



Page 1 of 12

Date January 2017

Replaces Form ID109C **Dated** March 2009

The IC-250-E is a self-propelled Industrial Crane designed for material handling and maintenance and repair of equipment, with special features of self-loading cargo decks, 4-wheel steer, and front-wheel drive (4-wheel drive optional). The basic unit consists of a chassis and hydraulic boom assembly. The chassis includes a frame, four hydraulic independently controlled outriggers, engine, torque converter, powershift 4-speed transmission, front planetary drive/steer axle and rear steer-only axle, fuel tank, hydraulic tank, control station, power steering and dual power brakes. The boom assembly includes a hydraulic powered continuous rotation turret, proportional 4-section telescopic boom, hydraulic boom elevating cylinder, hydraulic boom telescope cylinder and hydraulic powered hoist. Rated Capacity Limiter is standard.

IC-250-E

4-section hydraulically extended boom with capacity of 36,000 pounds (16,330 kg) at a 6-foot (1.83 m) load radius. Horizontal reach of 50 feet 1 inch (15.26 m) and vertical reach of 60 feet 7 inches (18.47 m).

GENERAL:

Length:

Overall 23 feet 6 inches (7.16 m) Chassis 15 feet 6 inches (4.72 m)

Width: 7 feet 10 inches (2.39 m)

Height:

Overall 7 feet 11 inches (2.41 m)

Deck 47 inches (1.19 m)

Wheelbase: 100 inches (2.54 m)

Ground Clearance: 13 inches (33 cm)

Angle of Approach: 25 degrees

Angle of Departure: 23 degrees

Outriggers:

Spread 14 feet 9 inches (4.50 m)

Penetration 3 inches (7.62 cm)

Boom Movement:

Rotation Continuous Elevation 0 to 75 degrees

Telescope 34 feet 6 inches (10.52 m)

Boom Speeds:

Rotation 1.4 RPM
Elevation 22 seconds
Telescope 41 seconds

Page Date 2 of 12 January 2017

Extension:W/O Boom ExtensionWith Boom ExtensionSheave Height (Nominal):60 feet 7 inches (18.46 m)79 feet 6 inches (24.23 m)Horizontal Reach:50 feet 1 inch (15.26 m)70 feet 1 inch (21.36 m)

Weight:

Total 37,700 pounds (17,100 kg) Front Axle 17,100 pounds (7,900 kg) Rear Axle 20,600 pounds (9,200 kg)

Turning Radius:

(4-Wheel Steering) 14 feet 4 inches (4.37 m)

Aisle Width for 90° Turn: 11 feet 11 inches (3.61 m)

Steering Modes: Rear Steer, Round Steer, Crab Steer

Road Speed: 19 MPH (30.6 kph)

Drawbar Pull:

Cummins 3.3L 17,700 pounds* (8,000 kg) GM 5.7L 21,400 pounds* (9,706 kg)

Gradeability: 64 percent* (33 degrees) *Calculated, wheels spin below these values in 2-wheel drive.

Grade Limit: 15 percent (9 degrees)

ENGINE:

Standard:

GM 5.7L V-8, EPA Tier 2 Woodward LPG Fuel

GM Model 5.7L V-8 industrial LPG engine complete with LPG Fuel injection, and engine management system. Includes water cooled, 350 Cl (5.7L) displacement, bore 4.00" (102mm), stroke 3.48" (88mm), 135 HP (101 kW) at governed speed of 2,500 RPM. Maximum torque is 307 ft. lbs. (417 Nm) at 1,500 RPM. Also includes special exhaust valves, seats and valve rotators for use with LPG, 100-amp alternator, catalytic converter, dual 43 pound (19.5 kg) LPG tanks with quick disconnects, and high temperature and low oil pressure shutdown. Throttle control switch for setting engine speed at 1200 or 1800 RPM. US EPA Tier 2 emissions certified. (Net weight: 175 pounds (79 kg), including 2 aluminum LP tanks.

Optional Engines and Engine Accessories:

Diesel Engine:

Cummins QSB3.3L Turbo, EPA Tier 4i

Cummins QSB3.3 Tier 4 Interim turbocharged diesel engine. Water cooled, 4-cylinder, 199 CID (3.3L), 3.74-inch bore, 4.53-inch stroke, 99 HP at governed speed of 2,500 RPM. Maximum torque is 304 ft-lbs at 1,400 RPM. 120-amp alternator included. 30-gallon fuel tank capacity. High temperature and low oil pressure shutdown included in engine management system. Throttle control switch for setting engine speed at 1200 or 1800 RPM. Charge air cooler and grid heater included. (Net Weight: 200 pounds).

