



GROVE
CRANE

A GROVE WORLDWIDE COMPANY

IND1012

Material Handling Hydraulic Crane



Superstructure specifications

Boom	14 ft. - 30 ft. (4.3m - 9.1m) three section full power boom, telescoping sections slide on adjustable and replaceable Nylatron wear pads. Maximum Tip Height: 36 ft. (10.9m).
*Optional Booms	18 ft. - 42 ft. (5.5m - 12.8m) three section full power boom. Maximum Tip Height: 48 ft. (14.6m). 24 ft. - 60 ft. (7.3m - 18.3m) 3 section full power boom. Maximum Tip Height: 66 ft. (20.1m).
*Optional Jib (30', 42', 60' Boom)	20 ft. (6.0m) non-stowable jib by special order only, offsettable at 0° or 30°. Maximum Tip Height: 83 ft. (25.3m).
Boom Nose	Three steel sheaves with heavy duty tapered needle bearings and removable pin-type rope guards.
Boom Elevation	Two double acting hydraulic cylinders with integral holding valve provides elevation from 0° to 70°.
Load Moment & Anti-Two Block System	Standard load moment and anti-two block system with audio-visual warning and control lever lockout. The system provides a high-visibility readout that displays boom length, boom angle, radius, tip height, relative load moment, maximum permissible load, actual load and warning of impending two-block condition.
Swing	Ball bearing swing circle with 270° rotation. Grove planetary drive with automatic type multi-disc swing brake. *Optional 140° rotation with non-supply of rear outriggers. *Optional 360° rotation.

HYDRAULIC SYSTEM

Pumps	Two main gear pumps. Combined capacity 54.4 GPM (206 LPM) driven by carrier engine through P.T.O.
Valves	Precision four way double acting control valves, four individual valve sections for multiple crane functions.
Filter	Return line type, full flow with bypass protection, 10 micron rated replaceable cartridge.
Reservoir	60 gallons (227 L) with spin-on breather.

HOIST SPECIFICATIONS

Hydraulic, Braden Model PD12C, power up and down equal speed.

Hoist Braden PD12C		
Maximum single line speed	Bottom layer	138 FPM (42.1m/min)
	Intermediate layer	168 FPM (51.2m/min)
	Top layer	198 FPM (60.4m/min)
Maximum single line pull	Bottom layer	10,030 lbs. (4550 kg)
	Intermediate layer	8,240 lbs. (3738 kg)
	Top layer	6,980 lbs. (3166 kg)
Maximum permissible single line pull	7,400 lbs. (3356 kg)	
5:1 strength factor	with 9/16 in. (14mm) 18x19 class	
Maximum rope stowage	398 ft. (121m)	
	9/16 in. (14mm)	
	Note: 300 ft. (91m) length of 9/16 in. (14mm) wire rope supplied with basic standard unit.	

**Denotes optional equipment*

SALE & RENTAL

Carrier specifications

Frame	High strength steel, all welded reinforced construction.
Counterweight	Integral with frame.
Outriggers	Hydraulic cantilever arm type at all four corners with integral check valves on each extension cylinder. Integral are steel outrigger float pads - 10 in. x 12 in. (254mmx305mm). Maximum outrigger pad load 55,565 lbs. (25204 kg).
Outrigger Controls	Individual controlled from the operator cab, activation requires two hand operation to prevent accidental retraction..
Engine	GM4-53N diesel, 127 hp (95 kw) @ 2,400 RPM. Maximum torque 270 ft. lbs. (373 kg/m) @ 2,400 RPM.
Optional Engine	Caterpillar 3208 diesel, 150 hp (130 kw) @ 2,800 RPM. Maximum torque 329 ft. lbs. (574 kg/m) @ 1,300 RPM.
Fuel Tank Capacity	43 gallons (163 L)
Electrical System	One 12 volt, 975 CCA @ 0°F.
Drive	4 x 2
Steering	Rear: Full hydraulic power controlled by steering wheel.
Transmission	Fully automatic transmission with torque converter, 4 speeds forward and 1 reverse.
Optional Transmission	Powershift transmission with torque converter drive, 4 speeds forward and reverse.
Axles	Front: Double reduction drive axle (rigid mounted to the chassis). Rear: Wide track steer axle oscillates up to 10 in. (254mm).
Oscillation	On rear axle, controlled from operator cab.
Lockouts	
Tires	Front: (4) 12x20-16PR (tube type - NHS-E-3). Rear: (2) 12x20-16PR (tube type - SRF).
Brakes	Service - air on front axle. Drum and shoe type. Spring applied parking brake on front wheels.
Lights	Full lighting package, including turn indicators, head, tail, brake and hazard warning lights.

