ATC-822

Hydraulic All-Terrain Crane
22-ton *(20 mt)*

- 22-ton at 9' *(2.74 m)* radius
- 121' *(36.88 m)* maximum tip height
- 39,223 lbs *(17 791 kg)* gross vehicle weight
- 27.12' - 70.12' *(8.27 - 21.37 m)* full power, three-section boom with quick reeve boom head
- Optional 44' *(13.41 m)* two-piece (bi-fold) lattice fly, stowable, offsettable to 2°, 20° and 40°
- Microguard 434 rated capacity limiter
- Off-highway 230 hp Cummins engine
- Pilot-operated hydraulic controls
- 1500/3000 lb counterweight capability

Link-Belt
CONSTRUCTION EQUIPMENT

ATC-822
Hydraulic All-Terrain Crane

Continuous innovation... Designed versatility


Engine hood design provides easy access for maintenance.


ZF automatic/powershift transmission

Right sliding window in carrier cab provides improved ventilation.

The ATC-822 is designed with job-proven innovations to give you the best value in its class!

- **ZF automatic or full power shift** transmission
- Hydraulic motor-operated **oil cooler** keeps engine and hydraulic system running cooler
- Two-piece (bi-fold) lattice fly, stowable, offsettable to 2°, 20° and 40° for increased versatility
- **1500/3000 lb counterweight** capability
- Confined area lifting capacities **(CALC™)** system allows work in confined work areas where full outrigger extension is not possible.
- Optional one-piece and two-piece **swing-away lattice flys** are easily stored or removed for transport if necessary.
- **Metri-Pak wire harnesses** have sealed relays and connectors throughout for outstanding long-term reliability. All wires have flame retardant polyethylene insulation, resulting in a higher heat resistant wiring system.
- Features the **"Boss," Link-Belt's patented boom design** of high strength angle cords and high formability sidewall embossments.


Circuit breakers, located in a remote location, run cooler, last longer and improve reliability.


Aluminum, sound floats

Operator cab features

- Sound-suppressed **environmental cab** with large front window for excellent visibility
- Tinted glass
- **Sliding right side and rear windows** and swing-up **top window** provide excellent ventilation
- **Integral rated capacity limiter** aids the operator in safe and efficient operation by continuously monitoring boom length, boom angle, head height, radius of load, machine configuration, allowed load and percent of allowed load.

Carrier cab offers highway comfort and control

- **Tilt/telescoping steering wheel** connected to **rack and pinion steering**
- Dash-mounted **comprehensive instrumentation with lighted gauges**
- **Right side, rear sliding and roll-down door windows**
- Fully adjustable fabric seat
- Suspended pedals
- Rear view mirrors
- Automotive-type fuses

Roadability with job site maneuverability

The ATC-822 provides a combination of highway speed with job site maneuverability, low axle loadings and a ZF electronic power shift/automatic transmission. With a spring-mounted suspension and oscillating cylinders acting as shock absorbers, plus radial tires, highway travel becomes smooth and comfortable.

Powerful hydraulics

- For greater productivity and control, the **four-pump hydraulic circuit** allows simultaneous function of boom hoist, winch and swing, setting the standard in the 22-ton *(20 mt)* class.
- Piston motor hydraulic hoist system delivers **superior hoisting**. Matched sizes of main and auxiliary winches provide equal maximum available line pulls of 9,080 lbs *(4 118 kg)* and maximum line speeds of 293 fpm *(89.3 m/min)* on 10-5/8" *(270 mm)* root diameter drums.

