

## **IC-250-E** **Industrial Crane**

The IC-250 has the versatility to perform facility maintenance, re-fits, upgrades and expansion projects. This quality crane will keep you productive every step of the way.

### **Capacity**

36,000 lbs. (16,330 kg)

### **Sheave Height**

79' 6" (24.23 m)  
(with boom extension)

### **Horizontal Reach**

70' 1" (21.4 m)  
(with boom extension)

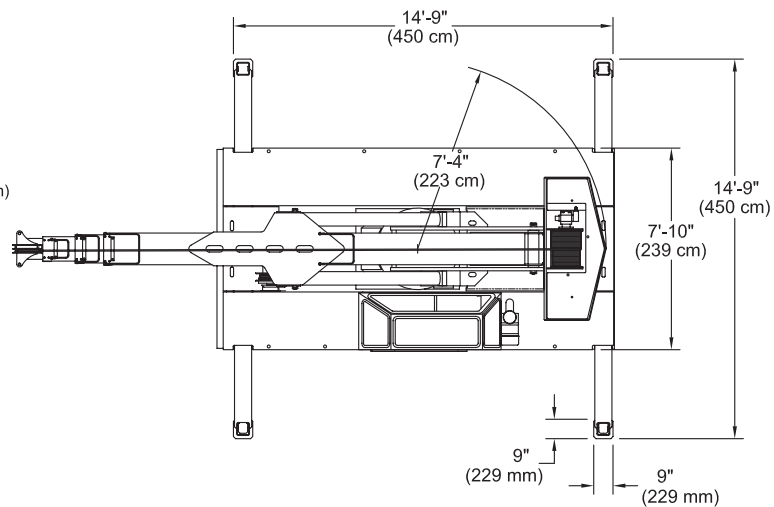
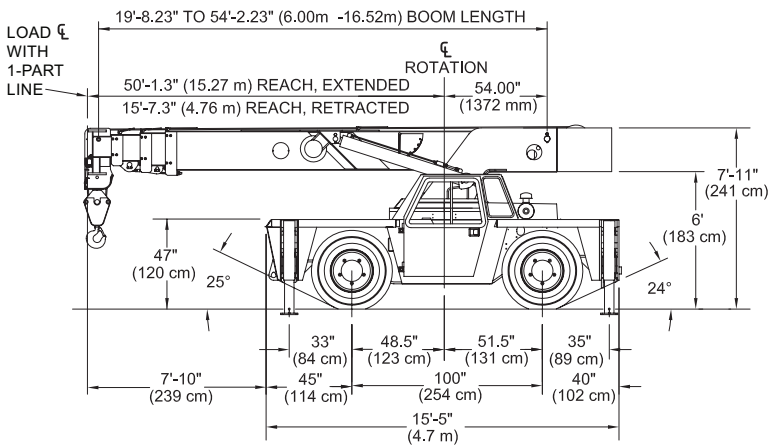
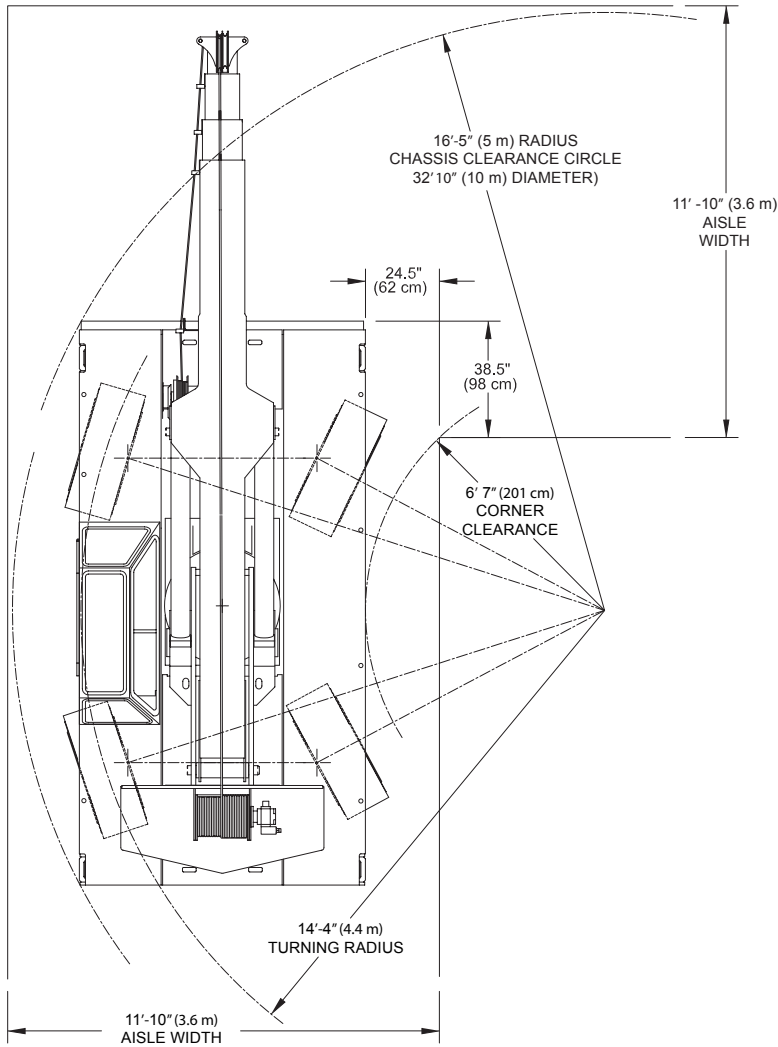
### **Height**

