

GROVE®

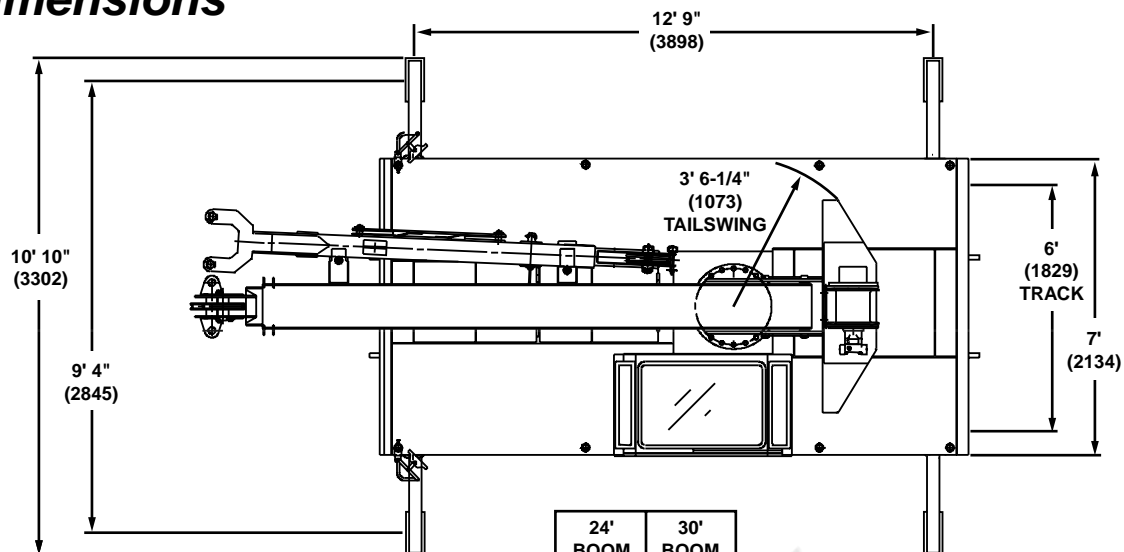
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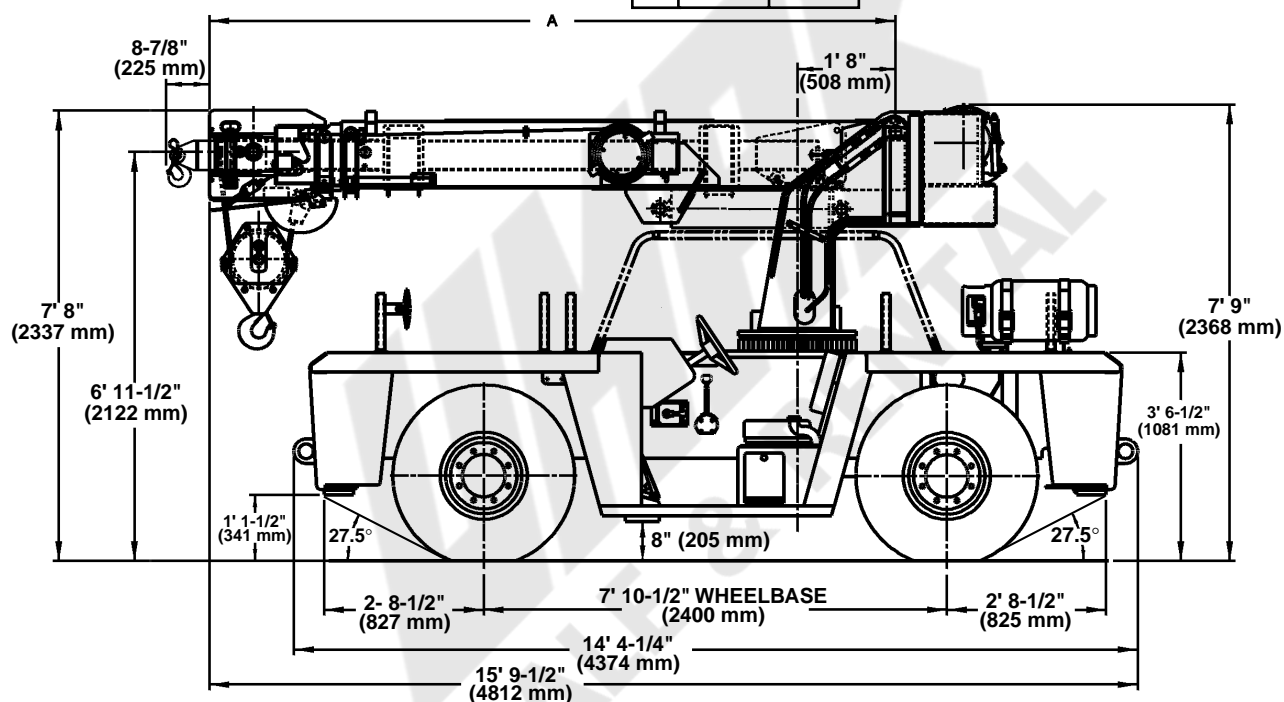
INDUSTRIAL CRANE



Dimensions



| | 24' BOOM | 30' BOOM |
|---|----------------------|----------------------|
| A | 11' 8" (3556) | 13' 8" (4166) |
| B | 1' 8-1/2" (521) | 3' 8-1/2" (1129) |
| | 15' 9-1/2" (4813) | 17' 9-1/2" (5421) |



Note: () Reference dimensions in mm

Turning Radius. 15' 11" (4.9 m) 2 Wheel Steer
9' 10" (3.04 m) 4 Wheel Steer

Front Axle Load 6,500 lbs. (2 949 kg)

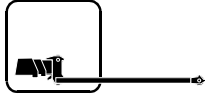
Rear Axle Load 10,500 lbs. (4 763 kg)

Gross Vehicle Weight. 17,000 lbs. (7 711 kg)