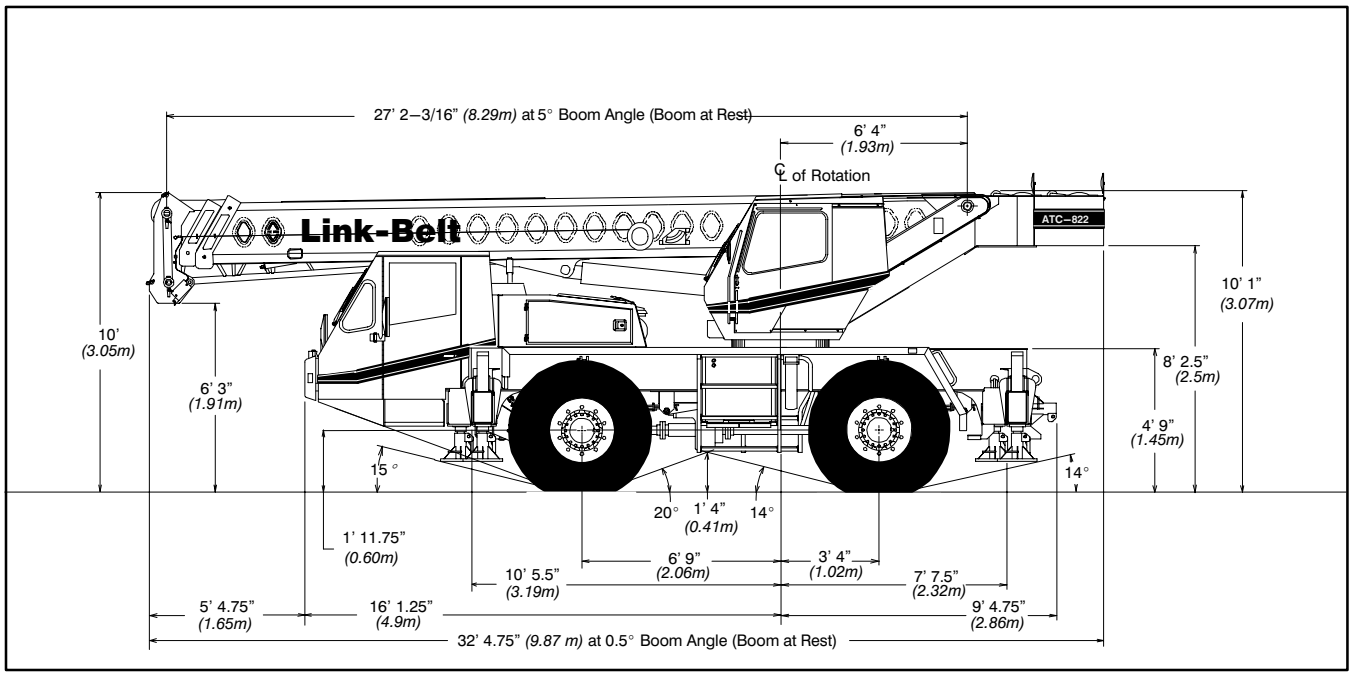
Litho in U.S.A. 08/01 #4259

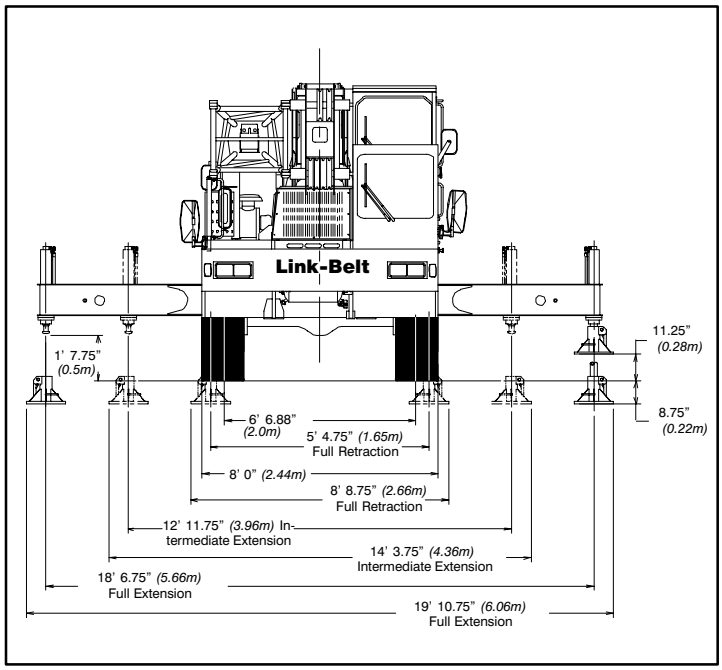
Specifications

Telescopic Boom All Terrain Crane

ATC–822

22–ton *(20 metric tons)*





General Dimensions	feet	*meters*
Turning radius (2–wheel steer)	29' 6"	*8.99*
Turning radius (4–wheel steer)	17' 6"	*5.33*
Turning radius (2–wheel steer, wall–to–wall)	32' 0"	*9.75*
Turning radius (4–wheel steer, wall–to–wall)	23' 6"	*7.16*
Tailswing	11' 1"	*3.38*

Upper Structure

■ Boom

Patented Design

- Boom side plates have diamond shaped impressions for superior strength to weight ratio and 100,000 p.s.i. *(689.5 MPa)* steel angle chords for lateral stiffness.
- Boom telescope sections are supported by top, bottom and adjustable side wear shoes to prevent metal to metal contact.

Standard Boom

- 27.12' to 70.12' *(8.27 – 21.37 m)* three–section full power boom.
- Mechanical Boom Angle Indicator

Boom Head

- Four 10 – 5/8" *(0.27 m)* root diameter non–metallic head sheaves handle up to eight parts of wire rope.
- Boom head is designed for quick reeve of hookblock.
- Rope dead end lugs provided on each side of boom head.
- Two, easily removable wire rope guards.

Boom Elevation

- One Link–Belt designed hydraulic cylinder with holding valve and bronze bushing in each end.
- Hand control for controlling boom elevation from –3° to 78°.

Optional Auxiliary Lifting Sheave

- Single 10–5/8" *(0.27 m)* root diameter non–metallic sheave with removable wire rope guard.
- Use with one or two parts of line off the optional auxiliary winch.
- Does not affect erection of fly or use of main head sheaves for multiple reeving.

Optional

- 25–ton *(22.7 mt)* 3–sheave, quick reeve hook block.
- 5–ton *(4.5 mt)* hook ball.
- Boom floodlight.

■ Fly

Optional

- 27' *(8.23 m)* One–piece lattice fly, stowable, offsettable to 2°, 20° or 40°.
- 27' to 44' *(8.23 to 13.41 m)* Two–piece (bi-fold) lattice fly, stowable, offsettable to 2°, 20° or 40°.

■ Cab and Controls

Environmental Cab

- Isolated from sound with acoustical foam insulation.
- Six–way adjustable operator's seat with retractable seat belt.
- All windows are tinted and tempered safety glass.
- Slide by door opens to 28" *(0.71 m)* width.
- Sliding rear and right side windows and swing up roof windows for maximum visibility and ventilation.
- Audible swing alarm.
- Backup alarm
- Mirrors
- Top hatch window wiper
- Warning horn
- Working lights
- Defrost
- Cup holder
- Fire extinguisher
- Dome light
- Front and rear steer indicator
- Windshield wiper and washer
- Engine monitoring system
- Circulating fan
- Sun screen

Optional

- Amber strobe light
- Amber rotating beacon
- 360° cab–mounted spotlight
- Diesel or hydraulic cab heater

Controls

Carrier Remote Control Steering – Standard – Relay switch design prevents operation of upper crane functions if crane is started from the carrier. If crane is started from the upper the carrier functions will not operate.