Cummins QSF3.8L Turbo, EPA Tier 4F:

Cummins QSF3.8 Tier 4 turbocharged diesel engine. Water cooled, 4-cylinder, 229 CID (3.8L), 4.02-inch (102 mm) bore, 4.53-inch (115 mm) stroke 120 HP (89 kW) at governed speed of 2,500 RPM. Maximum torque is 360 ft-lbs (488 Nm) at 1600 RPM. 135-amp alternator included. 30-gallon (114 L) fuel tank capacity. High temperature and low oil pressure shutdown included in engine management system. Throttle control switch for setting engine speed at 1600 RPM. Diesel oxidation catalyst muffler; air in-take pre-cleaner; charge air cooler. Net Weight: 766 pounds (348 kg)

Spark Arrester Muffler:

Spark arrester muffler used in addition to standard muffler (LPG fuel only). Net Weight: 10 pounds (5 kg)

Engine Heater:

Heater for LPG engine. Standard diesel engine. Engine coolant heater installed with hoses in coolant system to circulate warm water through engine. Plugs into 120V AC extension cord. 550 watts.

TRANSMISSION:

Standard 2-Wheel Drive:

Powershift transmission with four speeds in forward and reverse. Provides powershifts at any engine speed in any gear. All shifting is done with a single lever electrical control mounted on the steering column. Multiple-disc clutch packs operated by solenoid valves provide reverse, neutral, forward and speed selection. Equipped with oil cooler and filter.

Optional 4-Wheel Drive Transmission:

Same as 2WD transmission with an additional output shaft to drive the rear axle. Rear output shaft runs faster than front by a ratio of 1.58 to 1. Rear axle has more reduction than front axle to match speed of front. Electrohydraulic control for shifting between 2WD and 4WD. This option includes the 4-wheel drive axle listed below. Net weight: 310 lbs (141 kg) for 4WD system.

Transmission gear ratios:	Forward and Reverse (2WD & 4WD)
1st	5.72 to 1.0
2nd	3.23 to 1.0
3rd	1.77 to 1.0
4th	1.00 to 1.0

TORQUE CONVERTER:

Standard:

Stall torque ratio of 2.2:1, attached to engine flywheel.

FRONT AXLE:

Standard:

Planetary drive/steer front axle with 15.78 to 1.0 ratio. Differential equipped with "limited slip" feature. Driving effort is applied to wheel that has traction. Front axle mounted rigidly to frame.

Calculated Performance:

Gear	Travel Speeds (MPH)	Gradeability*	Drawbar Pull (pounds)
1st	3 mph (5 km/h)	65	18,100 lbs. (8,200 kg.)
2nd	5 mph (8 km/h)	36	10,600 lbs. (4,800 kg.)
3rd	10 mph (16 km/h)	19	6,000 lbs. (2,700 kg.)
4th	18 mph (29 km/h)	10	3,200 lbs. (1,450 kg.)

^{*}Calculated; wheels may spin in 1st or 2nd gear before these values are reached with 2-wheel drive.

REAR AXLE:

Standard 2-Wheel Drive:

Steering axle with 1½ degree oscillation in either direction.

Optional 4-Wheel Drive:

Planetary drive/steer axle with 24.98 to 1.0 ratio. Differential is not "limited slip" in rear axle. 1½ degree oscillation in either direction. (Axle ratio compatible with 4WD transmission rear output to match front axle speed.) Net Weight: 230 pounds (104 kg).

STEERING:

Standard:

Hydraulic steering unit with two, 3-inch (7.6 cm) cylinders attached to each axle. Allows limited steering when engine is not running. A switch on the control panel is used to select rear-wheel steering or four-wheel (round) steering.

BRAKES:

Standard:

Split-system, four-wheel hydraulically-boosted multiple-plate wet disc brakes. Uses mineral oil. Hand lever actuated disc-type parking brake on transmission.

TIRES:

Standard 2-Wheel & 4-Wheel Drive:

2-Wheel & 4-Wheel Drive 385/65D22.5, 16-ply, high-traction on/off road tread.

Tire Options:

Foam Filling of Tires:

Foam filling of four IC-250 tires. Net Weight: 2000 pounds (907 kg).

Non-Marking Pneumatic:

385/65D22.5 16-ply rating Net Weight: 20 pounds (9 kg).