7' 11" (2.41 m)

### **Width**

7' 10" (2.39 m)





# IC-250-E

## GENERAL SPECIFICATIONS



### GENERAL

	ROTATION	ELEVATION	EXTENSION
Boom Movement	Continuous	0' to 75'	34'6" (10.52m)
Boom Speeds	1.4 RPM	22 sec.	41 sec.

Weight Total	37,700 lbs. (17,100 kg.)		
Front Axle	17,100 lbs. (7,800 kg.)		
Rear Axle	20,600 lbs. (9,300 kg.)		
Gradeability	64% (33')		
Turning Radius	14' 4" (4.37m)		

### ENGINE

Make	Cummins	GM
Model	QSF3.8 T4F / QSB3.3 T4i	5.7L V8 (T2)
Type	Turbo-Diesel	LPG
Cylinder	4 / 4	8
Displacement	3.8L / 3.3L	5.7L
HP @ Gov. Speed	120HP (89kW) / 99HP (75kW)	135HP (101kW)
Fuel Tank Capacity	30 gal. (113L)	Dual 43lb. (19.5 kW)

### TRANSMISSION

**POWERSHIFT TRANSMISSION** with 4-speeds forward & reverse. Provides power shifts 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 torque converter and transmission oil cooler.

#### GEAR RATIOS:

1st	5.72:1
2nd	3.23:1
3rd	1.77:1
4th	1.00:1

#### FRONT

Planetary drive/steer front axle with 16:42 to 1.0 ratio. Differential equipped with "limited slip" feature. Front axle mounted rigidly to frame.

TRANS. GEAR	SPEED	DRAWBAR PULL*
1st	3 MPH	18,100 lbs. (8,200 kg)
2nd	5 MPH	10,600 lbs. (4,800 kg)
3rd	10 MPH	6,000 lbs. (2,700 kg)
4th	18 MPH	3,200 lbs. (1,450 kg)

\*Drawbar pull is calculated for QSB 3.3L Tier 4i Diesel engine.

#### REAR

##### Standard (2-Wheel Drive):

Steering axle with 1-1/2 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. 1-1/2 degree oscillation in either direction. Axle ratio compatible with 4-wheel drive transmission rear output ratio to match front axle speed.

### AXLES

Hydraulic steering unit with two 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 or crab steering.

### STEERING

**Service:** Split-system, 4-wheel hydraulic-boosted multiple plate wet disc brakes.

**Parking:** Hand lever actuated disc-type parking brake on transmission.

### BRAKES

#### Standard:

385/65 D22.5, 16-ply high traction on/off road tread.