- Upper cab contains rear–axle steering wheel.
- Toggle switch for front–axle steer
- Upper shift for four forward and one reverse speeds.
- Top speed when operating from upper cab is 37 m.p.h. *(59.5 km/hr)*.
- Top reverse speed when operating from upper cab is 6 m.p.h. *(9.7 km/hr)*.

Dual–axis, pilot–operated, hydraulic controls (joystick type) for:

- Main winch
- Optional auxiliary winch
- Outrigger controls located on dash and and sight level bubble also provided in upper cab.
- Boom hoist
- Swing

Foot controls for:

- Boom telescope
- Service brake
- Swing brake
- Engine throttle

Cab Instrumentation

Dash mounted gauges for:

- Hydraulic oil temperature
- Transmission temperature
- Water temperature
- Convertor temperature
- Tachometer
- Oil pressure
- Fuel
- Voltmeter
- Air pressure

■ Rated Capacity Limiter

- **Microguard 434** Graphic audio–visual warning system built into dash with anti–two block and function limiters.

Operating data available includes:

- Machine configuration.
- Boom length
- Head height
- Allowed load
- % of allowed load
- Boom angle
- Radius of load
- Actual load

Presettable alarms include:

- Maximum and minimum boom angles.
- Maximum tip height.
- Maximum boom length.
- Swing left/right positions.
- Operator defined area alarm is standard.
- Anti–two block weight designed for quick reeve of hookblock.

Optional

- **Internal RCL light bar:** Visually informs operator when crane is approaching maximum load capacity with a series of three lights; green, yellow and red.
- **External RCL light bar:** Visually informs ground crew when crane is approaching maximum load capacity kickouts and presettable alarms with a series of three lights; green, yellow and red.

■ Swing

- Bi–directional hydraulic swing motor mounted to a planetary reducer for 360° continuous smooth swing at 2.0 r.p.m.
- **Swing parking brake** – Foot operated, manually applied/released disc brake mounted on the speed reducer.
- **Swing brake** – Foot operated, spring released disc brake mounted on the speed reducer.
- **Swing lock** – Standard; two position travel lock operated from the operator's cab.
  - Optional – 360° swing lock.
- **Counterweight** – Bolted to upper structure frame.
  - 1,500 lbs. *(680 kg)* for a two–drum machine.
  - 2,365 lbs. *(1 073 kg)* for a one–drum machine.
  - Optional – additional 1,500 *(680 kg)* counterweight.

Optional

- 360° swing lock (meets New York City requirements).

■ Hydraulic System

Main Pump

- Three–section gear–type pump.
- Combined pump capacity 75 gpm *(283.8 lpm)*.
- Driven off of transmission.
- Pump disconnect for cold–weather starting.
- Two pumps operate at 3,500 p.s.i. *(246 kg/cm^2)* and a third operates at 2,600 p.s.i. *(183 kg/cm^2)*.

Steering Pump

- Single section rear pump, 20 gpm *(75.7 lpm)* maximum. Powered by carrier engine through an auxiliary pump drive.
- Pump operates at 2,000 p.s.i. *(141 kg/cm^2)*.

Reservoir

- 63 gal. *(238.5 L)* capacity. Single diffuser for deaeration.

Filtration:

- One 10–micron filter located outside hydraulic reservoir.
- Accessible for easy replacement.

Control Valves:

- Five separate control valves allow simultaneous operation of all crane functions.

Oil Seals

- Redundant oil seal technology incorporates 3–rod sealing surfaces on boomhoist, boom extend/retract, outrigger jack and oscillation cylinders.

(continued on next page)

(Upper Structure continued)

■ Load Hoist System

Standard

- 1M main winch with lagging.
- Single–speed motor and automatic brake.
- Power up/down mode of operation with hoist drum cable follower.
- Bi–directional piston–type hydraulic motor, driven through a planetary reduction unit for positive operator control under all load conditions.
- Electronic drum indicators.
- Asynchronous parallel double crossover grooved drums minimize rope harmonic motion.
- 350' *(106.68 m)* 5/8", 18 x 19, rotation resistant wire rope.

Line Pulls and Speeds

- Maximum line pull 9,080 lbs. *(4 118 kg)* and maximum line speed of 293 f.p.m. *(89.30 m/min)* on standard 10–5/8" *(0.27 m)* root diameter grooved drum.

Carrier

■ Type

- 8' 0" *(2.44 m)* wide, 121" *(3.07 m)* wheelbase.
- 4 x 4 x 4 – (4–wheel steer, 4–wheel drive) *For rough terrain with limited turning area.*

Frame

- 100,000 p.s.i. *(689.5 MPa)* steel, double walled construction.
- Integral 100,000 p.s.i. *(689.5 MPa)* steel outrigger boxes.

Standard Carrier Equipment

- Two front and two rear carrier steps.
- Battery box and engine compartment
- Skid–resistant finish on carrier deck.
- Air–cleaner service indicator
- Carrier mounted travel lights
- Desiccant type air dryer
- Cab access steps
- Locking storage
- Towing lugs
- Full deck fenders
- Back–up alarm
- Mud flaps

Optional

- Front and rear towing shackles.
- Rear mounted pintle hook.

