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BMC's IC-35-2E is a self-propelled industrial crane designed for in-plant lifting and material handling applications. It has the special features of low height, narrow width, short length, cargo deck, rear wheel steer, and front-wheel drive. The basic unit consists of a chassis and a hydraulic boom assembly. The chassis includes a frame, four hydraulic outriggers, engine, a variable speed hydrostatic transmission, front driving and rear power steering axles. The boom assembly includes a hydraulic-powered continuous rotation turret, a three-section telescopic boom, a hydraulic boom-elevating cylinder, hydraulic boom extension cylinders, and a hydraulic-powered hoist. A Rated Capacity Limiter is standard.

IC-35-2E:

This model includes a 3-section hydraulically extended boom with capacity of 8,000 lb (3,630 kg) at a 4 ft (1.22 m) load radius. It has a horizontal reach of 19 ft 2 in (5.84 m), and a vertical reach of 26 ft (7.92 m). Hoist is located on back of turret.

GENERAL:**Length:**

Chassis	9 ft 11 in (3.02 m)
Overall	11 ft 11 in (3.63 m)

Width: 5 ft 0 in (1.52 m)

Height:

Deck	28 in (71 cm)
Overall	6 ft 6 in (1.98 m)

Wheelbase: 6 ft 0 in (1.83 m)

Ground Clearance:

Chassis	7 in (18 cm)
Minimum (Axle)	5 in (13 cm)

Angle of Approach: 26°

Angle of Departure: 21°

Turning Radius: (Minimum) 11 ft 2 in (3.40 m)

Aisle Width: 90° Turn (Min.) 8 ft 3 in (2.51 m)

Travel Speed: (Max.) 10 MPH (16 KPH)

Weight Distribution:

Front Axle	3,580 lb (1,620 kg)
Rear Axle	3,950 lb (1,790 kg)
Total	7,530 lb (3,410 kg)

Tire Footprint Area: 46 in² (297 cm²), each

Outrigger Footprint Area: 48 in² (310 cm²), each

Drawbar Pull: 2,100 lb (950 kg)

Gradeability: 30% (16°)

Boom Movement:

Rotation	Continuous
Elevation	70°
Extension	12 ft (3.66 m)
Tailswing	3 ft 6 in (1.07 m)

Boom Speeds:

Rotation	(1.8 RPM)
Elevation	17 seconds
Extension	32 seconds

Sheave Height:

Without Jib	26 ft 0 in (7.92 m)
With Jib	33 ft 4 in (10.16 m)

Horizontal Reach:

Without Jib	19 ft 2 in (5.84 m), C/L Rotation 13 ft 11 in (4.24 m), Front of Frame
With Jib	27 ft 2 in (8.28 m), C/L Rotation 21 ft 11 in (6.68 m), Front of Frame

Engine:**Standard Gasoline:****GM 2.4L, Woodward EFI Dual Fuel, EPA Tier II Certified:**

Industrial gasoline engine complete with multi-port electronic fuel injection, dual fuel, and engine management system. Water-cooled, 4-cylinder, 147 CID (2.4 L), 3.44 in (8.74 cm) bore, 3.94 in (10.01 cm) stroke, 65 HP (48 kw) at governed speed of 2,500 RPM. Maximum torque- 137 foot pounds (186 N-m) at 2,300 RPM. 70-amp alternator, 13.5 gallon (51 L) gas tank, and 33 lb (15 kg) LPG tank. Includes high temperature, low oil pressure shutdown, and engine management system. Also includes a catalytic converter muffler.

Optional Engines and Accessories:**Cummins 2.3L, EPA Tier IV Certified:**

Cummins Model A2300 diesel engine. Water-cooled, 4-cylinder, 140 CID (2.3 L), 3.46 in bore (8.79 cm), 3.70 in (9.40 cm) stroke. 46 HP (34.0 kw) at governed speed of 2,600 RPM. Maximum torque, 110 foot pounds (150 N-m) at 1,800 RPM. 45-amp alternator. (No weight change from gasoline engine)

Spark Arrestor Muffler:

Spark arrestor muffler used in addition to standard muffler: Net Weight 10 lb (4.5 kg)

Engine Shutdown Kit:

Consists of Murphy switches that shut engine down if water temperature is excessive, or if oil pressure is too low. For diesel engine only.