### TIRES

### CHASSIS

#### CARGO DECK

80 Square feet (7.4 m ) of deck area. 17,000 lbs. (7,700 kg) capacity on deck when load is centered over or between axles.

#### OUTRIGGERS

Four hydraulic out & down outriggers of box beam construction with direct-connected holding valves. Independent controls for each outrigger. **Outrigger pad dimension 9" (23 cm) x 9" (23 cm)**

#### ACCESSORY STORAGE BOX

Storage box is 14" (35 cm) deep x 12½" (32 cm) long x 36 ½" (93 cm) wide, located in front cargo deck.

#### LIFTING RINGS

Lifting rings at each corner of cargo deck so sling can be attached for lifting crane.

### OPERATOR COMPARTMENT

Provides one-position access to all chassis & crane functions. Includes adjustable operator's seat, retracting seat belts, fire extinguisher & bubble level.

### ELECTRICAL (12-VOLT SYSTEM)

#### LIGHTING PACKAGE

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.

#### INSTRUMENT PACKAGE

Fuel gauge and hourmeter which records hours only during actual engine operation. Also included are warning lights for low oil and transmission pressure, check engine, high coolant and transmission temperature, turn signals, high beams, hazard lights, parking brake and four-wheel drive.

#### BACK-UP ALARM

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

#### OUTRIGGER ALARM SYSTEM

Two-tone alarm is activated when "outrigger down" or "outrigger out" controls are operated.

### HYDRAULIC

**TANDEM PUMP** direct-driven by engine, delivers 30 GPM (113L/min) at rated RPM. 54-gallon capacity.

### BOOM ASSEMBLY

#### FOUR-SECTION BOOM ASSEMBLY

equipped with bearing pads, double acting hydraulic cylinder & chain system telescopes booms proportionally. Telescope & boom elevation cylinders equipped with cylinder-mounted holding valves. Boom angle indicator on each side of boom.

#### BOOM ROTATION

Heavy-duty ball bearing rotation gear with external teeth. Rotation is powered by hydraulic motor & worm gear drive.

#### BOOM HOIST

Turret-mounted planetary gear hoist, is hydraulically powered to provide a bare-drum line pull of 12,000 lbs (5440 kg) and a speed of 100 fpm (30 m/min), includes 320 feet (97 m) of 9/16 inch (14 mm) wire rope, 170 pound (77 kg) downhaul weight, swivel hook, sheave block for 4-part line.

#### ANTI-TWO-BLOCK DEVICE

Prevents damage to hoist rope and/or crane components from pulling load hook against tip.

#### RATED CAPACITY LIMITER

Warns operator of impending overload with audible & visual signals. Prevents overload by stopping boom functions that cause overloads.

CONSULT THE IC-250-E ENGINEERING SPEC FOR ADDITIONAL INFORMATION.

## **Main Features**

**RATED CAPACITY LIMITER**  
Standard

**CAPACITY ON OUTRIGGERS**  
36,000 lbs. (16,330 kg)

**PICK AND CARRY CAPACITY**  
up to 18,500 lbs. (8,400 kg)

**HEIGHT**  
7' 11" (2.41 m)

**WIDTH**  
7' 10" (2.39 m)

**BOOM ROTATION**  
360°

**SHEAVE HEIGHT**  
up to 79' 6" (24.23 m)

**HORIZONTAL REACH**  
up to 70' 1" (20.4 m)

**FOUR-WHEEL STEER**  
Standard

**FOUR-WHEEL DRIVE**  
Optional

**POWERSHIFT TRANSMISSION**  
Standard

**FULLY HYDRAULIC CONTROLS FOR  
SMOOTH, PRECISE OPERATIONS**

**INDEPENDENT OUTRIGGER  
CONTROLS**

**DIESEL OR LPG FUELED ENGINES  
AVAILABLE**

## **ENGINE**

### **Spark Arrester Muffler**

Installed in addition to standard muffler.  
(LPG only.)