■ Engine

Engine	Cummins ISB 230
Cylinders – cycle	6 – 4
Bore	4.02 in. *(102.11 mm)*
Stroke	4.72 in. *(119.89 mm)*
Displacement	359 cu. in. *(5 884 cm^3)*
Maximum brake hp	230@ 2500 rpm
Peak torque (ft. lb.)	605 @ 1500 rpm
Electric system	12 volt
Fuel capacity	40 gallons *(151.4 L)*
Alternator	130 amps
Crankcase capacity (total system)	17.3 qts. *(16.37 L)*

- Charge air cooled
- Dual battery system
- 110–volt block heater

■ Transmission

- ZF automatic or full power shift.
- Six speeds forward and three reverse.
- Integral transmission and torque convertor
- Front axle disconnect for two or four–wheel drive.

■ Axles

- Front and Rear – Heavy duty planetary drive/steer type with differential lock.
- Rear axle also includes rear steer lock.

■ Suspension

Front and Rear Axle

- Front and rear axle oscillation.
- Leaf spring suspension.
- Lock out cylinders serve as shock absorbers.
- Suspension automatically locks when operating from upper cab, except when upper cab is directly over rear.
- Front axle unlocks for pick and carry operations

■ Steering

- Independent, hydraulic two–wheel, four–wheel and "crab" steering.
  - **Front axle** – Sheppard steering controlled by steering wheel in carrier cab and toggle switch in upper cab.
  - **Rear axle** – Orbital steering unit by steering wheel in upper cab and toggle switch in carrier cab.

■ Tires

Front and Rear

- Standard 16.0 R 20, AT–2A (load range "M"), tubeless

Optional

- 17.5 R 25, XHC–2 star, tubeless.
- Spare tires and rims.

■ Brakes

Service

- Full air on all wheels; drum–type brakes at each wheel end.
  - **Front** – Dual leading wedge type; drum diameter 16 1/8" *(0.41 m)*. Shoe width 7" *(0.18 m)*. Two brake chambers per wheel.
  - **Rear** – Single leading wedge type; drum diameter 16 1/8" *(0.41 m)*. Shoe width 7" *(0.18 m)*. One brake chamber per wheel.

Parking/Emergency

- Spring applied, pneumatic released, upper and carrier cab controlled, mounted on rear axle.

■ Outriggers

- Three position operation capability.
- Four hydraulic, telescoping beam and jack outriggers.
- Vertical jack cylinders equipped with integral holding valve.
- Beams extend to 18.5' *(5.7 m)* centerline–to–centerline and retract to within 8' *(2.4 m)* overall width.
- Equipped with stowable, lightweight 16" *(0.41 m)* diameter aluminum floats.
- Controls and sight level bubble located in upper cab.

Confined Area Lifting Capacities (CALC™) System

- The crane is operational in one of the three outriggers positions and operational in confined areas in two positions (intermediate and full retraction. The three outrigger positions are:
  - Full extension – 18' 6–3/4" *(5.66 m)*.
  - Intermediate position – 12' 11–3/4" *(3.96 m)*.
  - Full retraction – 7' 4–3/4" *(2.3 m)*.
- Capacities are available with the outrigger beams in the intermediate and full retraction positions.
- When the outrigger position levers (located on the outrigger beams) are engaged, the operator can set the crane in the intermediate or full retraction outrigger position without having to leave the cab.

■ Electrical System

- Two 12–volt batteries.
- 800 cold cranking amps.
- 130 amp alternator.
- Automotive type wiring with sealed connectors.

Lights

- Four dual–beam sealed headlights.
- Front and rear directional signals.
- Four–way emergency flashers.
- Stop and tail lights.
- Clearance lights.
- Back–up lights.
- License plate lights.

■ Carrier Cab

- One–man cab, rubber mounted for vibration and sound insulation, equipped with:
- Six–way adjustable seat with seat belt
- Tilt/telescoping steering wheel
- Sliding right and rear tinted windows.
- Roll up/down left hand tinted door window.
- Rear view mirror
- Dome and dash lights
- 36,000 BTU heater
- Door lock
- Wiper and washer
- Horn
- Defroster
- Fire extinguisher

Cab Instrumentation – Equipped with:

Illuminated instrument panel

- Engine water temperature gauge
- Fuel level gauge
- Engine oil pressure gauge
- Front and rear air system pressure gauges
- Transmission oil temperature gauge
- Voltmeter
- Tachometer
- Hourmeter
- Speedometer
- Odometer
- Driving light switch
- High beam indicator light
- Turn signal indicator light
- Heater/defroster switch and temperature control
- Rear axle steer switch and indicator gauge
- Rear axle steer lock switch with indicator light
- Park brake valve with indicator light
- Rear axle differential lock switch with indicator light
- 4–wheel drive switch.

■ Travel Speeds and Gradability

Engine	Tires	Maximum Speed		*Gradability at stall	Maximum tractive effort at stall		Gradability at 1.0 mph *(1.6km/h)*	Maximum tractive effort at 1.0 mph *(1.6km/h)*	
		mph	*km/h*		lbs	*kg*		lbs.	*kg*
Cummins ISB230	16.0R20	55.0	*88.5*	63.0	23,343	*10 588*	56.9	21,354	*9 685*
	17.5R25	55.0	*88.5*	60.0	23,021	*10 442*	54.2	20,827	*9 447*