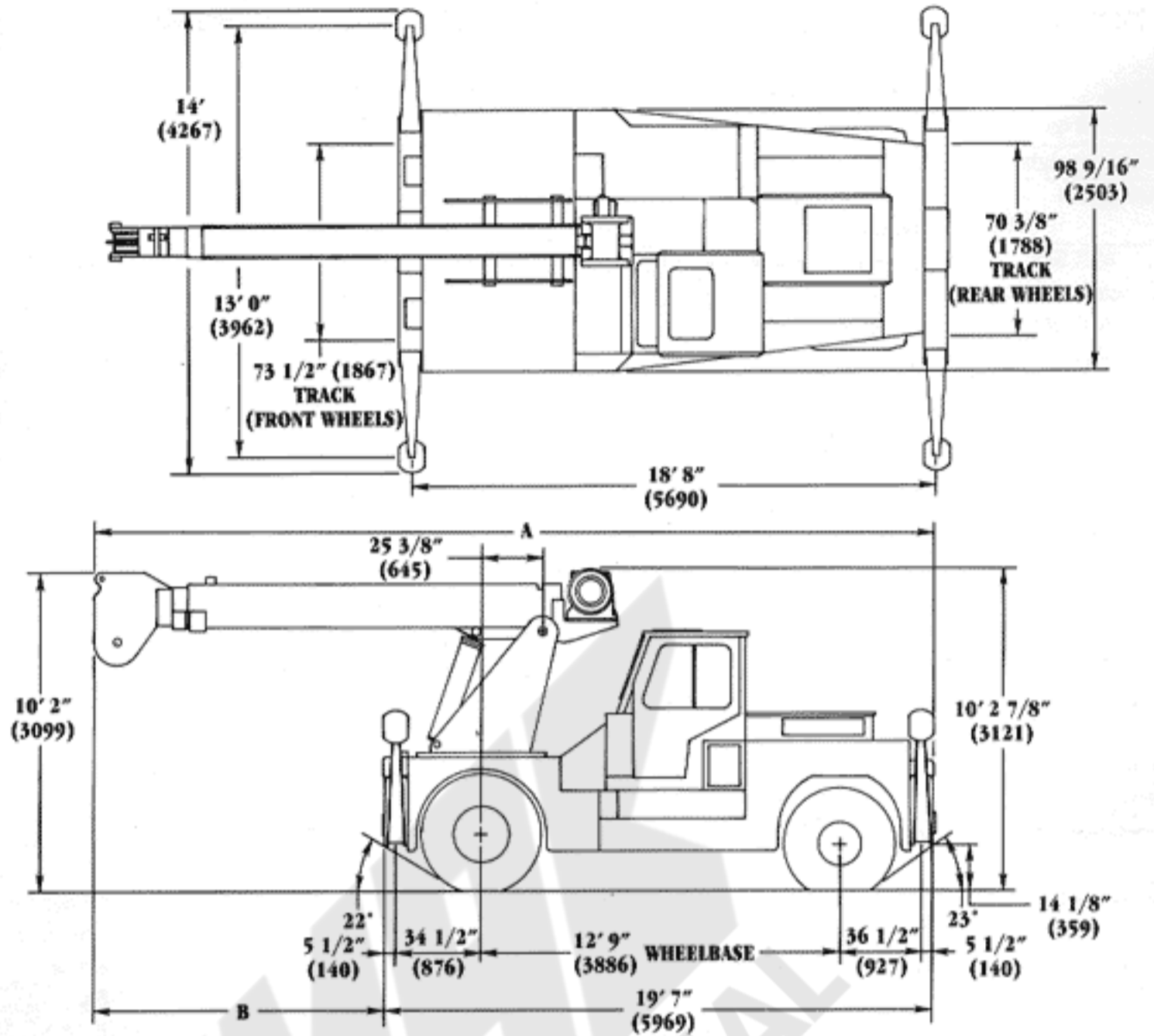
Cab	Standard frame mounted fully enclosed cab; full vision, all steel fabricated with tinted safety glass throughout, skylight, right and left doors, sliding left and right side windows, electric windshield wiper and circulating air fan, includes all crane function and driving controls, engine monitoring instrumentation, fire extinguisher and deluxe vinyl seat with seat belt.
Maximum Speed	15.5 MPH (24.9 kph).
Maximum Gradeability	48% (Theoretical based on 56,100 lbs. [25,447 kg] GVW).
Gross Vehicle Weight & Axle Loads	BASIC STANDARD MACHINE Front: 31,000 lbs. (14062 kg) Rear: 25,100 lbs. (11385 kg) G.V.W.: 56,100 lbs. (25447 kg)
Miscellaneous Standard Equipment	Fenders and decking, back-up alarm, light package, lifting lugs.
Optional Equipment	<ul style="list-style-type: none"> * No spin front axle * Front/rear pintle hook * High water temp./low oil pressure A/V warning system * Hookblocks * Tool kit * Low profile boom nose * Cold start aid * Spare tire assembly * 360° flashing light * Engine block heater * Tow winch, 9,000 lbs. (4082 kg) line pull * Spark arrester muffler * Hot water heater