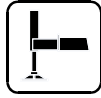
Working Range



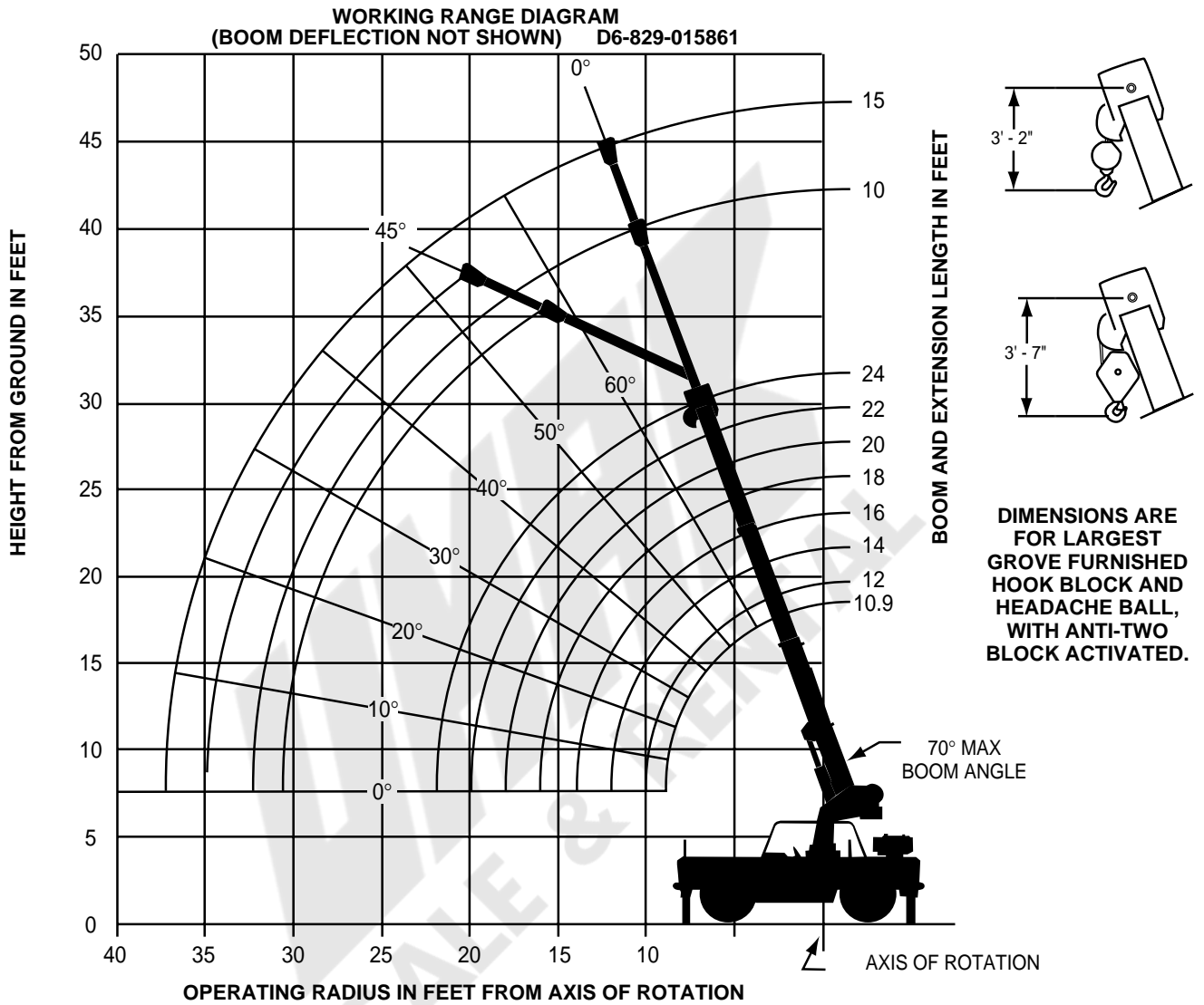
10.9 ft. - 24 ft.
(3.3 m - 7.3 m)



10 ft. - 15 ft.
(3.05 m - 4.8 m)



360°



THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

Superstructure Specifications

Boom (Standard)

10.9 ft. - 24 ft. (3.3 m - 7.3 m) three-section full power boom.
Maximum tip height: 29 ft. (8.8 m)

Boom (Optional)

13 ft. - 30 ft. (3.9 m - 9.1 m) three-section full power boom.
Maximum tip height: 35 ft. (10.7 m)

*Fixed Boom Extension

10 ft. (3.05 m) swingaway extension w/single metallic sheave in point. Stows alongside base boom section for travel. Extends tip heights to 38 ft. (11.6 m) or 44 ft. (13.4 m) with the 24 ft. (7.3 m) and 30 ft. (9.1 m) booms respectively.

*Telescopic Offsettable Boom Extension

10 ft. - 15.7 ft. (3.05 m - 4.8 m) telescopic boom extension with offset mechanism which permits offsetting at 0° or 45° to the boom head. It stows alongside base boom section for travel. Extends tip height to 44 ft. (13.4 m) or 50 ft. (15.2 m) with 24 ft. (7.3 m) and 30 ft. (9.1 m) booms, respectively.

Boom Nose

Low profile quick reeve design with single metallic sheave mounted on bronze bushing.

*Searcher Hook

A boom nose mounted fixed hook with safety latch.
Maximum capacity: 3,000 lbs. (1 316 kg). Use is limited to boom angles of 25° or below.

Boom Elevation

One double acting hydraulic cylinder with integral holding valve provides elevation from 0° to 70°.

Anti-Two Block Device - standard is a low profile type anti-two block device, which when activated, provides an audible-visual warning to the crane operator and disengages all crane functions whose movement can cause two-blocking.

*PAT Load Moment Indicator (LMI) and Grove Anti-Two Block Device

An operator friendly interactive LMI displays the crane operating configuration and actual load. Properly configured, the LMI system constantly monitors the actual lifting conditions versus allowable capacity ratings to assist in preventing an overload condition. It provides the operator with a visual pre-warning at approximately 90% of the rated capacity and an audible-visual warning in combination with automatic lockout at approximately 100% of rated load.

Swing

Ball bearing swing circle with 360° continuous rotation. Grove planetary glide-swing with automatic multi-wet-disc brake.
Maximum speed: 1.5 RPM

Counterweight

2,500 lbs. (1 134 kg). Integral with superstructure. Rotates 360° within chassis width.

Hydraulic System

Two main gear pumps driven off engine through PTO.
Combined capacity: Cummins Engine: 46.3 GPM (175 LPM)
Continental Engine: 54 GPM (204 LPM)

Two individual valve banks mounted on top of dash panel with direct mechanical linkage lever controls.

Return line type filter with full flow by-pass protection and service indicator. Three micron rated replaceable cartridges.

30 gallon (114 L) reservoir with lockable cap and steel plate to guard against side impact damage.

*Remote-mounted oil cooler with thermostatically controlled electric motor driven fan.

System pressure and flow test ports with quick release type fittings for each circuit.

HOIST SPECIFICATIONS - Grove HO12

Planetary reduction with automatic spring applied multi-wet-disc brake. *Cable follower available.

| | |
|--------------------------|-----------------------------------|
| Drum Dim. (Dia. x Width) | 9.62" x 9.0" (244 mm x 229 mm) |
|--------------------------|-----------------------------------|

| | |
|---------------------------|---------------------------|
| Maximum Single Line Pull: | 13,436 lbs. (6 095 kg) |
|---------------------------|---------------------------|

| | |
|----------------------------|-------------------------|
| Maximum Single Line Speed: | 135 FPM (41.1 m/min) |
|----------------------------|-------------------------|

Maximum Permissible Single Line Pull:

| |
|---|
| Std: 9,600 lbs. (4 355 kg) [9116" (14 mm) 6 x 37 EIPS] 3.5:1FOS |
| Opt: 10,220 lbs. (4 636 kg) [9116" (14 mm) 34 x 7 EEIPS] 5:1FOS |

| | |
|--------------------|-------------------------------------|
| Rope Length (Std): | 9/16 in. x 130 ft. (14 mm x 39.6 m) |
|--------------------|-------------------------------------|

| | |
|-------------------------------------|---------------------|
| Maximum Drum Rope Stowage Capacity: | 185 ft. (56.4 m) |
|-------------------------------------|---------------------|

**Denotes optional equipment*

Carrier Specifications

Frame

High strength alloy steel construction with integral outrigger housings, front/rear lifting, towing and tie down lugs and recessed lifting rings in all four corners of deck top. Carry deck constructed of 1/4" (6 mm) thick plate steel. Surface area of 61.2 sq. ft. (5.69 m²) with Continental engine and 52.15 sq. ft. (4.85 m²) with Cummins engine.