Hydrostatic Transmission Pump:**Standard:**

Piston type, 2.8 CID (46 cm³) per revolution, direct driven from engine crankshaft. Maximum flow 34 GPM (129 LPM). Maximum pressure 4,000 PSI (276 bar). Electrohydraulic servo and electronic, automotive type controller.

Front Axle:**Standard:**

Channel shaped structure houses torque hubs, brakes and hydraulic drive motors. Front axle oscillates a total of 1-12 in (3.81 cm) to minimize wheel spin on uneven surfaces.

Rear Axle:**Standard:**

Fixed rigid to frame. Box beam crossmember and thrust bearing supported wheel hubs.

Steering:**Standard:**

Full-hydraulic steering unit controls 2-1/2 in (6.35 cm) steering cylinder attached to rear axle. Limited steering if engine dies.

Brakes:**Standard:**

Primary braking from hydrostatic transmission. Foot-actuated disc brake attached to each torque hub for additional braking in some conditions. Parking brake switch locks brakes to hold crane when not being driven.

Tires:**Standard:**

7.5 x 10 pneumatic tires, 16-Ply Rating. Pressurized to 150 PSI (1,000 kPa) for crane rated loads.

Optional Tires:**Solid Rubber Tires:**

For applications where hazardous ground conditions exist. These tires do not change the overall height or ground clearance: Net Weight: 240 lb (109 kg)

Solid Rubber Tires, Non-Marking:

Same as solid-rubber tires except non-marking: Net Weight: 240 lb (109 kg)

Foam Filling of Tires:

Standard tires, foam filled to prevent flats: Net Weight 312 lb (142 kg)

Spare Tire & Wheel:

7.5 x 10 pneumatic tires, 16-Ply Rating. Front or rear axle must be specified: Net Weight: 80 lb (36 kg)

Chassis:**Standard:****Cargo Deck:**

29 ft² area (2.7 m²). A maximum of 6,000 lb (2,720 kg) may be carried on the deck when centered over, or to the rear of the front axle. Nine stake pockets are provided in deck, and nine 1 in (2.5 cm) diameter pipe stakes.

Outriggers:

Four hydraulic outriggers with box beam construction. Independent controls for each. Hydraulic cylinders are equipped with direct connected holding valves. Pad dimensions are 6 in (15 cm) by 8 in (20 cm).

Lifting Rings:

Includes four lift rings, one at each corner of the chassis for attaching lifting sling cables.

Front Pulling Eye:

Heavy eye in front bumper provides for attachment of hook block, so main winch line can be used for pulling loads at or near floor level.

Optional Chassis 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 3,000 lbs (1,360 kg), at 20 ft (6.1 m) per-minute. Winch drum is 3 1/2-in (8.9 cm) diameter by 6 1/4 in (15.8 cm) long. The winch includes 80 ft (24 m) of 5/16 in (7.9 mm) wire rope, hook, and four-way roller guide: Net Weight: 120 lb (54 kg)

Pintle Hook:

T-60-A Holland 5-ton (4,500 kg) pintle hook mounted on rear frame member: Net Weight: 7 lb (3.2 Kg)

Lifting Sling:

Sling to attach to Lifting Rings: Net Weight: 20 lb (9.1 kg)

Optional Chassis Accessories: (Cont'd)**Headlight and Taillight Grilles:**

Consists of welded steel protective grilles for headlights and taillights. Easily removable or swung out of way for replacing bulbs: Net Weight: 20 lb (9.1 kg)

Rear View Mirrors:

One right-hand and one left-hand mirror, 6 in (15 cm) diameter, mounted on deck stakes. Pivot out of way when contacted by obstacle on side of deck: Net Weight: 12 lb (5.4 kg)

Operator's Compartment:**Standard:**

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

Operator's Compartment Accessories:**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. Cab door adds 2 in (5 cm) to crane width on operator's side. Includes heater with 2-speed fan and 12-volt electric windshield wiper. Includes sliding window in the door, and one fold out window in rear to provide flow-through ventilation. Defroster fan and dome light included: Net Weight: 180 lb (82 kg)

Cab Heater:

Heater with two-speed fan for units without All Weather Cab: Net Weight: 15 lb (6.8 kg)

Operator Guard:

Tubular steel weldment with heavy expanded steel mesh top bolts over operator's compartment for units without All Weather Cabs. Net Weight: 55 lb (25 kg)

Operator Guard Cover:

Vinyl cover with windows to go over operator guard for inclement weather operations: Net Weight: 12 lb (5.4 kg)

Floormat:

Ribbed vinyl mat with foam backing for operator comfort.