**Denotes optional equipment*

Dimensions

IND 1012

BOOM	A	B
14' - 30' 3 SEC.	28' 5 1/4" (8668)	8' 10 1/4" (2699)
18' - 42' 3 SEC.	32' 5 1/4" (9887)	12' 10 1/4" (3918)
24' - 60' 3 SEC.	38' 5 1/4" (11716)	18' 10 1/4" (5747)
TURNING RADIUS-16'7"(5055)		



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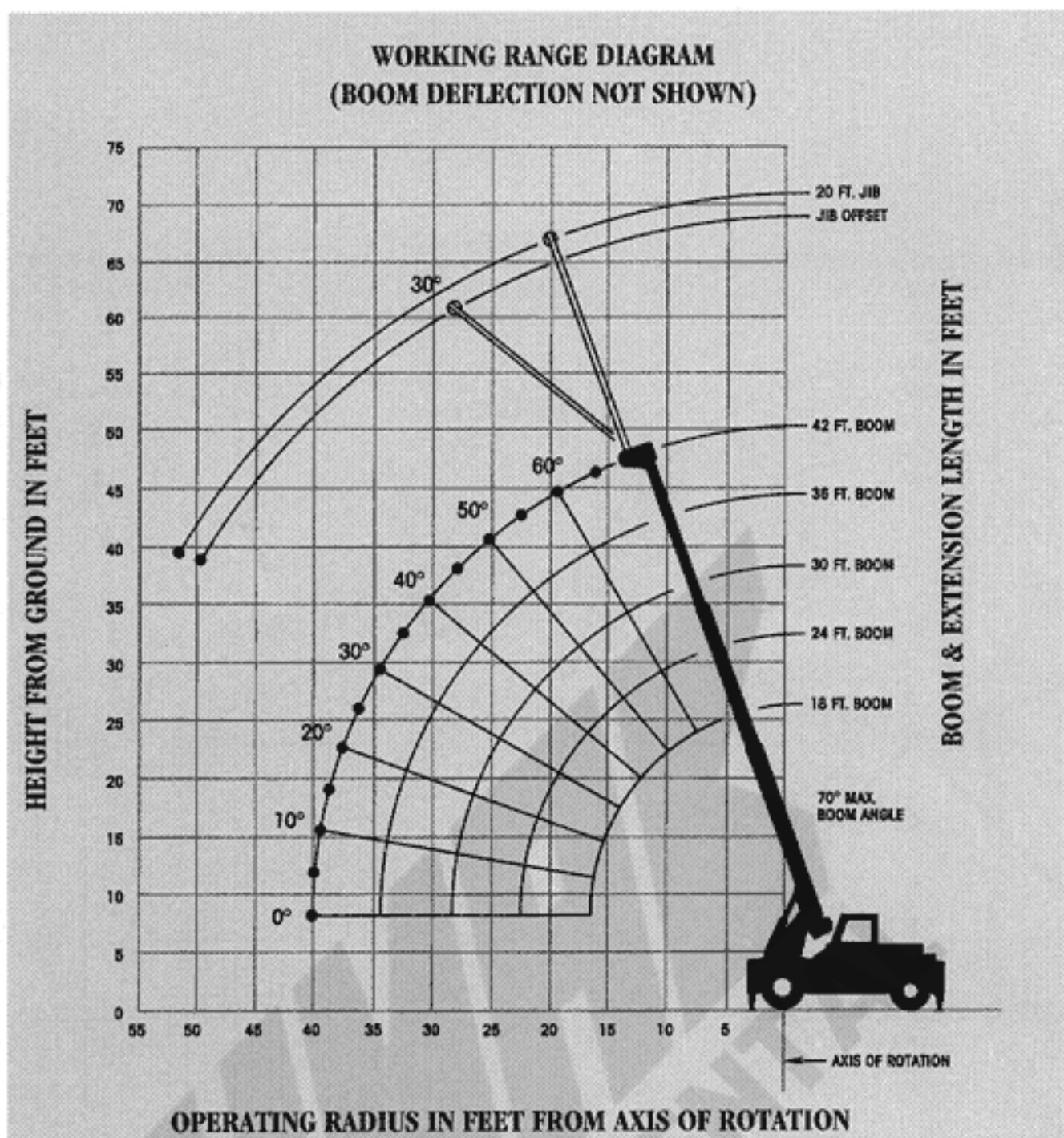
GROVE[®]
CRANE

A GROVE WORLDWIDE COMPANY

IND1012

Material handling hydraulic crane

Domestic 85%

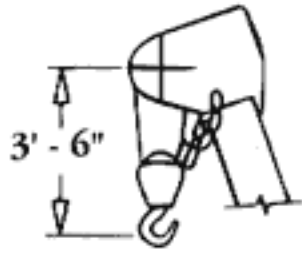
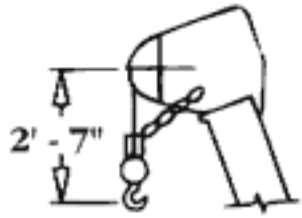