Spare Tire and Wheel, Mounted:

Extra wheel with 385/65D22.5 mounted, ready for service. Net Weight: 350 pounds (159 kg).

Spare Tire and Wheel Mounted, Non-Marking Pneumatic:

Extra wheel with non-marking 385/65D22.5 mounted, ready for service. Net Weight: 355 pounds (161 kg).

CHASSIS:

Standard:

Cargo Deck:

Total Deck Area: 80 Square Feet (7.43m²)(Front deck 94" (239 cm) X 62" (157 cm), RH side deck 182" (462 cm) X 28" (71 cm). A maximum of 17,000 pounds (7,700 kg) may be carried on the deck when centered over or between axles. Seven stake pockets are provided along edges of deck for 1-inch (2.5 cm) pipe stakes. Stakes furnished. Cargo decks have skid resistant coating.

Headlight and Taillight Grilles:

Steel protective grilles for headlights and taillights. Easily removable for replacing bulbs.

Outriggers:

Four hydraulic out-and-down outriggers of box-beam construction. Independent control for each outrigger. Hydraulic cylinders are equipped with direct-connected holding valves. Pad dimensions: 9 inches (23 cm) x 9 inches (23 cm).

Pulling Eyes:

Two heavy eyes in front bumper provide for attachment of hook block so main winch line can be used for pulling loads at or near floor level. Also for anchoring tag lines from load on hook.

Tie Downs:

Two holes in the rear bumper (in conjunction with the pulling eyes) provide tie down locations for transporting crane by truck or cargo container.

Accessory Storage Box:

Consists of front deck plate with removable and lockable cover, and box for carrying sheave block and other items. Storage box is 14 inches (35 cm) deep x 12½ inches (32 cm) long x 36½ inches (93 cm) wide.

Lifting Rings:

Consists of four rings, one at each corner of the load deck, so sling can be attached for lifting crane. Rings hang below deck surface when not in use.

Page Date 5 of 12 January 2017

Chassis Options and Accessories:

Auxiliary Winch:

Optional worm gear winch, mounted behind front bumper, with a single lever control at the operator's console. Hydraulic powered to provide bare drum line pull of 10,000 pounds (4,540 kg) at 33 feet per minute (10.2 m/min). Winch drum is 3½ inches (90 mm) in diameter by 10 inches (250 mm) long. This winch includes 115 feet (35 m) of 7/16-inch (11.1 mm) wire rope, hook and 4-way roller guide. Rated load on the wire rope is 5,800 pounds (2,630 kg) with a safety factor of 3.5:1. Net Weight: 250 pounds (113 kg).

Pintle Hook - Rear:

T-60-AOL Holland pintle hook mounted on rear frame member, provides capacity for 6,000-pound (2,700 kg) tongue weight and 30,000-pound (13,600 kg) trailer weight. Net Weight: 15 pounds (7 kg).

Pintle Hook - Front:

T-60-AOL Holland pintle hook mounted on front frame member, provides same capacity as rear pintle hook. Net Weight: 45 pounds (20 kg).

Outrigger Shoes:

Steel outrigger shoes, 18 X 18 inch (46 cm X 46 cm) octagonal shape with storage posts on rear bumper. Net Weight: 170 pounds (77 kg)

Rearview Mirrors:

One right-hand and one left-hand mirror, 6 inches (152 mm) wide x 16 inches (406 mm) high, mounted on deck stakes. Pivot out of way when contacted by obstacle at side of deck. Net Weight: 12 pounds (5 kg).

OPERATOR COMPARTMENT:

Standard:

Operator control station provides one-position access to all chassis and crane functions. Includes adjustable operator's seat and seat belt.

Drum Rotation Indicator:

Provides tactile feedback to operator when hoist drum is rotating. Feedback device attached to hoist control handle. Feedback is proportional to hoist speed

Operator's Compartment Options & Accessories:

Operator Guard:

Tubular steel weldment with heavy expanded steel mesh top bolts over operator's compartment. Operator Guard is not designed, rated or certified as Falling Objects Protection System (FOPS) or Rollover Protection Systems (ROPS). Net Weight: 60 pounds (27 kg).

All Weather Cab:

Consists of rigid mounted canopy section and removable hinged door with safety glass. Rugged canopy structure with laminated glass front and top. Door is equipped with a keyed lock to protect operator's station. Includes defroster fan, dome light, 12,400 BTU heater with 2-speed fan and 12V electric windshield wiper. There are sliding windows in the door and right-hand side. Net Weight: 220 pounds (98 kg).