Electrical System:**Standard:****Electrical Group:**

12-Volt DC.

Battery:

Group 24 with 550 CCA rating.

Lighting Group:

Consists of 2 headlights and taillights, and a 12-volt horn activated by button on instrument panel.

Instrument Group:

Located at operator's station. Includes: fuel gauge, ammeter, oil pressure, water temperature gauges, and hydraulic oil temperature gauges. Hourmeter records hours only during actual engine operation.

Outrigger Alarm System:

112-decibel alarm with alternating two-tone sound is actuated by a switch when the **OUTRIGGER DOWN** controls are operated.

Back-up Alarm:

Provides pulsating 97-decibel sound from solid-state alarm when ignition is ON and transmission is in **REVERSE**.

Optional Electrical Accessories:**Strobe Lights:**

Two yellow strobe lights mounted on turret for high visibility. Flash 60-120 times per minute. Draw 0.5 amps each. Includes operator-controlled switch.

Boom Work Lights:

Two work lights, one on the side of the boom to light the boom tip, and one on the side of the turret to light the ground under the boom tip. Includes switch at operator's station: Net Weight: 10 lb (4.5 kg)

Hydraulic System:**Standard:**

Tandem pump mounted to rear end of hydrostatic piston pump, which is driven by the engine crankshaft. Delivers 6 GPM (23 LPM) at 2,600 PSI (179 bar) for boom circuits and 17 GPM (64 LPM) at 2,500 PSI (172 bar) (for hoist circuit). System protected by relief valves and two 10-micron filters. Hydraulic reservoir with 14 gallons (53 L) capacity.

Boom Assembly:**Standard:**

Three-section, high-strength steel construction, equipped with bearing pads for efficient support and extension. Double-acting hydraulic cylinders extend boom sections. The primary extension cylinder and the double-acting boom elevation cylinder are equipped with direct connected holding valves. Boom angle indicator provided on the side of boom.

Boom Hoist:**Standard:**

Turret mounted, planetary gear hoist is hydraulically powered to provide bare-drum line pull of 5,000 lb (2,270 kg) and a line speed of 86 feet-per-minute (26 meters per minute). Hoist includes 85 ft (26 m) of 3/8 in (9.5 mm) wire rope, downhaul weight, swivel hook and sheave block for 2-part line. (Required for lifts over 4,000 lb (1,815 kg)). Sheave block weight is 60 lb (27 kg). Downhaul weight is 40 lb (18 kg).

Boom Swing:**Standard:**

Heavy-duty ball bearing rotation gear with external teeth support the boom. Rotation is powered by hydraulic motor and worm gear drive. 360° continuous rotation.

Boom Attachments:**Standard:****Anti-Two-Block Device:**

Has electric solenoid dump valve, which prevents damage to hoist rope and machine components from accidentally pulling load hook against boom tip. This valve will dump **HOIST RAISE**, **TELESCOPE EXTEND**, **BOOM LOWER**, **SWING LEFT**, and **SWING RIGHT** circuits. No other circuits are affected. These circuits are returned to normal operations by operating the **HOIST LOWER** or the **TELESCOPE RETRACT** control. This system uses a trip arm to activate switch.

Rated Capacity Limiter:

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

Optional Boom Attachments:**Boom Extension - 8 Ft (2.44 m):**

Provides 8 ft (2.44 m) of additional length for lifting loads with load line. Boom extension may be stowed along side base boom section when not in use. Tip sheave, attaching brackets, and pins included. Deduct 100 lb (45 kg) from Capacity Chart when boom extension is in stowed position. Includes switch and trip arm for Anti-Two-Block system: Net Weight: 130 lb (59 kg)

Optional Boom Attachments: (Cont'd)

Boom Extension - 8 Ft (2.44 m) Offset:

Provides 8 ft (2.44 m) of additional length for lifting loads with load line. Boom extension may be stowed along side base boom section when not in use. Tip sheave, attaching brackets, and pins included. Deduct 100 lb (45 kg) from Capacity Chart when boom extension is in stowed position. Includes switch and trip arm for Anti-Two-Block system. Three settings: 0° (in-line), 15° offset, and 30° offset: Net Weight: 150 lb (68 kg)

Searcher Hook:

2,000 lb (907 kg) capacity. Swivel hook with spring latch hangs from support structure, projecting outward from boom tip. Net Weight: 30 lb (14 kg)

Should you require an option or special equipment not listed please consult your dealer salesperson or BMC®.