1012 INDUSTRIAL 18 - 42 FT. BOOM
75% LIFTING CAPACITIES ON RUBBER
85% LIFTING CAPACITIES ON OUTRIGGERS

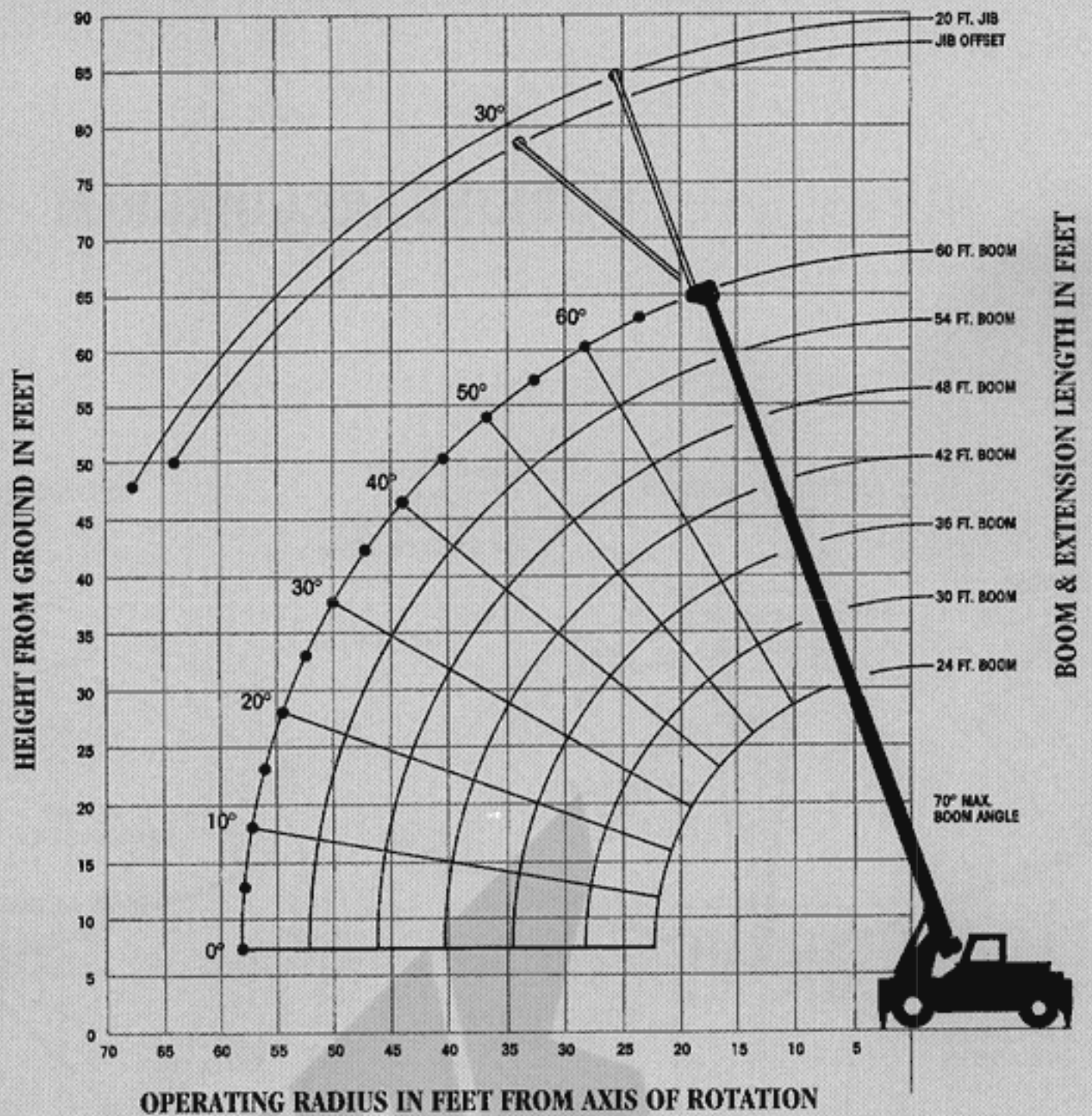
Radius in Feet	#01	#05**	#05
	On Outriggers (See Note 1)	On Rubber (3) (4)	
		Front	Side 70° (2)
6	35,000	30,000	22,700
8	32,400	24,500	16,400
10	30,000	18,800	11,200
12	27,500	15,850	8,820
15	23,750	11,900	6,610
20	17,500	8,020	4,140
25	12,000	5,020	2,730
30	9,000	3,350	1,730
35	6,800	2,470	1,140
40	5,300	2,020	

#LMI operating code. Refer to LMI manual for operating instructions.
**Select LMI operating code #06 for pick & carry operations.