Cab Heater Only:

Provides 12,400 BTU heater with 2-speed fan for units without All Weather Cab. Net Weight: 12 pounds (5 kg).

Windshield Washer:

Provides reservoir, pump and nozzle for windshield washer.

Floor Mat:

Vinyl mat with foam backing covers floor, front wall, and lower portion of right hand wall of operator's compartment. Net Weight: 5 pounds (2 kg).

Suspension Seat:

Vinyl seat with a small suspension built in. Operator comfort. Net Weight: 15 pounds (7 kg).

Noise Reduction Kit - Cab:

Includes vinyl floor mats and control valve cover and side panels of foam-backed, perforated vinyl for noise reduction. Net Weight: 15 pounds (7 kg)

Deluxe Seat:

Deluxe seat with upholstery springs provides additional operator comfort. Net Weight: Net Weight 15 lbs. (7 kg)

Page Date 6 of 12 January 2017

Air Conditioning:

Provides factory system using R134A refrigerant. Compact AC unit mounted in operator's area, fan cooled condenser mounted under fuel tank and belt driven compressor with magnetic clutch driven by engine. Net Weight 125 lbs. (57 kg)

ELECTRICAL SYSTEM:

Standard 12 Volt DC:

Battery:

Diesel Units: Group 31 with 950 CCA rating. LP Units: Group 27 with 540 CCA rating.

Lighting Group:

Consists of two 12V lamps, with high and low beams for driving; tail, brake and turn signal lights and backup lights in rear; front turn signals; and emergency flasher switch at operator's station. 12V horn actuated by button located on shifting control.

Display:

Located at operator's station, and includes fuel gauge, voltmeter, oil pressure, water temperature, hour meter and DEF tank level. Hour meter records only during actual engine operation. Displays warnings for check engine, engine codes and Wait-to-start. Also within the display menus, the after treatment regenerations can be initiated or inhibited.

Master Power Switch:

Located on the front passenger side of the engine package, the Master Power Switch controls power to the rest of the machine. To turn off power, wait for the light next to the Master Power Switch to extinguish and then it is safe to turn the switch to the "Off" position.

Instrument Group:

Located at operator's station, includes warning lights for low oil and transmission pressure, high coolant and transmission temperature, turn signals, high beams, hazard lights, parking brake and four-wheel drive.

Back-Up Alarm:

Provides pulsating sound from a 102 dB alarm when ignition is on and transmission is in reverse. Conforms to SAE J994B.

Outrigger Alarm System:

102 dB alarm with alternating two-tone sound is actuated by a switch when the OUTRIGGER DOWN or OUTRIGGER OUT controls are operated.

Optional Electrical Accessories:

Strobe Lights:

Two yellow strobe lights, one on each side of turret weight box, for high visibility all around crane. Flashes 60-120 times per minute. Each strobe draws only one-half amp. Includes operator controlled switch. Net Weight: 5 pounds (2 kg).

Boom Work Lights:

Two halogen work lights, one on left side of boom to light boom tip, and one on right side of the turret to light ground under boom tip. Includes switch at operator's station. Net Weight: 10 pounds (5 kg).

HYDRAULIC SYSTEM:

Standard:

Tandem pump, direct-driven by engine, delivers 30 GPM (113 L/min) at 3,000 PSI (207 bar) and 35 GPM (132 L/min) at 2,500 PSI (172 bar) at 2,500 RPM governed engine speed. System protected by relief valves, suction line strainer and 10-micron return line filter. 54-gallon (204 L) reservoir equipped with breather and filler cap. (Maximum flows with LPG only engine at 2,500 RPM governed speed are 29 gPM (110L/min) and 34 gPM (129L/min).

BOOM ASSEMBLY:

Standard:



Four-section, high strength steel construction, equipped with bearing pads for efficient support and extension. Double-acting hydraulic cylinder and chain system telescopes boom sections proportionally. The telescope cylinder and the double-acting boom elevation cylinders are equipped with the cylinder-mounted holding valves. Boom angle indicators are on each side of boom.

BOOM ROTATION:

Standard:

Heavy-duty bearing swing gear with external teeth supports boom. Rotation is powered by hydraulic motor and worm gear drive. Swing gearbox may be adjusted as wear occurs to minimize backlash. Boom is attached by high strength steel weldment.