Outriggers

Front and rear oblique type beams at all four corners with integral holding valves. Outrigger pads form an integral part of the beam and have a surface area of 72 sq. in. (464 cm²).

Maximum outrigger pad load: 17,727 lbs. (8 041 kg)

Outrigger Controls, Synchronized

Controls are located on dash panel and operate beams in pairs from side to side. Two hand sequence minimizes unintentional actuation.

*Independent control of each individual beam is available.

Engine, Dual Fuel (Gas/LPG)

Continental TM 2.7 L, four cylinder, dual fuel (LPG/gas) engine, 62 bhp (46 kW) (Gross) @ 2,800 RPM.

Maximum torque: 136 ft. lbs. (184 Nm) @ 1,800 RPM

Engine, Diesel

Cummins 4B3.9 L diesel, four cylinder, 80 bhp (60 kW) (Gross) @ 2,500 RPM.

Maximum torque: 201 ft. lbs. (73 Nm) @ 1,200 RPM

Operator's Control Station

Frame mounted, open-air style control station with overhead canopy includes all crane function and driving controls. Other standard equipment includes a durable, nylon cushion seat with lap belt, fire extinguisher; dash panel includes all critical engine monitoring instruments; engine low oil pressure/high water temperature A/V warning, Anti-two block A/V warning, *LMI Console, and warning indicators, outrigger controls, park/emergency brake toggle switch with warning light. All control valves are mounted on top of dash area for ease of operation and increased leg room.

Overhead Canopy

Tubular steel construction with steel mesh covering on top and right side grill type guard. Not available with enclosed cab option.

*Cab, Enclosed

Fully enclosed galvanized sheet metal structure replaces standard overhead canopy. Includes safety glass throughout, hinged removable door, sliding left and right side glass for cross ventilation, door lock, electric windshield wiper/washer, skylight glass, circulating air fan, heater & defroster, rear deck storage shelf area behind operator's seat.

Fuel Tank

30 gallons (114 L) all steel construction w/lockable cap and steel plate to guard against side impact damage.

Electrical System

One 12 V - maintenance free battery. 815 CCA. Includes standard 12 V remote slave receptacle to facilitate battery jump starting.

Drive

Front axle, 4 x 2 with no-spin differential.

Steering

All wheel (four-wheel), full hydraulic power via steering wheel permits three modes of operation: two wheel (front only), four wheel coordinated or four wheel crab. Inside switch to select between three modes.

Transmission

Automatic with 3 speeds forward and 1 reverse with torque converter.

Axles

Front: Clark-Hurth (4 x 2 x 4) drive/steer with planetary reduction hubs, internal multi-wet-disc brakes and no-spin differential.

Rear: Steer-type, non-driving rigid mounted to frame. *Dry disc brakes available.

Tires

Standard 10.00 x 15-16PR tube type, bias ply highway rib. *Mine lug service tires are available.

Suspension

Both front and rear axles are solid mounted to frame.

Brakes

Hydraulic, internal multi-wet-disc service brakes act on the front wheels. A dash mounted toggle switch activates the parking brake on front axle and has a dash mounted warning light. *Dry disc brakes for rear axle with split circuit design are optional.

Lights

Recessed head, tail, turn signals, brake and 4-way hazard warning lights.

Maximum Speed

15 MPH (24 Km/h)

Gradeability (Theoretical)

40% (Based on 17,000 lbs. [7 711 kg] GVW)

Miscellaneous Standard Equipment

Hookblock tiedown sling, electronic back-up alarm, front and rear running lights, tool stowage well, 11 ton (10 MT) capacity single sheave quick reeve hookblock, engine low oil pressure/high water temperature A/V warning system, remote slave receptacle for jump starting, R/S rearview mirror, O/R audio motion alarm.

*Miscellaneous Optional Equipment

- * Worklights
- * 360° Flashing light
- * Cab spotlight, 360°
- * Cold start aid (less canister)
- * Engine cold weather pkg (block heater & ether injection)
- * Pintle hook rear
- * Carry deck posts
- * Spark arrestor muffler
- * Sound suppression package for 87 dBA cab
- * Dual rearview mirrors
- * Removable light grill guards
- * Independent controls for each outrigger beam
- * Hydraulic system oil cooler
- * Quick reeve overhaul weight with 5 ton (4 500 kg mt) hook
- * Mine lug service tires
- * CE Mark (European) approval package

**Denotes optional equipment*

RATED LIFTING CAPACITIES IN POUNDS ON OUTRIGGERS FULLY EXTENDED - 360° & OVER FRONT

10.9 ft. - 24 ft. BOOM

| Radius in Feet | 10.9 ft. (Fully Retracted) | | 10.9 ft. - 24 ft. BOOM | |
|----------------------|----------------------------|--------|------------------------|--------|
| | Over Front | 360° | Over Front | 360° |
| 5 | 20,000 | 20,000 | 17,000 | 17,000 |
| 6 | 18,000 | 18,000 | 15,000 | 15,000 |
| 8 | 13,750 | 13,750 | 13,000 | 13,000 |
| 10 | | | 11,000 | 11,000 |
| 12 | | | 9,500 | 9,500 |
| 14 | | | 8,100 | 7,860 |
| 16 | | | 6,900 | 6,230 |
| 18 | | | 5,900 | 5,120 |
| 20 | | | 5,150 | 4,310 |
| 22 | | | 4,590 | 3,700 |

A6-829-016368

Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation. Capacities also do not exceed 85% of the tipping loads as determined by test in accordance with SAE J765.

NO LOAD STABILITY FOR ON OUTRIGGERS AND RUBBER CAPACITIES

| | No Load Stability Data | Main Boom 24 ft. |
|-----------------------|---|------------------------|
| Front (No load) | Min. boom angle (deg.) for indicated length | 0 |
| | Max. boom length (ft.) at 0 deg. boom angle | 24 |
| 360 Deg. (No load) | Min. boom angle (deg.) for indicated length | 0 |
| | Max. boom length (ft.) at 0 deg. boom angle | 24 |

WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES



| 10 FT. FIXED BOOM EXTENSION | |
|---------------------------------|------------|
| *Stowed - | 114 lbs. |
| *Erected - | 568 lbs. |
| 10 FT. - 15 FT. TELE. BOOM EXT. | |
| *Stowed - | 221 lbs. |
| *Erected (Retracted) - | 1,066 lbs. |
| *Erected (Extended) - | 1,285 lbs. |

*Reduction of main boom capacities

| | |
|---------------------------------|-----------|
| SEARCHER HOOK | 55 lbs. |
| HOOK BLOCKS and HEADACHE BALLS: | |
| 11 Ton, 1 Sheave | 304 lbs.+ |
| 5 Ton Quick Reeve Overhaul Wgt. | 148 lbs.+ |

+Refer to rating plate for actual weight.