### **Engine Heater**

Engine coolant heater installed to circulate warm water through engine, plugs into 120 volt AC.

## **AXLE & STEERING**

4-Wheel Steer & 2-Wheel Drive  
4-Wheel Steer & 4-Wheel Drive

## **TIRE**

Non Marking Pneumatic Tires  
Foam Filling of Tires  
Spare Tire & Wheel

## **CHASSIS**

### **Auxiliary Winch**

Mounted on front outrigger bumper, hydraulically driven with control in operator's console.

### **Pintle Hook**

Rear and Front

### **Rearview Mirrors**

One mounted on right-hand deck stake and one mounted on left-hand deck stake.

### **Outrigger Shoes**

Steel outrigger shoes, 18" (46 cm) x 18" (46 cm) octagonal shape with storage posts on rear bumper.

## **OPERATOR COMPARTMENT**

### **Operator Guard**

Tubular steel weldment with heavy expanded steel mesh top section.

### **All Weather Cab**

Rigid-mounted canopy section and removable hinged door. Includes heater, electric windshield wiper, one sliding glass window in the door & one in the right side of canopy. Defroster fan & dome light included.

## **Options**

### **Cab Heater Only**

Heater with two-speed fan for units without All Weather Cab.

### **Windshield Washer**

Includes reservoir, pump and nozzle.

### **Floor Mat**

Vinyl mat with foam backing.

### **Operator Suspension Seat**

Small suspension built in to provide additional operator comfort. Deluxe seat upholstery springs provide additional operator comfort.

### **Noise Reduction Kit**

Includes floor mat, control valve cover and side panels of foam backed vinyl for noise reduction.

### **Air Conditioning**

Air Conditioner w/134 coolant.

## **ELECTRICAL**

### **Strobe Lights**

Yellow strobe light mounted on each side of turret weight box.

### **Boom Work Lights**

One worklight mounted to boom to light boom tip, and one work light mounted to turret to light ground under boom tip.

### **Work Lights - Rear**

Two work lights recessed in rear bumper

### **RCL Light Bar**

3 color light bar for external indication of load status

## **BOOM ATTACHMENTS**

### **Boom Extension**

20 ft. (6.1 m) Offset. Boom stowable. Boom extension is offsettable to 3 different positions; 0 degree (in line), 15 degree and 30 degree offset.

### **Sheave Block**

Two-Part Line

### **Searcher Hook**

Nose Mount 5,000 lb (2,270 kg)

Broderson Cranes are manufactured to ISO 9001:2015 certified standards and have a market leading reputation for quality and reliability. Broderson Cranes are engineered for operating efficiency and are easy to operate and maintain.

An extensive network of full-service dealers offer parts and service support by factory-trained technicians.

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

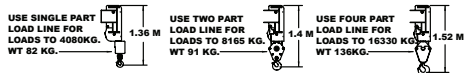
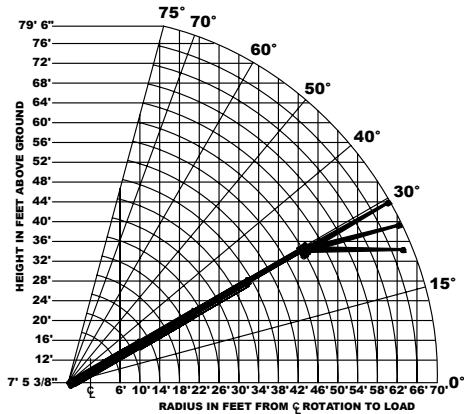
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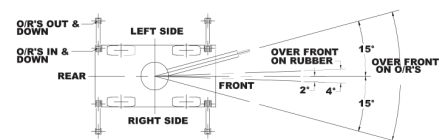
Dimensions and values shown  
are for reference purposes  
only. Specifications subject  
to change.



## Load Chart US Standard



Load hooks, downhaul weights, hook blocks and other load handling devices except hoist rope shall be considered part of the load.



The load hoist line on this unit must be 9/16" dia. 6x36-EIP-RR-L-IWRC wire rope (or equivalent) with a minimum breaking strength of 31,500 lbs..