**WORKING RANGE DIAGRAM
(BOOM DEFLECTION NOT SHOWN)**



DIMENSIONS ARE FOR LARGEST GROVE FURNISHED HOOK BLOCK AND HEADACHE BALL, WITH ANTI-TWO BLOCK ACTIVATED.



20 FT. JIB CAPACITIES

MINIMUM BOOM ANGLE	#61	#63
	NO OFFSET	MAX. OFFSET (30°)
75°	6,200	2,600
70°	5,000	2,400
65°	4,300	2,300
60°	3,700	2,150
55°	3,300	2,100
50°	2,600	1,650
45°	2,400	1,500
40°	2,200	1,460
30°	1,900	1,200

#LMI operating code. Refer to LMI manual for operating instructions.

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**1012 INDUSTRIAL 24 - 60 FT. BOOM
75% LIFTING CAPACITIES ON RUBBER
85% LIFTING CAPACITIES ON OUTRIGGERS**

Radius in Feet	#01	#05**	#05
	On Outriggers (See Note 1)	On Rubber (3) (4)	
		Front	Side 70° (2)
6	35,000	30,000	22,700
8	32,400	24,500	16,400
10	30,000	18,800	11,200
12	27,500	15,850	8,820
15	23,750	11,900	6,610
20	17,500	8,020	4,140
25	12,000	5,020	2,730
30	9,000	3,350	1,730
35	6,800	2,470	1,010
40	5,300	2,020	
45	4,200	1,670	
50	3,200	1,230	
55	2,500	880	
59	1,700		

#LMI operating code. Refer to LMI manual for operating instructions.

**Select LMI operating code #06 for pick & carry operations.

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NOTES FOR LIFTING CAPACITIES

WARNING: THIS CHART IS ONLY A GUIDE. The notes below are for illustration only and should not be relied upon to operate the crane. The individual crane's load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane.

1. Capacities applicable through 270° of swing only, front and rear outriggers required. (See working area diagram.)
2. Rear axle lockouts must be set to maintain published capacities.
3. Rated capacities are based on a static lift on level ground.
4. For pick-and-carry loads, suitable reductions to front static capacities must be made to allow for terrain. Loads must be carried directly over the front of machine with shortest practical boom length. SPEED MUST NOT EXCEED 2.5 MPH.
5. The weights of all load-handling devices are considered part of the load lifted and suitable allowances for them should be made.
6. All rated loads have been tested to and meet minimum requirements of SAE J1063 OCT80 - Cantilevered Boom Crane Structures - Method of Test, and do not exceed 85% of the tipping load on outriggers (75% of the tipping load on rubber) as determined by SAE J765 OCT80 Crane Stability Test Code.
7. Capacities given do not include the weight of hookblocks, slings, auxiliary lifting equipment and load handling devices. Their weights MUST be added to the load to be lifted. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.
8. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
9. All capacities are for crane on firm, level surface. It may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
10. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.
11. For outrigger operation, ALL outriggers shall be fully extended with tires raised free of ground before raising the boom or lifting loads.
12. Unless otherwise stated, capacities are with powered boom sections equally extended.