■ Axle Loads

Base machine with standard 27.12' — 70.12' *(8.27 m – 21.37 m)* three–section boom, 350' *(106.68 m),* 5/8" *(16 mm)* wire rope, 4 x 4 x 4 carrier with Cummins ISB230 engine, 16.0R20tires, full of fuel and counterweight.	G.V.W.[1]		Upper facing front				Upper facing rear			
			Front axle		Rear axle		Front axle		Rear axle	
	lbs.	*kg.*	lbs.	*kg.*	lbs.	*kg.*	lbs.	*kg.*	lbs.	*kg.*
	39,223	*17 791*	19,963	*9 055*	19,260	*8 736*	17,772	*8 061*	21,451	*9 730*
Ether injector for engine	14	*6*	16	*7*	–2	*–1*	16	*7*	–2	*–1*
Rear carrier mounted towing winch	370	*167*	–167	*–75*	537	*243*	–167	*–75*	537	*243*
17.5R25 tires	480	*218*	240	*109*	240	*109*	240	*109*	240	*109*
Driver in carrier cab	200	*91*	300	*136*	–100	*–45*	300	*136*	–100	*–45*
Rear carrier mounted pintle hook	25	*11*	–14	*–6*	39	*18*	–14	*–6*	39	*18*
Diesel heater with fuel in operator's cab	70	*32*	8	*4*	62	*28*	39	*18*	31	*14*
Hydraulic heater in operator's cab	110	*50*	12	*5*	98	*44*	61	*28*	49	*22*
Deduct 350' *(106.68 m)* of wire rope from front winch	–257	*–116*	173	*78*	–430	*–195*	–343	*–156*	86	*39*
Rear winch roller	60	*27*	–35	*–16*	95	*43*	75	*34*	–15	*–7*
Power up/down front winch w 350' *(106.68 m)* of rope	4	*2*	–1	*–0.5*	5	*2*	4	*2*	0	*0*
Deduct 350' *(106.68 m)* of wire rope from-front winch	–257	*117*	124	*56*	–381	*–173*	–294	*–133*	37	*17*
Front winch roller	60	*27*	–24	*–11*	84	*38*	63	*29*	–3	*–1*
360° mechanical (pin–on shear) swing lock	15	*7*	7	*3*	8	*4*	3	*1*	12	*5*
1,500 lbs. *(680 kg)* of counterweight	1,500	*680*	–935	*–424*	2,435	*1 105*	1,927	*874*	–427	*–194*
Fly brackets to boom base section for fly options	106	*48*	96	*44*	10	*5*	–26	*12*	132	*60*
27' *(8.23 m)* offsettable lattice fly (stowed)	1,052	*477*	1,243	*564*	–191	*–87*	–548	*248*	1,600	*726*
27' – 44' *(8.23 m–13.14 m)* offsettable lattice fly stowed (stowed)	1,475	*669*	1,516	*688*	–41	*–19*	–541	*248*	2,016	*914*
Boom floodlight	10	*5*	18	*8*	–8	*–4*	–11	*–5*	21	*10*
22–ton *(20 mt)* Hookblock stowed at boom head (3 sheave)	670	*304*	1,607	*729*	–937	*–425*	–1,164	*–528*	1,834	*832*
22–ton *(20 mt)* Hookblock stowed in the front storage compartment (3 sheave)	670	*304*	1,138	*516*	–468	*–212*	1,138	*516*	–468	*–212*
22–ton *(20 mt)* Hookblock stowed in the rear storage compartment (3 sheave)	670	*304*	–169	*–77*	839	*381*	–169	*–77*	839	*381*
5–ton *(4.5 mt)* Hookball at the boom head	189	*86*	462	*210*	–273	*–124*	–337	*–153*	526	*239*
5–ton *(4.5 mt)* Hookball in front storage compartment	189	*86*	321	*147*	–132	*–60*	321	*147*	–132	*–60*
5–ton *(4.5 mt)* Hookball in rear storage compartment	189	*86*	–48	*–22*	237	*108*	–48	*–22*	237	*108*
Auxiliary lifting sheave	110	*50*	274	*124*	–164	*–74*	–201	*–91*	311	*141*

[1] Adjust gross vehicle weight and axle loading according to component weight.
Note: All weights are ± 3%

Tire	Max. Load @ 55 mph *(88.50 km/hr)*
16.0 R 20	22,800 lbs. *(10 342 kg)*
17.5 R 25	22,800 lbs. *(10 342 kg)*

Lifting Capacities

Telescopic Boom All Terrain Crane

ATC–822

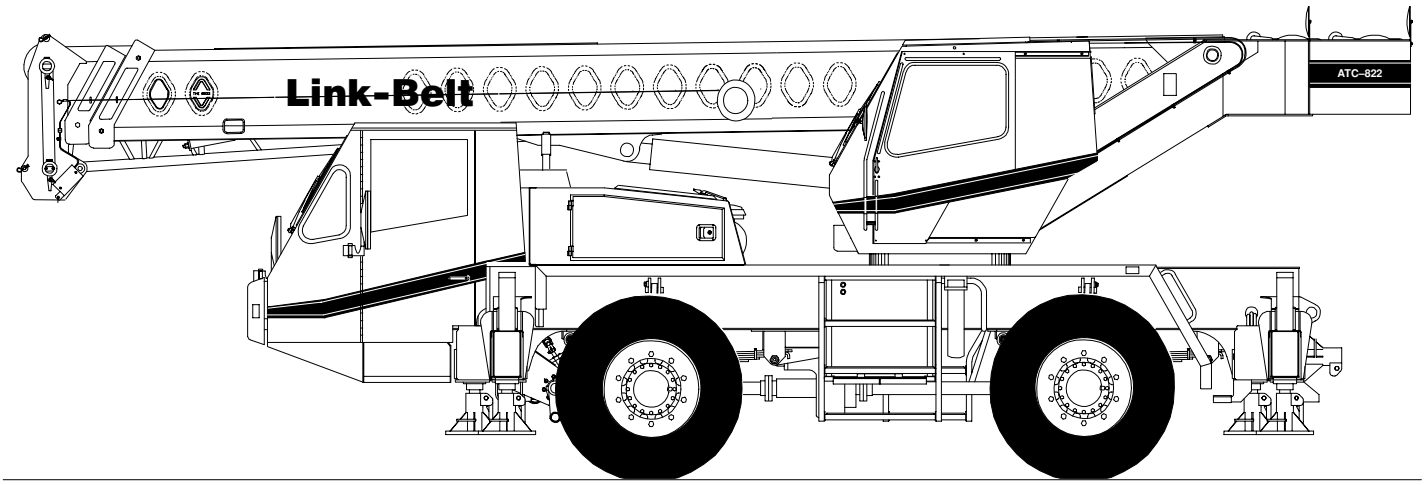
***22*–ton** *(20 metric ton)*

1,500 lbs. *(680 kg)* Counterweight

Boom and fly capacities for this machine are listed by the following sections:

Fully Extended Outriggers
- Working Range Diagram
- 27.12’ – 70.12’ *(8.27 – 21.37 m)* Main Boom Capacities
- 27’ *(8.23 m)* Offset Fly Capacities
- 27’ – 44’ *(8.23 – 13.41 m)* Two–piece Offset Fly Capacities

On–Tires
- Working Range Diagram
- 27.12’ – 70.12’ *(8.27 – 21.37 m)* Main Boom Capacities



CAUTION: This material is supplied for reference use only. Operator must refer to in–cab Crane Rating Manual to determine allowable machine lifting capacities and operating procedures.

Litho in U.S.A. 2/01

#6294 (Supersedes #6198)

⚠ WARNING

READ AND UNDERSTAND THE OPERATOR'S AND SAFETY MANUALS AND THE FOLLOWING INSTRUCTIONS AND RATED LIFTING CAPACITIES BEFORE OPERATING THE CRANE. OPERATION WHICH DOES NOT FOLLOW THESE INSTRUCTIONS MAY RESULT IN AN ACCIDENT.

OPERATING INSTRUCTIONS

GENERAL:

1. Rated lifting capacities in pounds as shown on lift charts pertain to this crane as originally manufactured and normally equipped. Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity.
2. Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this crane must be in compliance with the information in the Operator's, Parts, and Safety Manuals supplied with this crane. If these manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this crane shall read and fully understand the latest applicable American National Standards (ASME B30.5) safety standards for cranes.
4. The rated lifting capacities are based on crane standing level on firm supporting surface.

SET UP:

1. The crane shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger pontoons or tires to spread the load to a larger bearing surface.
2. When making lifts on outriggers, all tires must be free of supporting surface. All outrigger beams must be extended to the same length; fully retracted, intermediate extended, or fully extended.
3. When making lifts on tires, they must be inflated to the recommended pressure. (See Operation note 19.)
4. Do not exceed 70° maximum boom angle. Loss of backward stability will occur causing a backward tipping condition.
5. For required parts of line, see Wire Rope Capacity and Winch Performance.
6. Before setting up on intermediate outriggers, retracted outriggers, or tires, refer to Working Range Diagrams and rated lifting capacities to determine allowable crane configurations.

OPERATION:

1. Rated lifting capacities at rated radii shall not be exceeded. Do not tip the crane to determine allowable loads. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacities. For clamshell bucket operation, weight of bucket and bucket contents is restricted to a maximum weight of 5,000 pounds or 80% of rated lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum weight of 5,000 pounds or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 50 feet and the boom angle is restricted to a minimum of 35°. Lifts with any fly erected are prohibited for both clam and magnet operation.
2. Rated lifting capacities shown on fully extended outriggers or intermediate extended outriggers do not exceed 85% of the tipping loads. The rated lifting capacities shown on fully retracted outriggers or tires do not exceed 75% of the tipping loads as determined by SAE crane stability test code J–765A.
3. Rated lifting capacities in the shaded areas are based on structural strength or hydraulic limitations. Rated lifting capacities in the non–shaded areas are based on stability ratings. Some capacities are limited by a maximum obtainable 78° boom angle.
4. Rated lifting capacities include the weight of hook block, hook ball, slings, bucket, magnet and auxiliary lifting devices. Their weights must be subtracted from the listed rated capacity to obtain the net load that can be lifted. Rated lifting capacities include the deduct for any fly stowed on the base of the boom. For deducts of any fly erected, but not used, see Capacity Deductions For Auxiliary Load Handling Equipment.
5. Rated lifting capacities are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
6. Rated lifting capacities are for lift crane service only.
7. Do not operate at radii or boom lengths (minimum or maximum) where capacities are not listed. At these positions, the crane can tip or cause boom failure.