Approved tires: OTR 385/65D22.5, 16 PLY - 120 PSI

Torque wheel nuts to 500 ft. lbs (these conditions must be maintained to handle rated loads on this crane.)

CAPACITIES ARE IN POUNDS AND APPLY TO OPERATION ON FIRM LEVEL SURFACE								
LOAD RADIUS FEET	MAIN BOOM		MAIN BOOM OR BOOM EXTENSION					
	ON RUBBER 360° ROTATION	ON RUBBER OVER FRONT	O/R'S IN & DOWN 360° ROTATION	O/R'S IN & DOWN OVER FRONT	O/R'S OUT & DOWN 360° ROTATION			
6	16400	18500	30000	36000	36000			
8	13000	15000	25000	30400	30400			
10	10800	12350	20300	25000	25000			
12	9000	10450	15500	20800	20800			
14	7550	9000	11500	18700	18700			
16	6450	7800	9000	16700	16700			
18	5600	6850	7500	14900	14900			
20	4800	6100	6400	13500	13500			
22	4150	5400	5500	12100	12100			
24	3600	4650	4800	10900	10900			
26	3100	4000	4100	9850	9850			
28	2700	3500	3500	8950	8950			
30	2350	3050	3050	8200	8200			
32	2000	2650	2650	7500	7500			
34	1750	2300	2300	7150	7000			
38	1300	1750	1750	5950	5650			
42	900	1400	1300	5000	4700			
46	600	1100	1000	4250	4000			
50	350	900	700	3650	3400			
54	---	---	---	---	3550			
58	---	---	---	---	3100			
62	---	---	---	---	2700			
66	---	---	---	---	2350			
70	---	---	---	---	2100			
BOOM EXT. OFFSET ANGLE	BOOM EXTENSION - STRAIGHT OR OFFSET							
	MAIN BOOM ANGLE							
	0°	15°	30°	40°	50°	60°	70°	75°
0°	2600	2750	3000	3400	4100	5100	6200	7000
15°	---	2500	2600	2700	2900	3300	4300	4800
30°	---	---	2300	2400	2500	2700	3200	3400

Deck load capacity 17,000 lbs, with empty boom retracted over front. Deck load must be centered behind front axle. Speed must be less than 2 MPH. Maximum travel 200 ft. in 30 minutes on smooth pavement.

Pick and Carry with the shortest practical boom, centered over the front. Operate with boom as low as possible with the load close to the ground. Pick and Carry capacities are for smooth, level paved surface.

The booms on this unit are all steel and have no line voltage rating - No electrical insulation value.

Boom extension deduct: 500 lbs. when stowed on base boom.

Ensure anti-two-block switch is functional after deploying or stowing boom extension.

LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION OF THE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.

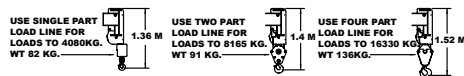
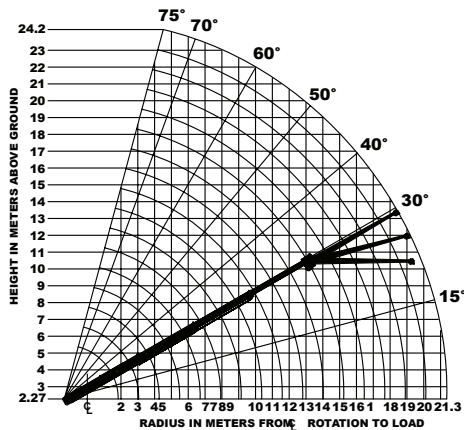
EXCEEDING CAPACITY RATINGS OR APPLYING SIDE LOADS TO THE BOOM OR BOOM EXTENSION IS MISUSE, HAZARDOUS, AND VOIDS WARRANTY.

CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY. BOOM EXTENSION MAY ONLY CARRY LOADS WITH OUTRIGGERS DOWN.