Load Distribution Chart for Carry Deck

| CONTINENTAL ENGINE | | | CUMMINS ENGINE | | |
|------------------------|---|-----------------------|------------------------|---|-----------------------|
| 1 | 3 | 2 | 1 | 3 | 2 |
| 1 |  | 2 | 1 |  | ENGINE HOOD |
| 1 | OPERATOR COMPARTMENT | L. P. TANK | 1 | OPERATOR COMPARTMENT | |
| MAXIMUM ALLOWABLE LOAD | | | MAXIMUM ALLOWABLE LOAD | | |
| AREA 1 | 34.0 sq. ft. (3.16 m ²) | 8,500 lbs. (3856 kg) | AREA 1 | 34.0 sq. ft. (3.16 m ²) | 8,500 lbs. (3856 kg) |
| AREA 2 | 18.7 sq. ft. (1.74 m ²) | 4,675 lbs. (2120 kg) | AREA 2 | 9.65 sq. ft. (0.90 m ²) | 2,412 lbs. (1094 kg) |
| AREA 3 | 8.5 sq. ft. (0.79 m ²) | 2,125 lbs. (964 kg) | AREA 3 | 8.5 sq. ft. (0.79 m ²) | 2,125 lbs. (964 kg) |
| TOTAL | 61.2 sq. ft. (5.69 m ²) | 15,300 lbs. (6940 kg) | TOTAL | 52.15 sq. ft. (4.85 m ²) | 13,037 lbs. (5914 kg) |

1. MAXIMUM TRAVEL SPEED WITH ANY OR ALL LOADS - 2.5 MPH/4.0 KPH
2. LOADS TO BE TRANSPORTED ON SMOOTH LEVEL FIRM SURFACES ONLY.
3. BOOM MUST BE RETRACTED AND IN CENTER FORWARD POSITION.
4. ANY COMBINATION OR TOTAL OF AREAS 1, 2, & 3 MAY BE USED.
5. LIFTING IS NOT PERMITTED WHEN CARRY DECK IS LOADED EXCEPT FOR LOADING AND UNLOADING CARRY DECK.
6. RATED PICK & CARRY LOADS MAY BE TRANSPORTED ON DECK AREA 1 PROVIDED THE LOAD IS CRIBBED DIRECTLY ON THE FRAME RAILS.

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

MINE LUG TIRES ON RUBBER CAPACITIES

| Radius in Feet | Stationary Capacity Defined Arc Over Front (See Note 3) | Stationary Capacity 360 Degree Arc | Pick & Carry Cap. Up to 2.5 MPH Boom Centered Over Front (See Note 6) |
|----------------------|---|--|---|
| 4 | 14,080 | 11,230 | 14,080 |
| 5 | 14,080 | 11,230 | 14,080 |
| 6 | 14,080 | 8,840 | 14,080 |
| 7 | 12,500 | 7,220 | 12,500 |
| 8 | 11,200 | 6,060 | 11,200 |
| 10 | 9,260 | 4,490 | 9,260 |
| 12 | 7,850 | 3,490 | 7,850 |
| 14 | 6,360 | 2,790 | 6,360 |
| 16 | 5,020 | 2,270 | 5,020 |
| 18 | 4,110 | 1,880 | 4,110 |
| 20 | 3,440 | 1,560 | 3,440 |
| 22 | 2,940 | 1,310 | 2,940 |

A6-829-016370A

1. Capacities are in pounds and do not exceed 75% of the tipping loads in accordance with SAE J765.
2. Capacities are applicable to machines equipped with 10.00 x 15 (16 ply) mine lug tires, at 115 psi cold inflation pressure.
3. Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine.
4. Capacities are applicable only with machine on firm level surface.
5. All rubber lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. Damaged tires are hazardous to safe operation of crane.
6. For pick and carry operation, the boom, using the shortest practical boom length, must be centered over front of machine. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speed* 2.5 MPH capacities are permissible on main boom only, NOT on boom extension.

*Creep - not over 200 feet of movement in any 30 minute period and not exceeding 1 mph.

RIB TIRES ON RUBBER CAPACITIES

| Radius in Feet | Stationary Capacity Defined Arc Over Front (See Note 3) | Stationary Capacity 360 Degree Arc | Pick & Carry Cap. Up to 2.5 MPH Boom Centered Over Front (See Note 6) |
|----------------------|---|--|---|
| 4 | 14,080 | 11,230 | 14,080 |
| 5 | 14,080 | 11,230 | 14,080 |
| 6 | 14,080 | 8,840 | 14,080 |
| 7 | 12,500 | 7,220 | 12,500 |
| 8 | 11,200 | 6,060 | 11,200 |
| 10 | 9,260 | 4,490 | 9,260 |
| 12 | 7,850 | 3,490 | 7,850 |
| 14 | 6,115 | 2,790 | 6,115 |
| 16 | 4,825 | 2,270 | 4,825 |
| 18 | 3,945 | 1,880 | 3,945 |
| 20 | 3,300 | 1,560 | 3,300 |
| 22 | 2,815 | 1,310 | 2,815 |

A6-829-016414A

1. Capacities are in pounds and do not exceed 75% of the tipping loads in accordance with SAE J765.
2. Capacities are applicable to machines equipped with Denman 10.00 x 15 (16 ply) tires, at 125 psi cold inflation pressure.
3. Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine.
4. Capacities are applicable only with machine on firm level surface.
5. All rubber lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. Damaged tires are hazardous to safe operation of crane.
6. For pick and carry operation, the boom, using the shortest practical boom length, must be centered over front of machine. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speed* 2.5 MPH capacities are permissible on main boom only, NOT on boom extension.

*Creep - not over 200 feet of movement in any 30 minute period and not exceeding 1 mph.