8. The maximum loads that can be telescoped are not definable because of variation in loadings and crane maintenance, but it is permissible to attempt retraction and extension within the limits of the applicable load rating chart.
9. For main boom capacities when either boom length or radius or both are between values listed, proceed as follows:
   a. For boom lengths not listed, use rating for next longer boom length or next shorter boom length, whichever is smaller.
   b. For load radii not listed, use rating for next larger radius.
10. The user shall operate at reduced ratings to allow for adverse job conditions, such as: soft or uneven ground, out of level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, traveling with loads, electrical wires, etc. Side load on boom or fly is dangerous and shall be avoided.
11. Rated lifting capacities do not account for wind on suspended load or boom. Rated capacities and boom length shall be appropriately reduced as wind velocity approaches 20 mph.
12. When making lifts with auxiliary head machinery, the effective length of the boom increases by 2 ft.
13. Power sections of boom must be extended equally.
14. The least stable rated working area on fully extended outriggers is over the rear. The least stable working area on intermediate outriggers, fully retracted outriggers, and on tires is over the side.
15. Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required (see Wire Rope Capacity) is considered excessive and must be accounted for when making lifts. Use Working Range Diagram to estimate the extra feet of rope then deduct 1 lb. for each extra foot of wire rope before attempting to lift a load.
16. The loaded boom angle combined with the boom length give only an approximation of the operating radius. The boom angle, before loading, should be greater to account for deflection. For main boom capacities, the loaded boom angle is for reference only. For fly capacities, the load radius is for reference only.
17. For fly capacities with main boom length less than 70 ft., the rated capacities are determined by the boom angle using the 70 ft. boom and fly chart. For angles not shown use the next lower boom angle to determine the rated capacity.
18. The 27 ft. boom length structural capacities are based on boom fully retracted. If the boom is not fully retracted, do not exceed capacities shown for the 40 ft. boom length.
19. Rated lifting capacities on tires depend on tire capacity, condition of tires, and tire air pressure. On tire capacities require lifting from main boom head only on a smooth and level surface. Pick and carry operations are restricted to speed of 2.5 mph. The boom must be centered over the rear with the swing lock engaged and the load must be restrained from swinging. Tire inflation pressure for stationary and 2.5 mph. operation is 110 psi.

DEFINITIONS:

1. Load Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface, before loading, to the center of the vertical hoist line or tackle with load applied.
2. Loaded Boom Angle: $\measuredangle^{\circ}$ The angle between the boom base section and horizontal with freely suspended load at the rated radius.
3. Working Area: Area measured in a circular arc about the center line of rotation as shown on the Working Area Diagram.
4. Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist line.
5. Side Load: Horizontal side force applied to the lifted load either on the ground or in the air.
6. No Load Stability Limit: The radius or boom angle beyond which it is not permitted to position the boom because the crane can overturn without any load on the hook.

WINCH PERFORMANCE

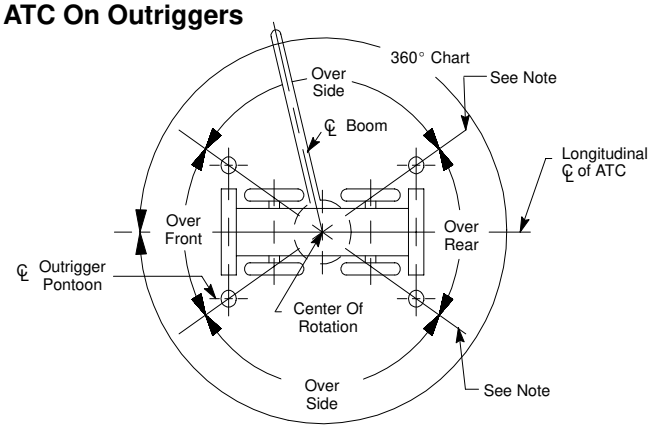
Winch Line Pulls			
Single Speed Winch		Drum Rope Capacity (ft.)	
Wire Rope Layer	Available Lbs.	Layer	Total
1	8,592	62	62
2	7,733	69	131
3	7,030	76	207
4	6,444	82	289
5	5,948	89	378

WIRE ROPE CAPACITY

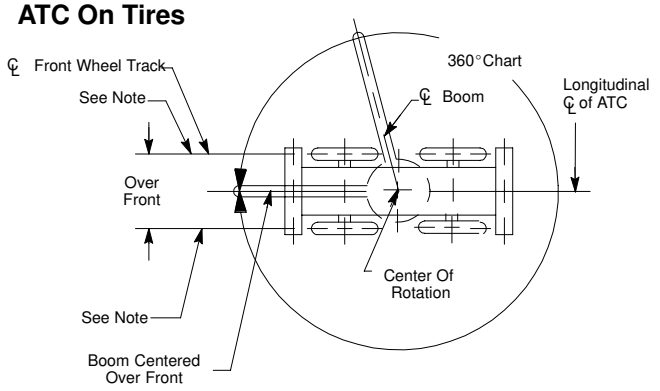
Maximum Lifting Capacities Based On Wire Rope Strength		
Parts of Line	5/8" Type RB	Notes
1	9,080	Capacities shown are in pounds and working loads must not exceed the ratings on the capacity charts in the Crane Rating Manual. Study Operator's Manual for wire rope inspection procedures.
2	18,160	
3	27,240	
4	36,320	
5	45,400	
6	54,480	
7	63,560	
8	72,640	
LBCE TYPE RB	**DESCRIPTION:** 18 x 19 Rotation Resistant – Compacted Strand – High Strength – Preformed – Right Regular Lay	

WORKING AREAS

ATC On Outriggers



ATC On Tires



Note: These Lines Determine The Limiting Position Of Any Load For Operation Within Working Areas Indicated.

HYDRAULIC CIRCUIT PRESSURE SETTINGS

Function	Pressure (PSI)
Front and Rear Winch	3,500
Outriggers	2,600
Boom Hoist	3,500
Telescope	3,500
Swing	1,350
Steering – Front	2,000
Steering – Rear	2,500
Hydraulic Controllers	500

CAPACITY DEDUCTIONS FOR AUXILIARY LOAD HANDLING EQUIPMENT

Load Handling Equipment:	(lbs.)
Auxiliary Head Attached	75
5–ton Hook Ball (see hook ball for actual weight)	172
8.5–ton Hook Ball (see hook ball for actual weight)	354
25–ton Hook Block (see hook ball for actual weight)	429
25–ton Hook Block with cheek weight kit (see hook ball for actual weight)	653
Lifting From Main Boom With:	**(lbs.)**
Fly stowed on boom base (See Operation Note 4)	0
27 ft. offset fly erected but not used	3,300
44 ft. offset fly erected but not used	6,600
Lifting From 27 ft. Offset Fly With:	
17 ft. fly tip erected but not used	**PROHIBITED**
17 ft. fly tip stowed on 27 ft. offset fly	**PROHIBITED**
Note: Capacity deductions are for Link–Belt supplied equipment only.	