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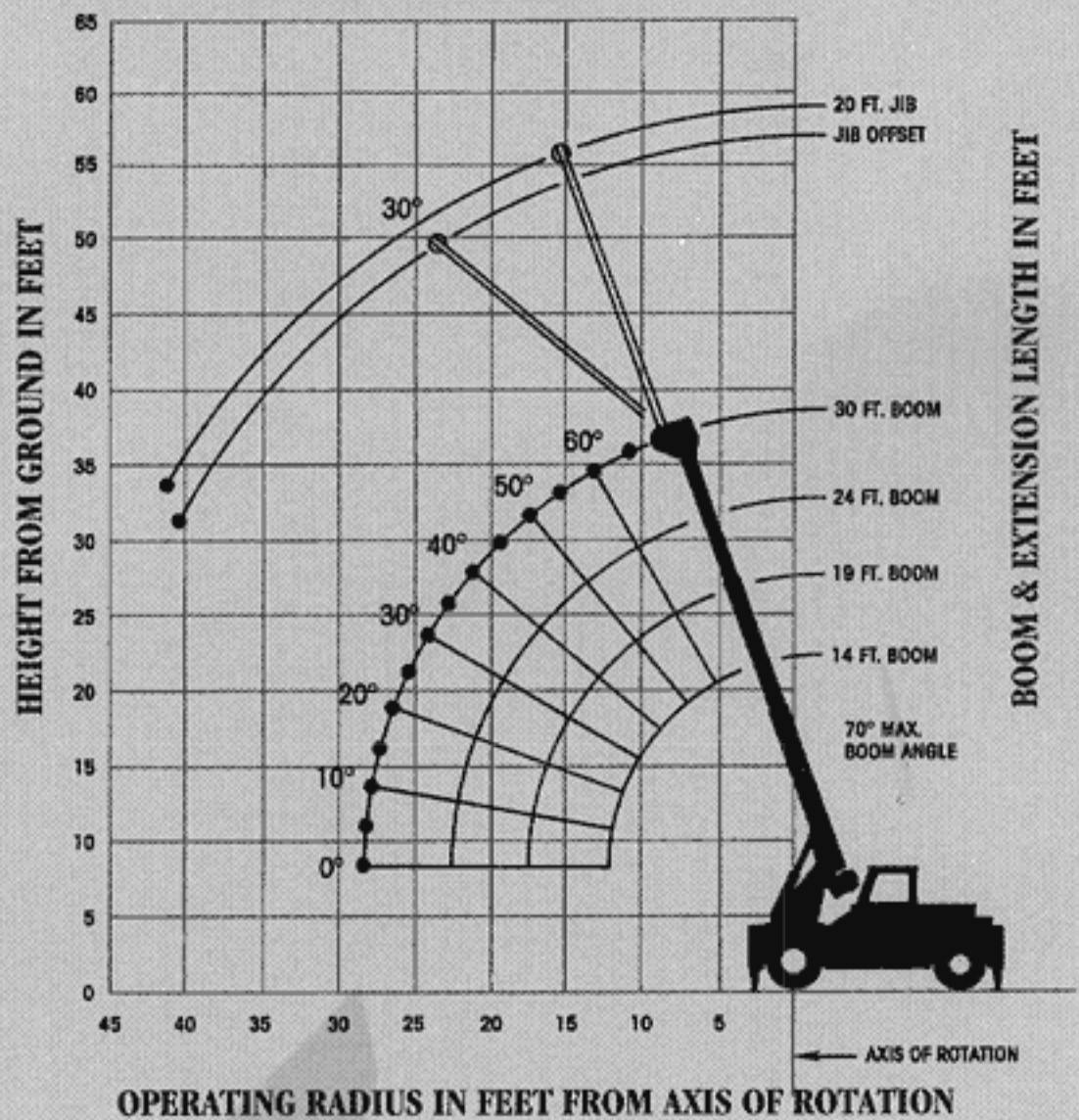


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**WORKING RANGE DIAGRAM
 (BOOM DEFLECTION NOT SHOWN)**



1012 INDUSTRIAL 14 - 30 FT. BOOM 75% LIFTING CAPACITIES ON RUBBER 85% LIFTING CAPACITIES ON OUTRIGGERS

Radius in Feet	#01 On Outriggers (See Note 1)	#05** On Rubber (3) (4)	
		Front	Side 70° (2)
6	35,000	30,000	22,700
8	32,400	24,500	16,400
10	30,000	18,800	11,200
12	27,500	15,850	8,820
15	23,750	11,900	6,610
20	17,500	8,020	4,140
25	12,000	5,020	2,730
28	9,600	3,520	1,850