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

**RATED LIFTING CAPACITIES IN POUNDS ON OUTRIGGERS FULLY EXTENDED
10 ft. FIXED & 10 ft. - 15 ft. TELE. BOOM EXTENSION**

| Radius in Feet | 360 Degrees | | | | Over Front | | | |
|----------------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|
| | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | |
| | * 0° | 45° | 0° | 45° | * 0° | 45° | 0° | 45° |
| 8 | 7,000 | | | | 7,000 | | | |
| 10 | 6,500 | | 4,150 | | 6,500 | | 4,150 | |
| 12 | 6,000 | | 3,800 | | 6,000 | | 3,800 | |
| 14 | 5,500 | 4,500 | 3,400 | | 5,500 | 4,500 | 3,400 | |
| 16 | 5,000 | 4,200 | 3,150 | | 5,000 | 4,200 | 3,150 | |
| 18 | 4,500 | 3,900 | 2,950 | 2,600 | 4,500 | 3,900 | 2,950 | 2,600 |
| 20 | 4,200 | 3,600 | 2,800 | 2,550 | 4,200 | 3,600 | 2,800 | 2,550 |
| 22 | 3,670 | 3,350 | 2,650 | 2,500 | 3,700 | 3,350 | 2,650 | 2,500 |
| 24 | 3,170 | 3,150 | 2,550 | 2,450 | 3,500 | 3,150 | 2,550 | 2,450 |
| 26 | 2,770 | 2,770 | 2,500 | 2,400 | 3,250 | 3,000 | 2,500 | 2,400 |
| 28 | 2,430 | | 2,450 | 2,250 | 3,000 | | 2,450 | 2,250 |
| 30 | 2,160 | | 2,350 | 2,100 | 2,800 | | 2,350 | 2,100 |
| 32 | 1,920 | | 2,110 | 2,050 | 2,600 | | 2,200 | 2,050 |
| 34 | | | 1,900 | | | | 2,000 | |
| 36 | | | 1,710 | | | | 1,900 | |
| 38 | | | 1,550 | | | | 1,800 | |

A6-829-016369

*10 ft. capacities at 0° offset only are also applicable to the 10 ft. fixed length non-offsettable extension.

BOOMEXTENSIONCAPACITY NOTES:

1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of the tipping loads on outriggers in accordance with SAE J765.
2. 10 ft. and 15 ft. boom extension lengths may be used for single line lifting service only.
3. Rated load is based on radius, regardless of main boom length.
WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
4. Capacities listed are with fully extended outriggers only.
5. No load stability on outriggers 360° with fixed or tele. extension installed:
 - a. Minimum boom angle for 24 ft. main boom = 0°
 - b. Maximum main boom length at 0° main boom angle = 24 ft.
6. When lifting loads the minimum allowable boom angle is: 3° with 0° offset and 48° with 45° offset.

10:00 X 15 (16 PLY) MINE LUG TIRES
RATED LIFTING CAPACITIES IN POUNDS ON RUBBER
10 ft. FIXED & 10 - 15 ft. TELE. BOOM EXTENSION - STATIONARY CAPACITY

| Radius in Feet | 360 Degrees | | | | **Defined Arc Over Front | | | |
|----------------------|-------------------|-------|-------------------|-------|--------------------------|-------|-------------------|-------|
| | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | |
| | * 0° | 45° | 0° | 45° | * 0° | 45° | 0° | 45° |
| 8 | 6,200 | | | | 7,000 | | | |
| 10 | 4,410 | | 4,150 | | 6,500 | | 4,150 | |
| 12 | 3,340 | | 3,380 | | 6,000 | | 3,800 | |
| 14 | 2,620 | 3,030 | 2,780 | | 5,500 | 4,500 | 3,400 | |
| 16 | 2,100 | 2,430 | 2,320 | | 5,000 | 4,200 | 3,150 | |
| 18 | 1,710 | 1,960 | 1,960 | 2,100 | 4,150 | 3,900 | 2,950 | 2,600 |
| 20 | 1,410 | 1,610 | 1,660 | 1,770 | 3,480 | 3,480 | 2,800 | 2,550 |
| 22 | 1,170 | 1,330 | 1,410 | 1,510 | 2,960 | 2,960 | 2,650 | 2,500 |
| 24 | 970 | 1,120 | 1,210 | 1,300 | 2,560 | 2,560 | 2,550 | 2,450 |
| 26 | 810 | 950 | 1,030 | 1,130 | 2,230 | 2,230 | 2,330 | 2,330 |
| 28 | 670 | | 870 | 980 | 1,960 | | 2,060 | 2,060 |
| 30 | 550 | | 740 | 840 | 1,730 | | 1,830 | 1,830 |
| 32 | 450 | | 620 | 710 | 1,540 | | 1,640 | 1,640 |
| 34 | | | 510 | | | | 1,470 | |
| 36 | | | 420 | | | | 1,330 | |
| 38 | | | | | | | 1,200 | |

A6-829-016371A

*10 ft. capacities at 0° offset only are also applicable to the 10 ft. fixed length non-offsettable extension.
 **Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine.

BOOM EXTENSION CAPACITY NOTES:

1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 75% of the tipping loads in accordance with SAE J765.
2. 10 ft. and 15 ft. boom extension lengths may be used for single line lifting service only.
3. Rated load is based on radius, regardless of main boom length.
4. **WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
5. No load stability on rubber over front & 360° with fixed or tele. extension installed:
 - a. Minimum boom angle for 24 ft. main boom = 0°
 - b. Maximum main boom length at 0° main boom angle = 24 ft.
6. When lifting loads the minimum allowable boom angle is: 3° with 0° offset and 48° with 45° offset.

10:00 X 15 (16 PLY) RIB TIRES
RATED LIFTING CAPACITIES IN POUNDS ON RUBBER
10 ft. FIXED & 10 - 15 ft. TELE. BOOM EXTENSION - STATIONARY CAPACITY

| Radius in Feet | 360 Degrees | | | | **Defined Arc Over Front | | | |
|----------------------|-------------------|-------|-------------------|-------|--------------------------|-------|-------------------|-------|
| | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | |
| | * 0° | 45° | 0° | 45° | * 0° | 45° | 0° | 45° |
| 8 | 6,200 | | | | 7,000 | | | |
| 10 | 4,410 | | 4,150 | | 6,500 | | 4,150 | |
| 12 | 3,340 | | 3,380 | | 6,000 | | 3,800 | |
| 14 | 2,620 | 2,880 | 2,780 | | 5,500 | 4,500 | 3,400 | |
| 16 | 2,100 | 2,300 | 2,320 | | 4,900 | 4,200 | 3,150 | |
| 18 | 1,710 | 1,880 | 1,960 | 1,995 | 3,995 | 3,900 | 2,950 | 2,600 |
| 20 | 1,410 | 1,565 | 1,660 | 1,675 | 3,340 | 3,340 | 2,800 | 2,550 |
| 22 | 1,170 | 1,320 | 1,410 | 1,420 | 2,840 | 2,840 | 2,650 | 2,500 |
| 24 | 970 | 1,120 | 1,210 | 1,220 | 2,450 | 2,450 | 2,550 | 2,450 |
| 26 | 810 | 950 | 1,030 | 1,055 | 2,135 | 2,135 | 2,245 | 2,245 |
| 28 | 670 | | 870 | 920 | 1,875 | | 1,980 | 1,980 |
| 30 | 550 | | 740 | 800 | 1,655 | | 1,755 | 1,755 |
| 32 | 450 | | 620 | 700 | 1,470 | | 1,570 | 1,570 |
| 34 | | | 510 | | | | 1,405 | |
| 36 | | | 420 | | | | 1,265 | |
| 38 | | | | | | | 1,140 | |

A6-829-016415A

*10 ft. capacities at 0° offset only are also applicable to the 10 ft. fixed length non-offsettable extension.
 **Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine.

