Speed must be 2 mph (3 km/h) maximum.
- The boom on this unit is steel and has no line voltage rating - no electrical insulation value.
- Maximum hydraulic pressure: 4000 psi (280 bar)
- Boom extension deduct: 500 (220 kg) lbs when stowed on base boom. This is automatically deducted in the RCL program as long as the machine is configured correctly.
- Ensure anti-two-block switch is functional after deploying or stowing boom extension.
- The load hoist line on this unit must be 5/8” dia (16mm), 425 ft (130m) long, compact 35 rotation resistant, grade 2160 wire rope with a minimum breaking strength of 56,400 lbs (251kN).
- Approved tires: 17.5x25/20PR OTR TX-90 - 100 psi (6.9 bar)
- Torque wheel nuts to 475 ft. lbs (645 Nm)

NOTE

These conditions must be maintained to handle rated loads on this crane. N-5012-WP-0

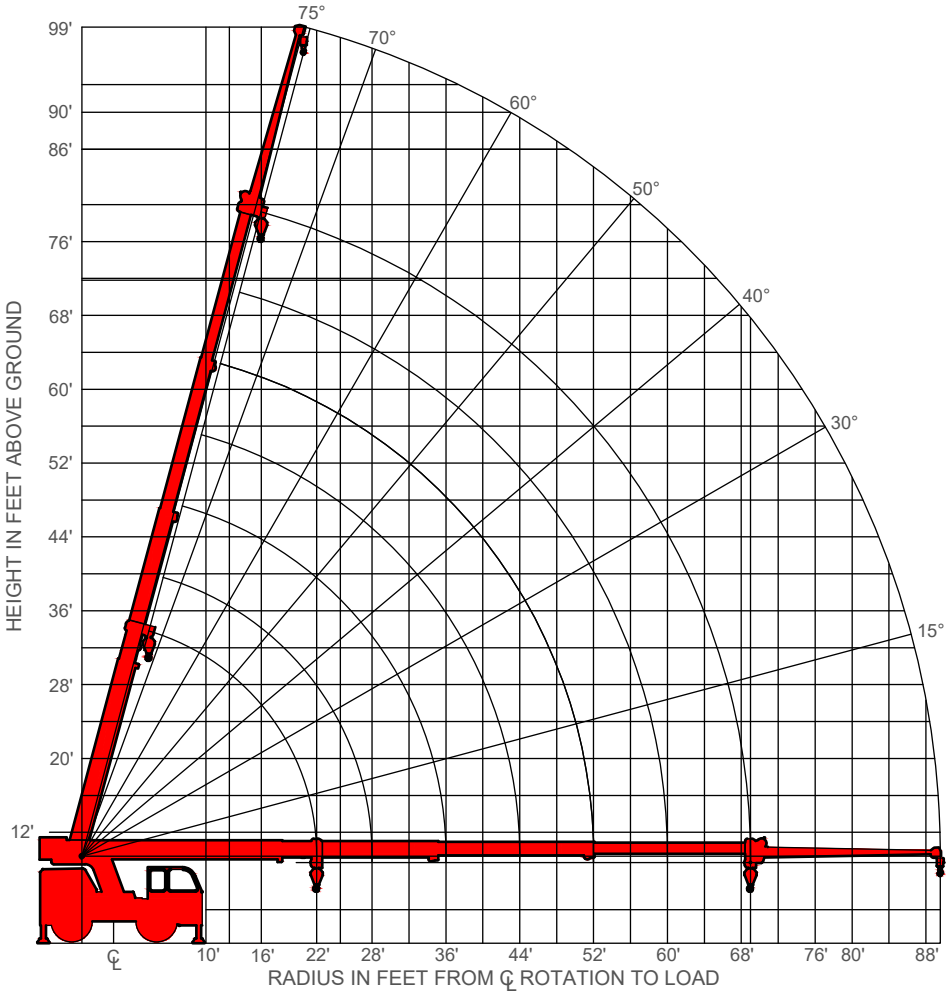


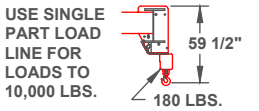
RT-400B-OM-070-00-DR-1

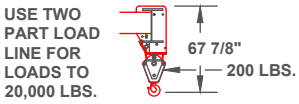
OPERATION

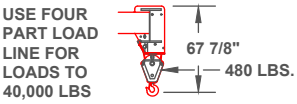
- Read and understand the operator’s manual before operating the crane.
- Check hydraulic and engine oil levels daily.
- Check the unit for visible defects and loose parts.
- Set the vehicle park brake securely.
- Extend outriggers to solid footing and ensure crane is level.
- Operate all hydraulic controls slowly and smoothly. Avoid sudden stops and starts.