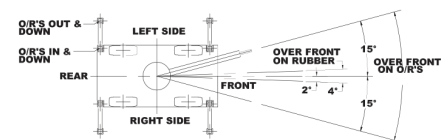
CAPACITIES ON OUTRIGGERS ARE 85% OF TIPPING LOADS. CAPACITIES ON RUBBER ARE 75% OF TIPPING LOADS. CAPACITIES BELOW BOLD LINE ARE LIMITED BY TIPPING. OTHER CAPACITIES ARE LIMITED BY STRUCTURAL OR HYDRAULIC CAPABILITY.

**MAXIMUM HYDRAULIC PRESSURE: 3000 PSI**

## Load Chart Metric



Load hooks, downhaul weights, hook blocks and other load handling devices except hoist rope shall be considered part of the load.



The load hoist line on this unit must be 14.3mm dia. 6x36-EIP-RRL-IWRC wire rope (or equivalent) with a minimum breaking strength of 140 kN.

Approved tires: OTR 385/65D22.5, 16 PLY - 825 kPa  
Torque wheel nuts to 680Nm (these conditions must be maintained to handle rated loads on this crane.)

CAPACITIES ARE IN KILOGRAMS AND APPLY TO OPERATION ON FIRM LEVEL SURFACE								
LOAD RADIUS METERS	MAIN BOOM		MAIN BOOM OR BOOM EXTENSION					
	ON RUBBER 360° ROTATION	ON RUBBER OVER FRONT	O/R'S IN & DOWN 360° ROTATION	O/R'S IN & DOWN OVER FRONT	O/R'S OUT & DOWN 360° ROTATION			
1.8	7440	8400	13600	16330	16330			
2.0	6900	7880	12950	15600	15600			
2.5	5790	6680	11120	13540	13540			
3.0	4970	5680	9370	11530	11530			
3.5	4280	4930	7590	9770	9770			
4.0	3690	4350	5940	8890	8890			
4.5	3210	3860	4690	8130	8130			
5.0	2840	3440	3920	7400	7400			
6.0	2230	2820	2970	6220	6220			
7.0	1760	2280	2340	5210	5210			
8.0	1380	1780	1820	4410	4410			
9.0	1100	1430	1420	3800	3800			
10.0	860	1130	1130	3330	3300			
11.0	680	900	900	2960	2850			
12.0	520	730	710	2540	2400			
13.0	380	610	560	2210	2080			
14.0	270	500	450	1930	1820			
15.0	190	420	340	1700	1590			
15.2	160	410	310	1650	1540			
16.0	---	---	---	---	1610			
17.0	---	---	---	---	1520			
18.0	---	---	---	---	1360			
20.0	---	---	---	---	1080			
21.3	---	---	---	---	950			
BOOM EXT. OFFSET ANGLE	BOOM EXTENSION CAPACITIES- STRAIGHT OR OFFSET							
	MAIN BOOM ANGLE							
	0°	15°	30°	40°	50°	60°	70°	75°
0°	1180	1250	1360	1540	1860	2310	2810	3170
15°	---	1130	1180	1220	1310	1490	1950	2180
30°	---	---	1040	1090	1130	1220	1450	1540

Deck load capacity 7,700 kg, with empty boom retracted over front. Deck load must be centered behind front axle. Speed must be less than 3.2 km/h. Maximum travel 60m. in 30 minutes on smooth pavement.

Pick and Carry with the shortest practical boom, centered over the front. Operate with boom as low as possible with the load close to the ground. Pick and Carry capacities are for smooth, level paved surface.

The booms on this unit are all steel and have no line voltage rating - No electrical insulation value.

Boom extension deduct: 220 kg. when stowed on base boom.

Ensure anti-two-block switch is functional after deploying or stowing boom extension.

# IC-250-E Industrial Crane

LOAD RADIUS IS THE HORIZONTAL DISTANCE FROM THE CENTER OF ROTATION OF THE UNLOADED CRANE TO THE VERTICAL LOAD LINE WITH THE LOAD APPLIED.

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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.

**MAXIMUM HYDRAULIC PRESSURE: 207 BAR**

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