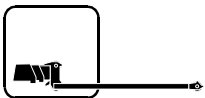
BOOM EXTENSION CAPACITY NOTES:

1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 75% of the tipping loads in accordance with SAE J765.
2. 10 ft. and 15 ft. boom extension lengths may be used for single line lifting service only.
3. Rated load is based on radius, regardless of main boom length.
4. **WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
5. No load stability on rubber **over front & 360°** with fixed or tele. extension installed:
 - a. Minimum boom angle for 24 ft. main boom = 0°
 - b. Maximum main boom length at 0° main boom angle = 24 ft.
6. When lifting loads the minimum allowable boom angle is: 3° with 0° offset and 48° with 45° offset.

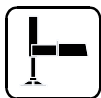
Working Range



13 ft. - 30 ft.
(3.9 m - 9.1 m)

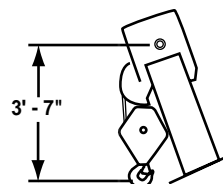
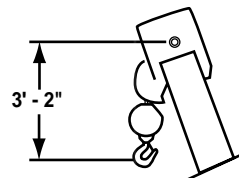
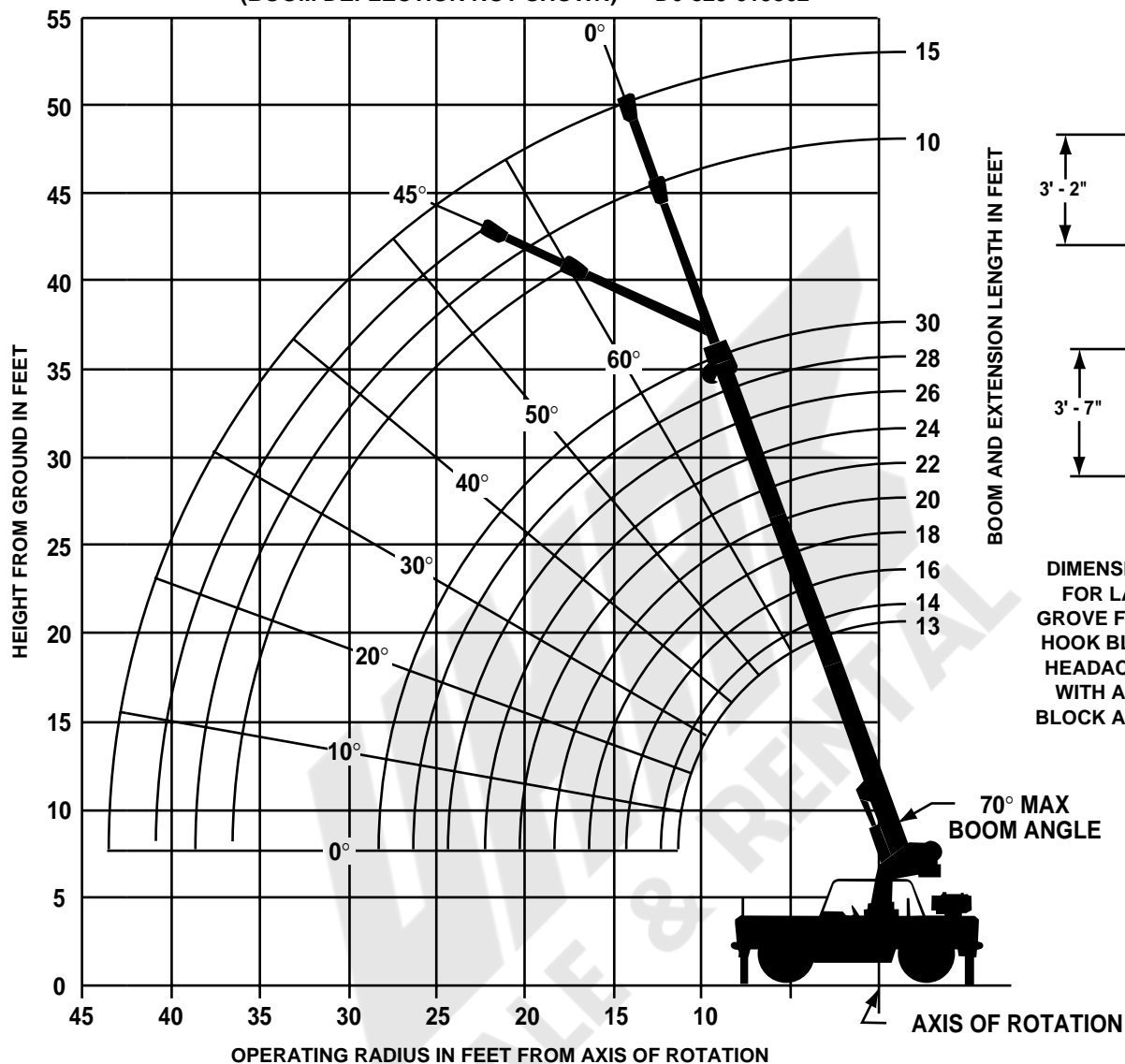


10 ft. - 15 ft.
(3.05 m - 4.8 m)



360°

WORKING RANGE DIAGRAM
(BOOM DEFLECTION NOT SHOWN) D6-829-015862



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

**RATED LIFTING CAPACITIES
IN POUNDS ON OUTRIGGERS
FULLY EXTENDED - 360° & OVER FRONT**

13 ft. - 30 ft. BOOM

| Radius in Feet | 13 ft. (Fully Retracted) | | 13 ft. - 30 ft. BOOM | |
|----------------------|--------------------------|--------|----------------------|--------|
| | Over Front | 360° | Over Front | 360° |
| 5 | 20,000 | 20,000 | 17,000 | 17,000 |
| 6 | 18,000 | 18,000 | 15,000 | 15,000 |
| 8 | 13,750 | 13,750 | 13,000 | 13,000 |
| 10 | | | 11,000 | 11,000 |
| 12 | | | 9,500 | 9,500 |
| 14 | | | 8,100 | 7,880 |
| 16 | | | 6,900 | 6,250 |
| 18 | | | 5,900 | 5,140 |
| 20 | | | 5,150 | 4,330 |
| 22 | | | 4,590 | 3,720 |
| 24 | | | 4,275 | 3,240 |
| 26 | | | 3,870 | 2,850 |
| 28 | | | 3,520 | 2,530 |

A6-829-016115

Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation. Capacities also do not exceed 85% of the tipping loads as determined by test in accordance with SAE J765 OCT90.