WORKING RANGE CHART





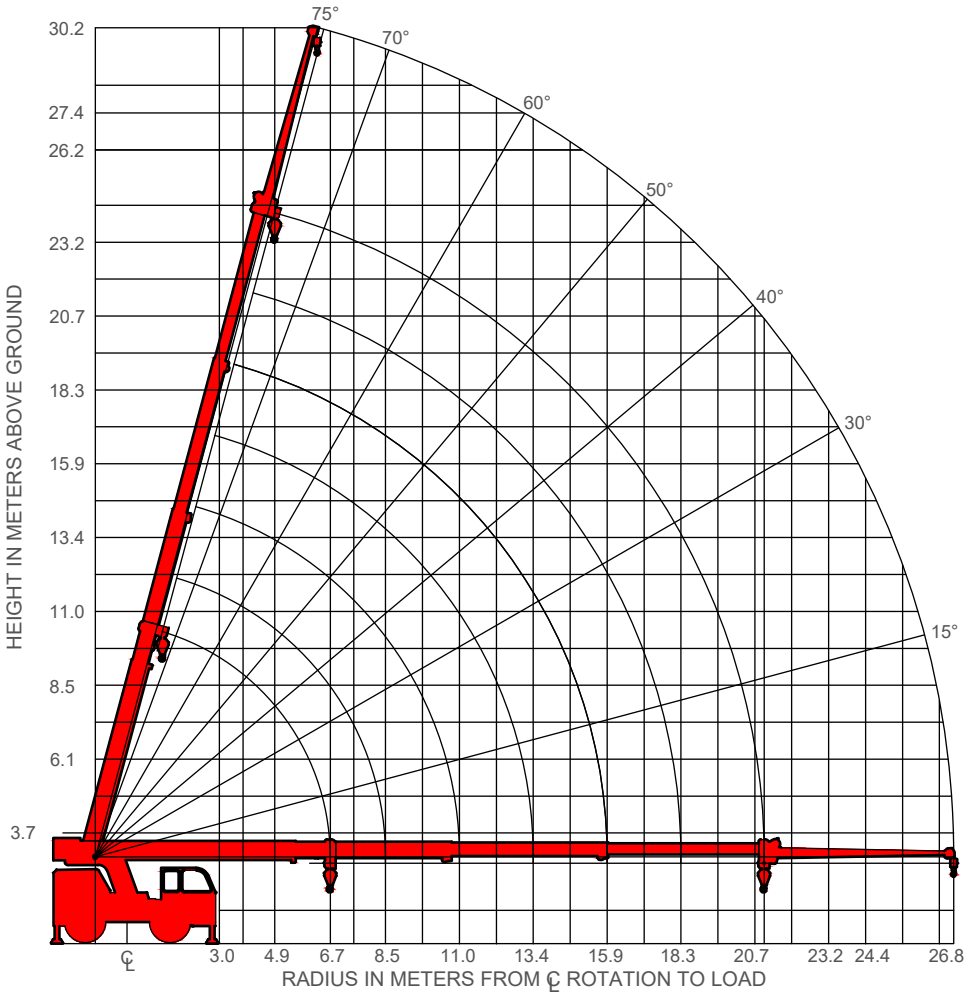




LOAD HOOKS, DOWNHAUL WEIGHTS, HOOK BLOCKS AND OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED PART OF THE LOAD EXCEPT FOR HOIST ROPE.

RT-400B-OM-070-00-DR-2

WORKING RANGE CHART (METRIC)



LOAD HOOKS, DOWNHAUL WEIGHTS, HOOK BLOCKS AND OTHER LOAD HANDLING DEVICES SHALL BE CONSIDERED PART OF THE LOAD EXCEPT FOR HOIST ROPE.