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

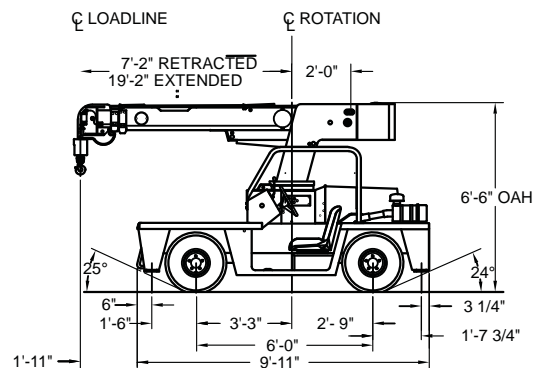
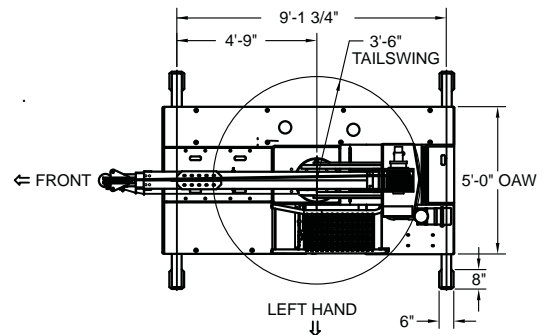
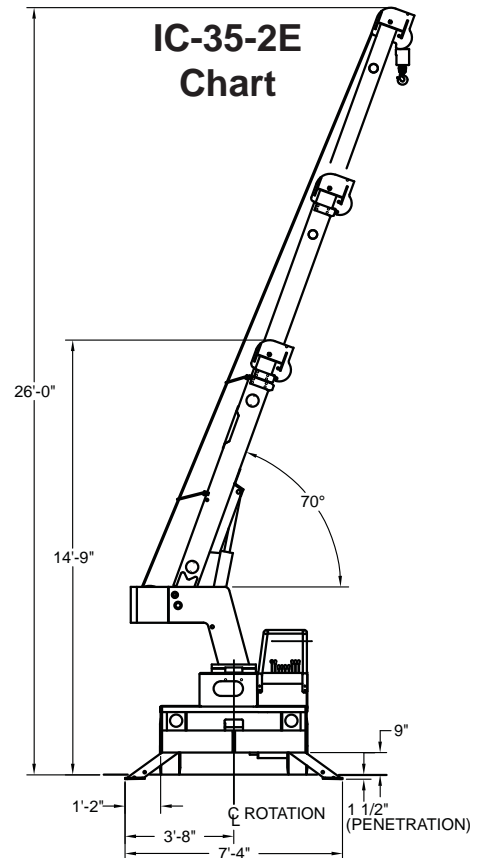
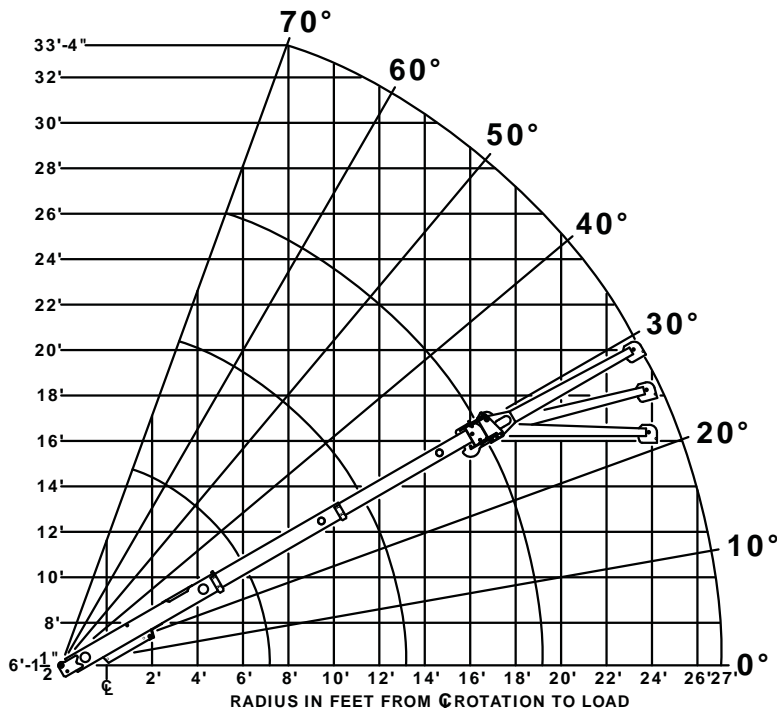
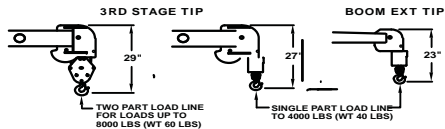


CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE									
LOAD RADIUS FEET	MAIN BOOM OR EXTENSION CAPACITIES IN POUNDS								
	360° ROTATION		OVER FRONT						
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS					
MAIN BOOM	4	5000	8000	6700	8000				
	5	4000	6800	5800	6800				
	6	2850	5850	5100	5850				
	8	1800	4150	3500	4150				
	10	1250	3200	2350	3400				
	12	900	2350	1750	2850				
	14	700	1850	1350	2450				
	16	600	1500	1100	2150				
	18	500	1250	950	1950				
	19	450	1150	900	1850				
8' BOOM EXTENSION	20	400	1100	850	1600				
	22	300	900	700	1450				
	24	250	800	600	1300				
	26	200	700	500	1150				
	27	150	650	450	1100				
	BOOM EXTENSION		8-FOOT BOOM EXTENSION - STRAIGHT OR OFFSET						
	ANGLE		MAIN BOOM ANGLE						
			0°	10°	20°	30°	40°	50°	60°
+* 0°		1100	1200	1300	1450	1600	1850	2300	3500
* 15°		—	—	1100	1250	1350	1500	1700	2050
* 30°		—	—	—	1100	1200	1300	1450	1600

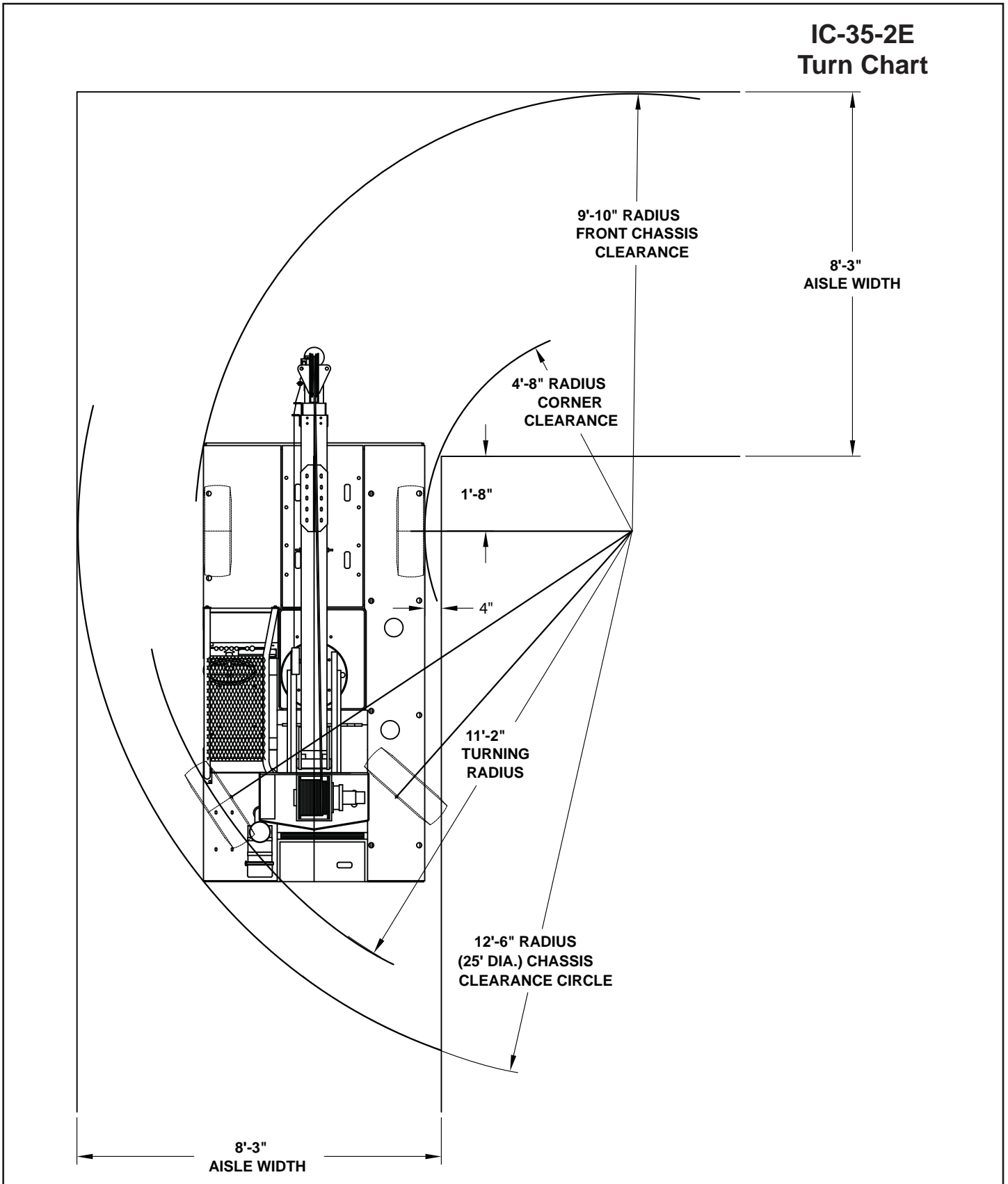
+ USE 0° FOR STRAIGHT BOOM EXTENSION.
* USE 0°, 15° OR 30° FOR OFFSET BOOM EXTENSION.

CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY. BOOM EXTENSION DEDUCT: 100 LBS. WHEN STOWED ON BASE BOOM. DO NOT PICK & CARRY WITH LOADS ON BOOM EXTENSION.

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 CAPABILITIES. MAXIMUM HYDRAULIC PRESSURE 2600 PSI.



**IC-35-2E
Turn Chart**



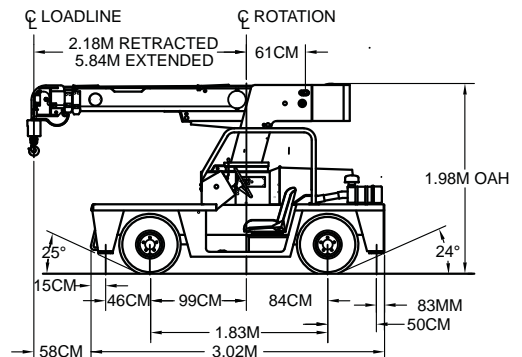
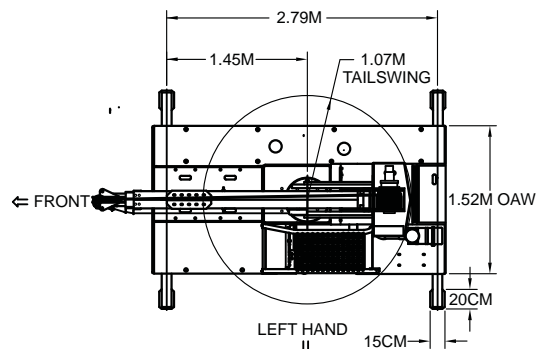
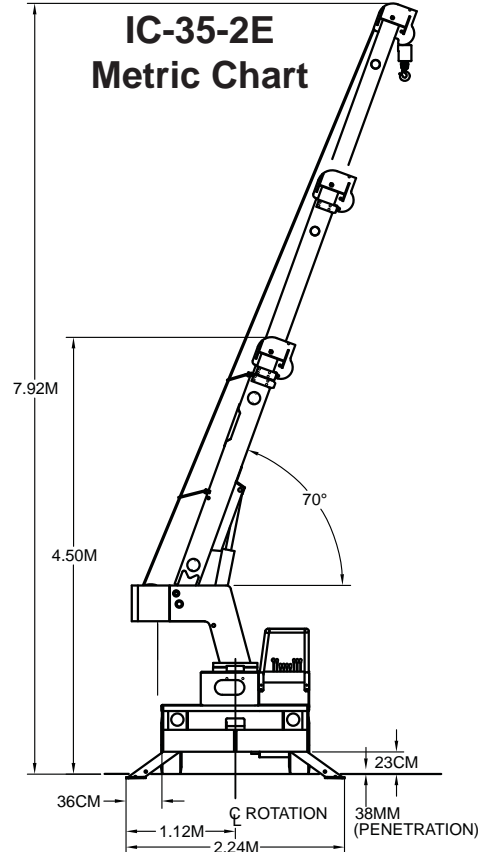
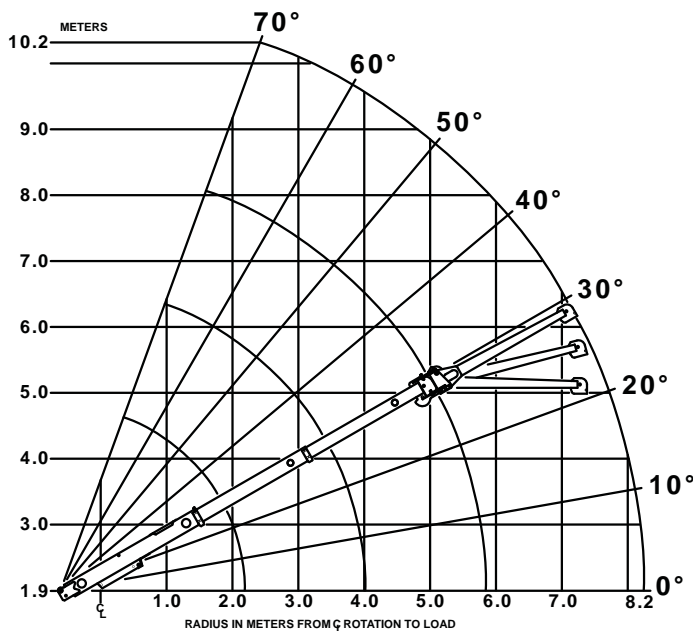
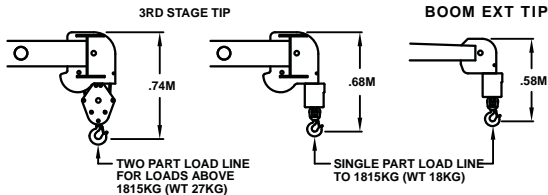
CAPACITIES APPLY TO OPERATION ON FIRM LEVEL SURFACE									
LOAD RADIUS METERS	MAIN BOOM OR EXTENSION CAPACITIES IN KILOGRAMS								
	360° ROTATION		OVER FRONT						
	ON RUBBER	ON OUTRIGGERS	ON RUBBER	ON OUTRIGGERS					
1.2	2260	3620	3040	3630					
1.5	1850	3120	2650	3120					
2.0	1090	2420	2120	2420					
2.5	780	1830	1520	1830					
3.0	580	1480	1090	1560					