**NO LOAD STABILITY FOR
ON OUTRIGGERS & RUBBER CAPACITIES**

| No Load Stability Data | | Main Boom 30 ft. |
|------------------------|---|---------------------|
| Front (No Load) | Min. boom angle (deg.) for indicated length | 0 |
| | Max. boom length (ft.) at 0 deg. boom angle | 30 |
| 360 Deg. (No Load) | Min. boom angle (deg.) for indicated length | 0 |
| | Max. boom length (ft.) at 0 deg. boom angle | 30 |

**MINE LUG TIRES
ON RUBBER CAPACITIES**

| Radius in Feet | Stationary Capacity Defined Arc Over Front (See Note 3) | Stationary Capacity 360° Arc | Pick & Carry Cap. Up to 2.5 MPH Boom Centered Over Front (See Note 6) |
|----------------------|---|---------------------------------------|---|
| 5 | 15,100 | 10,450 | 15,100 |
| 6 | 13,250 | 8,370 | 13,250 |
| 8 | 10,600 | 5,830 | 10,600 |
| 10 | 8,790 | 4,360 | 8,790 |
| 12 | 7,470 | 3,390 | 7,470 |
| 14 | 6,040 | 2,710 | 6,040 |
| 16 | 4,800 | 2,210 | 4,800 |
| 18 | 3,940 | 1,820 | 3,940 |
| 20 | 3,320 | 1,510 | 3,320 |
| 22 | 2,850 | 1,250 | 2,850 |
| 24 | 2,480 | 1,040 | 2,480 |
| 26 | 2,190 | 870 | 2,190 |
| 28 | 1,940 | 720 | 1,940 |

A6-829-016117A

1. Capacities are in pounds and do not exceed 75% of the tipping loads in accordance with SAE J765.
2. Capacities are applicable to machines equipped with 36.00x11-15 (16 ply) mine lug tires, at 115 psi cold inflation pressure.
3. Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine.
4. Capacities are applicable only with machine on firm level surface.
5. All rubber lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. Damaged tires are hazardous to safe operation of crane.
6. For pick and carry operation, the boom, using the shortest practical boom length, must be centered over front of machine. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speed* 2.5 MPH capacities are permissible on main boom only, NOT on boom extension.

*Creep - not over 200 feet of movement in any 30 minute period and not exceeding 1 mph.

**RIB TIRES
ON RUBBER CAPACITIES**

| Radius in Feet | Stationary Capacity Defined Arc Over Front (See Note 3) | Stationary Capacity 360 Degree Arc | Pick & Carry Cap. Up to 2.5 MPH Boom Centered Over Front (See Note 6) |
|----------------------|---|--|--|
| 5 | 15,100 | 10,450 | 15,100 |
| 6 | 13,250 | 8,047 | 13,250 |
| 8 | 10,600 | 5,270 | 10,600 |
| 10 | 8,790 | 3,770 | 8,790 |
| 12 | 7,470 | 2,840 | 7,470 |
| 14 | 5,820 | 2,210 | 5,820 |
| 16 | 4,620 | 1,740 | 4,620 |
| 18 | 3,800 | 1,390 | 3,800 |
| 20 | 3,200 | 1,110 | 3,200 |
| 22 | 2,740 | 890 | 2,740 |
| 24 | 2,380 | 710 | 2,380 |
| 26 | 2,100 | 550 | 2,100 |
| 28 | 1,860 | 450 | 1,860 |

A6-829-016346A

1. Capacities are in pounds and do not exceed 75% of the tipping loads in accordance with SAE J765.
2. Capacities are applicable to machines equipped with Denman 10.00 x 15 (16 ply) tires, at 125 psi cold inflation pressure.
3. Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine.
4. Capacities are applicable only with machine on firm level surface.
5. All rubber lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. Damaged tires are hazardous to safe operation of crane.
6. For pick and carry operation, the boom, using the shortest practical boom length, must be centered over front of machine. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speed* 2.5 MPH capacities are permissible on main boom only, NOT on boom extension.

*Creep - not over 200 feet of movement in any 30 minute period and not exceeding 1 mph.

RATED LIFTING CAPACITIES IN POUNDS ON OUTRIGGERS
10 ft. FIXED & 10 ft. - 15 ft. TELE. BOOM EXTENSION

| Radius in Feet | 360 Degrees | | | | Over Front | | | |
|----------------------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|
| | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | |
| | * 0° | 45° | 0° | 45° | * 0° | 45° | 0° | 45° |
| 8 | 7,000 | | | | 7,000 | | | |
| 10 | 6,500 | | 4,150 | | 6,500 | | 4,150 | |
| 12 | 6,000 | | 3,800 | | 6,000 | | 3,800 | |
| 14 | 5,500 | 4,500 | 3,400 | | 5,500 | 4,500 | 3,400 | |
| 16 | 5,000 | 4,200 | 3,150 | | 5,000 | 4,200 | 3,150 | |
| 18 | 4,500 | 3,900 | 2,950 | 2,600 | 4,500 | 3,900 | 2,950 | 2,600 |
| 20 | 4,200 | 3,600 | 2,800 | 2,550 | 4,200 | 3,600 | 2,800 | 2,550 |
| 22 | 3,700 | 3,350 | 2,650 | 2,500 | 3,700 | 3,350 | 2,650 | 2,500 |
| 24 | 3,270 | 3,150 | 2,550 | 2,450 | 3,500 | 3,150 | 2,550 | 2,450 |
| 26 | 2,860 | 2,860 | 2,500 | 2,400 | 3,250 | 3,000 | 2,500 | 2,400 |
| 28 | 2,520 | 2,520 | 2,450 | 2,250 | 3,000 | 2,850 | 2,450 | 2,250 |
| 30 | 2,230 | 2,230 | 2,350 | 2,100 | 2,800 | 2,700 | 2,350 | 2,100 |
| 32 | 1,990 | | 2,130 | 2,050 | 2,600 | | 2,200 | 2,050 |
| 34 | 1,780 | | 1,910 | 1,910 | 2,450 | | 2,000 | 1,950 |
| 36 | 1,600 | | 1,720 | | 2,300 | | 1,900 | |
| 38 | 1,440 | | 1,550 | | 2,200 | | 1,800 | |
| 40 | | | 1,400 | | | | 1,700 | |
| 42 | | | 1,270 | | | | 1,600 | |

A6-829-016116

*10 ft. capacities at 0° offset only are also applicable to the 10 ft. fixed length non-offsettable extension.

BOOM EXTENSION CAPACITY NOTES:

1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of the tipping loads on outriggers in accordance with SAE J765.
2. 10 ft. and 15 ft. boom extension lengths may be used for single line lifting service only.
3. Rated load is based on radius, regardless of main boom length.
WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
4. Capacities listed are with fully extended outriggers only.
5. No load stability on outriggers 360° with fixed or tele. extension installed:
 - a. Minimum boom angle for 30 ft. main boom = 0°
 - b. Maximum main boom length at 0° main boom angle = 30 ft.
6. When lifting loads the minimum allowable boom angle is: 3° with 0° offset and 48° with 45° offset.