MAIN HOIST:

Standard:

Turret-mounted planetary gear hoist is hydraulically powered to provide a bare drum line pull of 12,000 pounds (5,440 kg) at a speed of 100-feet-per-minute (30 m/min). Hoist drum is 9 7/8-inch (251 mm) diameter by 16 1/2 inches (419 mm) long.

MAIN HOIST ROPE:

Standard:

Main hoist rope is 9/16" (14 mm) diameter, Warrington-Seale construction, 6x36 classification, EIP grade, IWRC core, RRL lay, minimum breaking strength 31,500 pounds (140 kN). Weight per foot is 0.6 pounds (0.9 Kg per meter) Note that rope weight is not included in load calculations. 180 pound (82 Kg) downhaul weight and swivel hook are included.

BOOM ATTACHMENTS:

Standard:

Rated Capacity Limiter:

Operational aid that warns operator of impending overload with audible and visual signals. Has read-outs for load, boom angle, boom length and load radius. In the event of an overload, dumps the following boom functions: HOIST RAISE, TELESCOPE EXTEND, BOOM LOWER, SWING LEFT and SWING RIGHT. These circuits are returned to normal by lowering load to a safe resting place with hoist or by retracting or raising boom to a shorter load radius. There is a key-operated override switch under the dashboard.

Four-Part-Line Sheave Block:

Double sheave block for 4-part-line requirements. 10-inch (254 mm) O.D. sheaves for 9/16 inch (14 mm) diameter wire rope. Swivel hook with safety latch. 300-pound (136 kg) weight provides positive overhaul. Includes bar on top to actuate trip arm of Anti-Two-Block device.

Optional Boom Attachments:

Boom Extension - 20 Feet (6.1 m), Offset:

Turret-mounted planetary gear hoist is hydraulically powered to provide a bare drum line pull of 12,000 pounds (5,440 kg) at a speed of 100-feet-per-minute (30 m/min). Hoist drum is 9 7/8-inch (25 cm) diameter by 16 1/2 inches (419 mm) long. The hoist includes 320 feet (97.5m) or 9/16 inch (14.3 cm) wire rope, 170 pound (82 kg) downhaul weight and swivel hook.

Searcher Hook: (4-Pin)

5,000 pound capacity hook bracket is attached to the front of the boom tip with 4 pins through the boom extension attachment lugs. A hook with latch is pinned to the tip of the bracket. Net Weight: 65 pounds

(29 kg).

Two-Part Line Sheave Block:

Sheave block for two-part-line requirements. 10 inch (254 mm) OD sheave for 9/16 inch (14 mm) wire rope. Swivel hook with safety latch. 200 pounds (91 kg) weight provides positive overhaul. Includes bar on top to actuate trip arm of anti-two-block device. Net Weight: 200 pounds (91 kg)

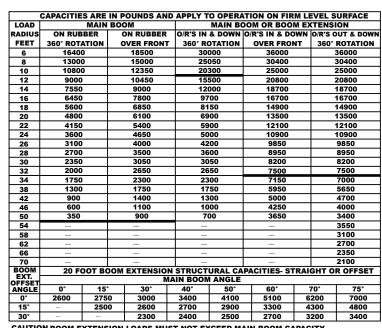
Specifications subject to change without notice.

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

BRODERSON® **Manufacturing Corp.**14741 West 106th Street Lenexa, KS 66215 USA

(913) 888-0606 www.BMCcranes.com Dimensions and values shown are for reference purposes only.
Specifications subject to change.

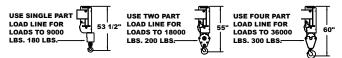


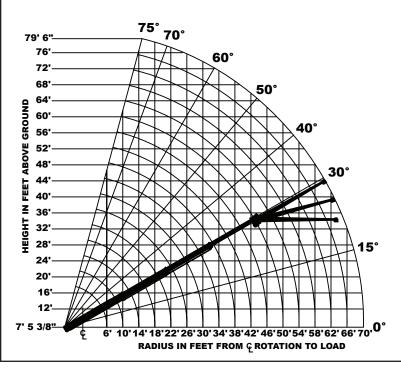


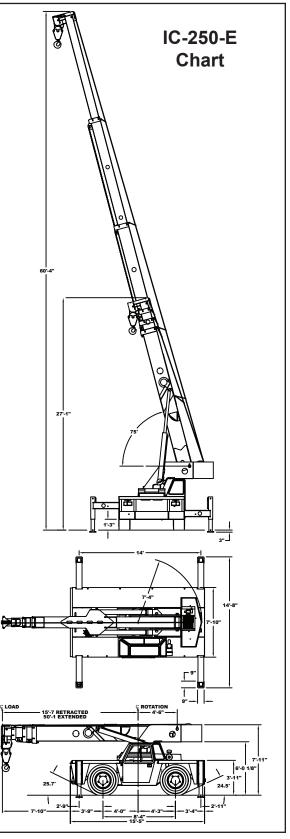
CAUTION BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