3.5	440	1160	850	1350					
4.0	350	920	680	1180					
4.5	300	770	560	1050					
5.0	260	650	480	950					
5.8	200	520	410	840					
6.0	190	500	390	750					
6.5	150	430	340	680					
7.0	120	380	290	620					
7.5	100	350	250	570					
8.2	70	290	200	500					
2.44M BOOM EXTENSION	2.44M BOOM EXTENSION - STRAIGHT OR OFFSET								
	MAIN BOOM ANGLE								
	ANGLE	0°	10°	20°	30°	40°	50°	60°	70°
	+* 0°	500	540	590	660	720	840	1040	1590
	* 15°	—	—	500	560	610	680	770	930
* 30°	—	—	—	500	540	590	660	720	

+ USE 0° FOR STRAIGHT BOOM EXTENSION.

* USE 0°, 15° OR 30° FOR OFFSET BOOM EXTENSION.

CAUTION: BOOM EXTENSION LOADS MUST NOT EXCEED MAIN BOOM CAPACITY. BOOM EXTENSION DEDUCT: 45KG WHEN STOWED ON BASE BOOM. DO NOT PICK & CARRY WITH LOADS ON BOOM EXTENSION.

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 CAPABILITIES. MAXIMUM HYDRAULIC PRESSURE 179 BAR.



**IC-35-2E
Metric Turn Chart**