RT-400B-OM-070-00-DR-3

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
	62	-	2900	-	4600
	66	-	2400	-	4000
	68	-	2300	-	3600
Boom Extension	72	-	2500	-	2800
	76	-	2000	-	2800
	80	-	1600	-	2800
	84	-	1300	-	2800
	88	-	1100	-	2000

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
	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
Boom Extension	22.0	-	1130	-	1270
	23.2	-	900	-	1270
	24.4	-	720	-	1270
	25.6	-	580	-	1270
	26.8	-	490	-	900

Boom Extension Angle	20-Foot Boom Extension Capacities							
	Main Boom Angle							
	0°	15°	30°	40°	50°	60°	70°	75°
0°	2300	2400	2700	3100	3700	4800	6200	7000
15°	-	2300	2400	2600	2900	3400	4100	4800
30°	-	-	2300	2400	2500	2700	3100	3400

Boom Extension Angle	6.1 Meter Boom Extension Capacities							
	Main Boom Angle							
	0°	15°	30°	40°	50°	60°	70°	75°
0°	1040	1080	1220	1400	1670	2170	2810	3170
15°	-	1040	1080	1170	1310	1540	1850	2170
30°	-	-	1040	1080	1130	1220	1400	1540

⚠ CAUTION

Do not position boom at load radii where no load capacities are shown. C-3018-WP-0

⚠ WARNING

Do not exceed capacity ratings. Do not apply side loads to the boom or boom extension. Failure to comply with these instructions voids the warranty on the machine, and may result in equipment damage, damage to the surrounding work area, personal injury or death. W-2033-WP-0

⚠ WARNING

Boom extension loads must never exceed the main boom capacity. Never pick and carry with a load on the boom extension. Never lift loads on the boom extension when operating on rubber tires. Failure to comply with these instructions voids the machine warranty and may result in equipment damage, work area damage, personal injury or death. W-2015-WP-0

⚠ WARNING

The ON OUTRIGGERS capacities of this crane are based on all outriggers being deployed to a **firm, level surface**, **with no load on the tires.**

- Always adhere to the following criteria:
- Outriggers must always be fully deployed — tires must never carry any load!
- Never operate on a slope with outriggers deployed. The crane will tip at less than rated capacity if the crane is not on a level surface.
- Never deploy outriggers to surfaces that are less than completely firm and able to support the outrigger pad at full rated loads. Inspect the areas prior to deploying the outriggers and ensure the surfaces are firm and secure. Do not deploy outriggers on unstable surfaces, including the following examples, but not limited to:
- Thin or cracked blacktop or concrete
- Dirt that appears dry and firm on the surface but is moist or unpacked beneath the surface
- Dirt with a frozen but thin crust.

Failure to comply with the above may result in machine instability, dropped loads, equipment damage, damage to the surrounding work area, personal injury or death. W-2039-WP-0

CAPACITY EXAMPLE

(Also see the Boom Extension section on page RT-400B-OM-110-00-002).

Refer to the RT-400-B working range chart on page RT-400B-OM-070-00-003. A load 6' X 6' X 6' (1.5 m x 1.5 m x 1.5 m) and weighing 12,700 pounds (5750 kg) is to be lifted to a new location. The load is on a roof 64 ft (20 m) high. The center of the load is 24 ft (7 m) from the center of rotation of the crane.

The chart shows that 10,000 pounds (4500 kg) is the maximum load on one-part line, so the sheave block is required. The chart also shows the weight of the standard sheave block to be 480 pounds (223 kg). The rigger indicates that two slings are required, weighing a total of 50 pounds (23kg). The total load is 12,700 + 480 + 50 = 13,230 lbs (5760 + 218 + 23 = 6001 kg).

The 360° ROTATION, ON RUBBER column of the chart allows lifting up to 18,300 pounds (7700 kg) at a 10-foot (3.048 m) load radius. However, this radius is less than the distance from the center of rotation to the center of the load, so the load cannot be lifted in this configuration. This lift will require the ON OUTRIGGERS columns to be used. Outriggers should always be used whenever possible.

The boom will need to be fully extended to reach the desired height. ON OUTRIGGERS 360° with a fully extended boom at a 24 ft (7 m) load radius, the capacity is 17,800 pounds (8000 kg) which is more than the total load. The load can be lifted over the front on outriggers or over the side on outriggers. If possible, position the crane to lift the load over the front with the outriggers deployed. This is the best position for stability.

NOTE

As the boom is loaded, deflection of the boom, tires, etc. will increase the load radius. Be conservative in your capacity estimate. N-5005-WP-0

SECTION 13

SHEAVE BLOCK AND DOWNHAUL WEIGHT