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

10:00 X 15 (16 PLY) RIB TIRES
RATED LIFTING CAPACITIES IN POUNDS ON RUBBER
10 ft. FIXED & 10 - 15 ft. TELE. BOOM EXTENSION - STATIONARY CAPACITY

| Radius in Feet | 360 Degrees | | | | **Defined Arc Over Front | | | |
|----------------------|-------------------|-------|-------------------|-------|--------------------------|-------|-------------------|-------|
| | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | |
| | *0° | 45° | 0° | 45° | *0° | 45° | 0° | 45° |
| 8 | 5,510 | | | | 7,000 | | | |
| 10 | 3,810 | | 4,150 | | 6,500 | | 4,150 | |
| 12 | 2,800 | | 3,170 | | 6,000 | | 3,800 | |
| 14 | 2,130 | 2,690 | 2,440 | | 5,500 | 4,500 | 3,400 | |
| 16 | 1,660 | 2,110 | 1,930 | | 4,840 | 4,200 | 3,150 | |
| 18 | 1,300 | 1,670 | 1,550 | 2,060 | 3,940 | 3,900 | 2,950 | 2,600 |
| 20 | 1,030 | 1,320 | 1,250 | 1,670 | 3,280 | 3,280 | 2,800 | 2,550 |
| 22 | 800 | 1,050 | 1,010 | 1,360 | 2,780 | 2,780 | 2,650 | 2,500 |
| 24 | 620 | 820 | 820 | 1,110 | 2,380 | 2,380 | 2,500 | 2,450 |
| 26 | 480 | 630 | 660 | 910 | 2,070 | 2,070 | 2,180 | 2,180 |
| 28 | 350 | 460 | 520 | 730 | 1,810 | 1,810 | 1,910 | 1,910 |
| 30 | | 320 | 410 | 590 | 1,590 | 1,590 | 1,690 | 1,690 |
| 32 | | | 310 | 460 | 1,400 | | 1,500 | 1,500 |
| 34 | | | | 350 | 1,240 | | 1,340 | 1,340 |
| 36 | | | | | 1,100 | | 1,200 | |
| 38 | | | | | 980 | | 1,070 | |
| 40 | | | | | | | 960 | |
| 42 | | | | | | | 870 | |

A6-829-016345

*10 ft. capacities at 0° offset only are also applicable to the 10 ft. fixed length non-offsetable extension.
**Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine.

BOOM EXTENSION CAPACITY NOTES:

1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 75% of the tipping loads in accordance with SAE J765.
 2. Capacities are applicable to machines equipped with Denman 10.00 x 15 (16 ply) tires, at 125 psi cold inflation pressure.
 3. 10 ft. and 15 ft. boom extension lengths may be used for single line lifting service only.
 4. Rated load is based on radius, regardless of main boom length.
 5. **WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
 6. No load stability on rubber **over front** with fixed or tele. extension installed:
 - a. Minimum boom angle for 30 ft. main boom = 0°
 - b. Maximum main boom length at 0° main boom angle = 30 ft.
- No load stability on rubber **360°**:
- a. Minimum boom angle for 30 ft. main boom = 46° with 10 ft. fixed or 10 ft. tele., and 52° with 15 ft. tele. ext.
 - b. Maximum main boom length at 0° main boom angle = 22 ft. with 10 ft. fixed or 10 ft. tele., and 18 ft. with 15 ft. tele. ext.
7. When lifting loads the minimum allowable boom angle is: 3° with 0° offset and 48° with 45° offset.

MINE LUG TIRES
RATED LIFTING CAPACITIES IN POUNDS ON RUBBER
10 ft. FIXED & 10 - 15 ft. TELE. BOOM EXTENSION - STATIONARY CAPACITY

| Radius in Feet | 360 Degrees | | | | **Defined Arc Over Front | | | |
|----------------------|-------------------|-------|-------------------|-------|--------------------------|-------|-------------------|-------|
| | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | | 10 ft. Tele. Ext. | | 15 ft. Tele. Ext. | |
| | * 0° | 45° | 0° | 45° | * 0° | 45° | 0° | 45° |
| 8 | 6,200 | | | | 7,000 | | | |
| 10 | 4,450 | | 4,150 | | 6,500 | | 4,150 | |
| 12 | 3,370 | | 3,380 | | 6,000 | | 3,800 | |
| 14 | 2,630 | 2,960 | 2,670 | | 5,500 | 4,500 | 3,400 | |
| 16 | 2,100 | 2,370 | 2,150 | | 5,000 | 4,200 | 3,150 | |
| 18 | 1,660 | 1,950 | 1,750 | 2,120 | 4,080 | 3,900 | 2,950 | 2,600 |
| 20 | 1,380 | 1,620 | 1,440 | 1,770 | 3,390 | 3,390 | 2,800 | 2,550 |
| 22 | 1,120 | 1,330 | 1,180 | 1,500 | 2,860 | 2,860 | 2,650 | 2,500 |
| 24 | 910 | 1,070 | 980 | 1,280 | 2,450 | 2,450 | 2,520 | 2,450 |
| 26 | 740 | 860 | 800 | 1,090 | 2,120 | 2,120 | 2,190 | 2,190 |
| 28 | 590 | 680 | 650 | 920 | 1,840 | 1,840 | 1,920 | 1,920 |
| 30 | 460 | 530 | 520 | 780 | 1,610 | 1,610 | 1,700 | 1,700 |
| 32 | 350 | | 410 | 660 | 1,410 | | 1,510 | 1,510 |
| 34 | | | 310 | 560 | 1,250 | | 1,340 | 1,340 |
| 36 | | | | | 1,100 | | 1,200 | |
| 38 | | | | | 970 | | 1,070 | |
| 40 | | | | | | | 960 | |
| 42 | | | | | | | 860 | |

A6-829-100412

*10 ft. capacities at 0° offset only are also applicable to the 10 ft. fixed length non-offsetable extension.
**Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine.

BOOM EXTENSION CAPACITY NOTES:

1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 75% of the tipping loads in accordance with SAE J765.
 2. 10 ft. and 15 ft. boom extension lengths may be used for single line lifting service only.
 3. Rated load is based on radius, regardless of main boom length.
 4. **WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
 5. No load stability on rubber **over front** with fixed or tele. extension installed:
 - a. Minimum boom angle for 30 ft. main boom = 0°
 - b. Maximum main boom length at 0° main boom angle = 30 ft.
- No load stability on rubber **360°**:
- a. Minimum boom angle for 30 ft. main boom = 45° with 10 ft. fixed or 10 ft. tele., and 51° with 15 ft. tele. ext.
 - b. Maximum main boom length at 0° main boom angle = 22 ft. with 10 ft. fixed or 10 ft. tele., and 18 ft. with 15 ft. tele. ext.
6. When lifting loads the minimum allowable boom angle is: 3° with 0° offset and 48° with 45° offset.
 7. Capacities are applicable to machines equipped with 36.00x11-15 (16 ply) mine lug tires, at 115 psi cold inflation pressure.

THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

YB4410 Features and Benefits

▶ Three steering modes: two wheel (front only), four wheel coordinated, or four wheel crab to handle jobsite maneuverability



▶ Full power standard 24 ft. (7 m) boom with 10 - 16 ft. (3 - 5 m) fixed or 45 degree offsettable telescopic boom extension that gives max tip height of 38 ft. (11.5 m) or 44 ft. (13 m) respectively



▶ Low-profile quick reeve boom nose design with single metallic sheave for improved accessibility



▶ Interactive PAT/LMI system with actual load display that provides visual prewarning at 90% of rated capacity



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