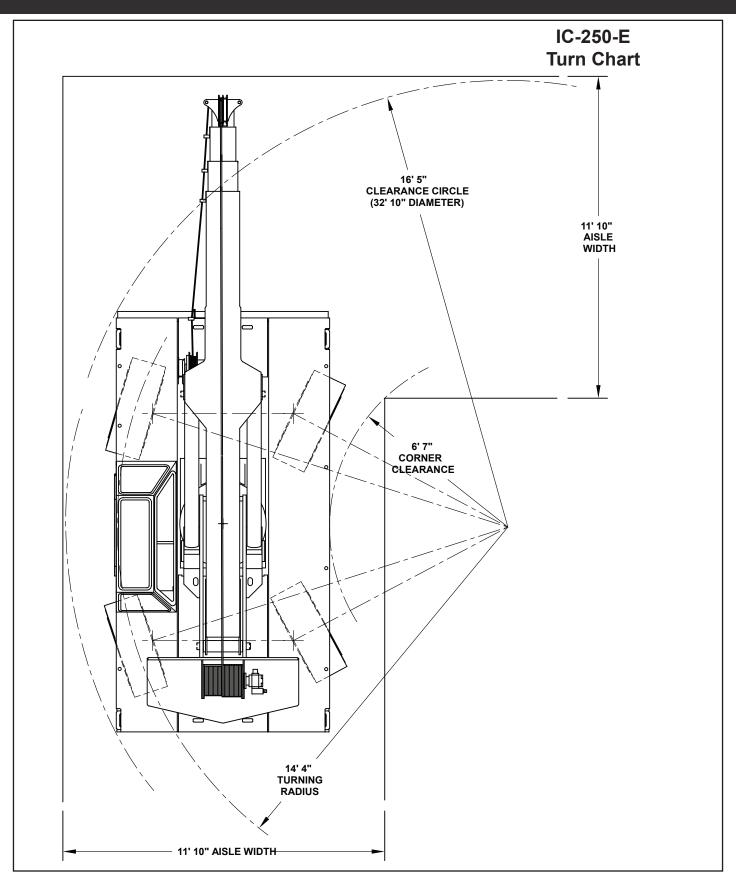
BOOM EXTENSION MAY ONLY CARRY LOADS WITH OUTRIGGERS DOWN
CAPACITIES ON OUTRIGGERS OUT & DOWN ARE 85% OF TIPPING LOADS.
CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW
BOLD LINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY
STRUCTURAL OR HYDRAULIC CAPABILITY.

BOOM EXTENSION DEDUCT: 500 LBS. WHEN STOWED ON BASE









CAPACITIES ARE IN KILOGRAMS AND APPLY TO OPERATION ON FIRM LEVEL SURFACE **MAIN BOOM** MAIN BOOM OR BOOM EXTENSION RADIUS ON RUBBER ON RUBBER O/R'S IN & DOWN O/R'S IN & DOWN O/R'S OUT & DOWI METERS 360° ROTATION OVER FRONT 360° ROTATION OVER FRONT 360° ROTATION 1.8 2.0 2.5 3.0 3.5 4.0 4.5 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 15.2 16.0 17.0 18.0 20.0 21.3 BOOM EXT. OFFSET ANGLE 6.1M BOOM EXTENSION STRUCTURAL CAPACITIES- STRAIGHT OR OFFSET MAIN BOOM ANGLE O° 40° 15° CAUTION BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

CAUTION BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY.

BOOM EXTENSION MAY ONLY CARRY LOADS WITH OUTRIGGERS DOWN.

CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITY.

BOOM EXTENSION DEDUCT: 225 kg WHEN STOWED ON BOOM

USE SINGLE PART LOAD LINE FOR LOADS TO 4080KG.

USE TWO PART LOAD LINE FOR LOADS TO 4080KG.

USE TWO PART LOAD LINE FOR LOADS TO 16330 KG. 1.52 M WT 91 KG.