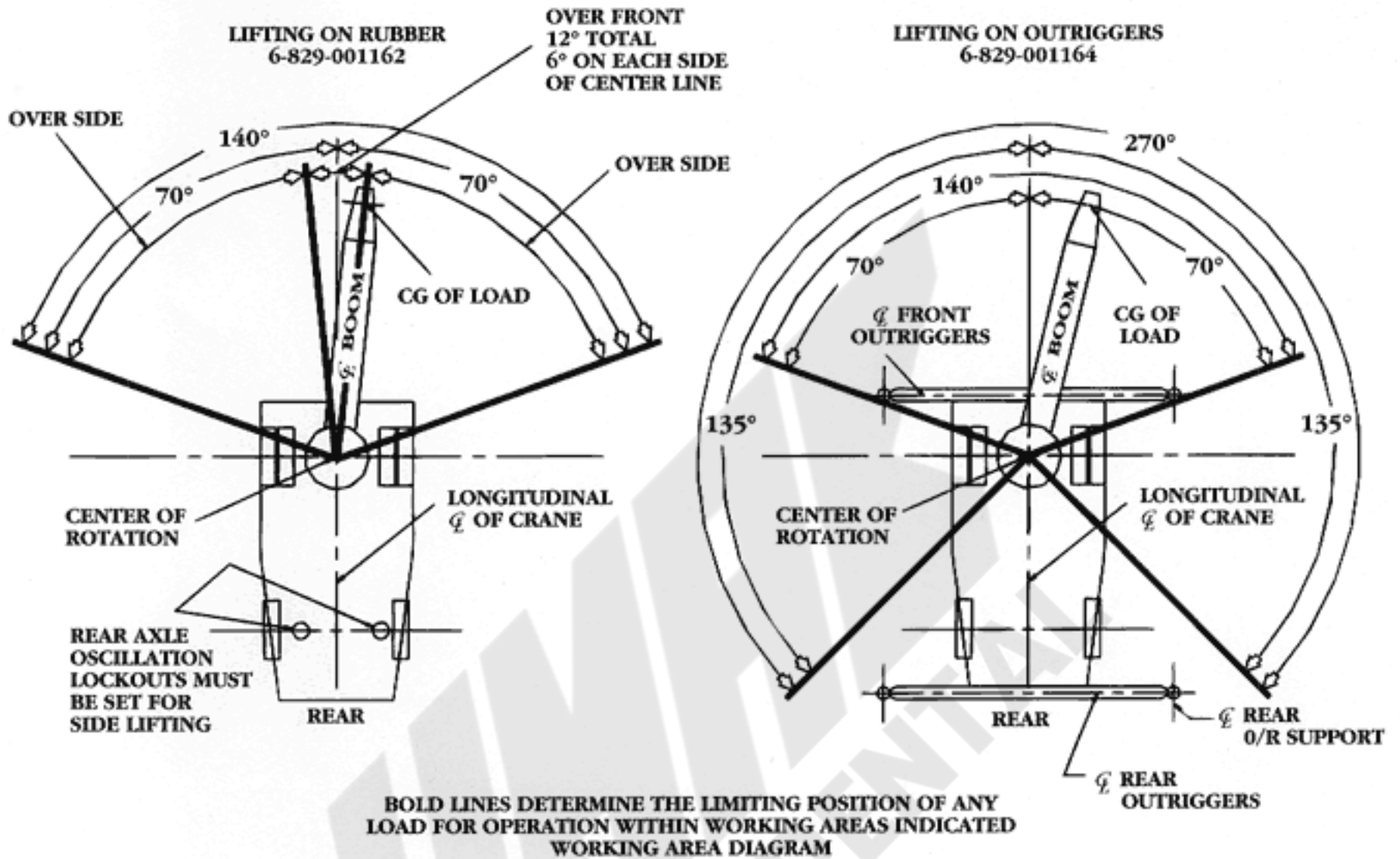
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WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES

20 ft. JIB	
Erected -	810 lbs.
HOOKBLOCK AND HEADACHE BALL:	
20 Ton, 3 Sheave	400 lbs.
5 Ton Headache Ball	172 lbs.

WORKING AREA DIAGRAM



SALE & RENTALS