PONTOON LOADINGS

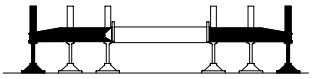
Maximum Pontoon Load:	Maximum Pontoon Ground Bearing Pressure:
40,000 lbs.	200 psi

OUTRIGGER SPREAD

Position	Distance
Fully Retracted	7' 4.75" *(2.25 m)*
Intermediate	12' 11.75" *(3.96 m)*
Fully Extended	18' 6.75" *(5.66 m)*

WORKING RANGE DIAGRAM

Working Range Diagram
On Fully Extended Outriggers



□ Denotes Main Boom + 27 Ft. Fly
○ Denotes Main Boom + 44 Ft. Fly

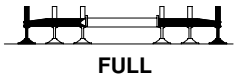
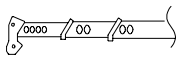
Note: Boom and fly geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.

⚠ WARNING

Do Not Lower The Boom Below The Minimum Boom Angle For No Load As Shown In The Above Chart For The Boom Lengths Shown. Loss Of Stability Will Occur Causing A Tipping Condition.

Note: Refer To Page 4 For "Capacity Deductions For Auxiliary Load Handling Equipment". ∡° Loaded Boom Angle In Degrees. ( ) Reference Radius For Minimum Boom Angle Capacities (Shown in Parenthesis) Are In Feet.

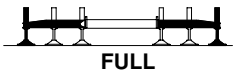
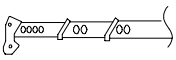
Rated Lifting Capacities In Pounds
Fully Extended Outriggers.
See Set Up Note 2.

FULL

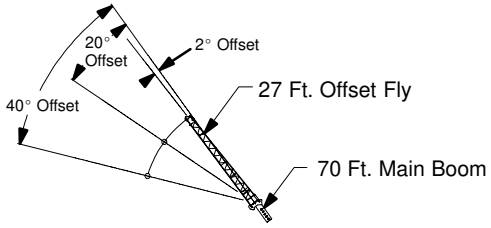
Load Radius (Ft.)	27 Ft.		40 Ft.		50 Ft.	
	∡ °	Load	∡ °	Load	∡ °	Load
9	60.5	44,000	71.5	41,000	75.5	38,800
10	58.0	40,000	69.5	38,800	74.5	36,800
12	52.5	32,500	66.5	32,800	72.0	32,900
15	43.5	25,200	61.5	25,500	68.0	25,700
20	19.5	17,800	52.5	18,000	61.5	18,200
25			42.0	14,000	54.5	14,100
30			28.5	11,000	47.0	11,300
35					37.5	8,700
40					25.5	6,800
Min.Bm. Ang./Cap.	0 (20.8)	16,800	0 (33.7)	9,100	0 (43.7)	5,800

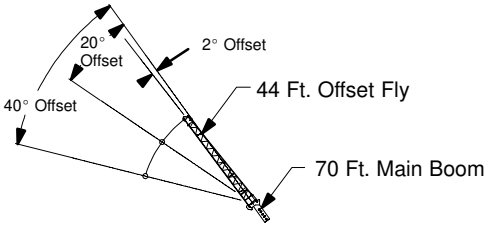
Rated Lifting Capacities In Pounds
Fully Extended Outriggers.
See Set Up Note 2.

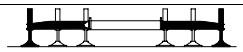
FULL

Load Radius (Ft.)	60 Ft.		70 Ft.	
	∡ °	360°	∡ °	360°
12	76.0	30,500		
15	72.5	25,700	76.0	22,000
20	67.5	18,300	71.5	17,700
25	62.0	14,200	67.0	14,300
30	56.0	11,400	62.0	11,600
35	49.5	8,800	57.5	8,900
40	42.5	6,900	52.0	7,000
45	34.5	5,600	46.0	5,700
50	23.5	4,500	39.5	4,600
55			32.0	3,800
60			22.0	3,100
Min.Bm. Ang./Cap.	0 (53.7)	3,900	0 (63.8)	2,700





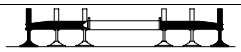
Rated Lifting Capacities In Pounds
Fully Extended Outriggers.
See Set Up Note 2



FULL

Load Radius (Ft.)	2° Offset		20° Offset		40° Offset	
	∡ °	Load	∡ °	Load	∡ °	Load
20	77.0	11,300				
25	74.0	11,000				
30	71.0	9,400	75.5	6,800		
35	68.0	8,400	72.5	6,400	77.0	4,900
40	64.5	7,300	69.5	5,900	73.5	4,700
45	61.0	6,100	66.0	5,600	70.0	4,500
50	57.5	5,000	62.5	5,300	66.5	4,400
55	53.5	4,100	58.5	4,500	62.5	4,300
60	49.5	3,400	54.5	3,700	58.0	4,000
65	45.5	2,800	50.0	3,100	53.5	3,300
70	40.5	2,400	45.5	2,600	48.5	2,700
75	35.5	2,000	40.0	2,100	42.5	2,200
80	29.5	1,600	34.0	1,700		
85	22.0	1,300	26.0	1,400		
90	9.5	1,100				
Min.Bm. Ang./Cap.	0	400	0	400	0	500

Rated Lifting Capacities In Pounds
Fully Extended Outriggers.
See Set Up Note 2



FULL

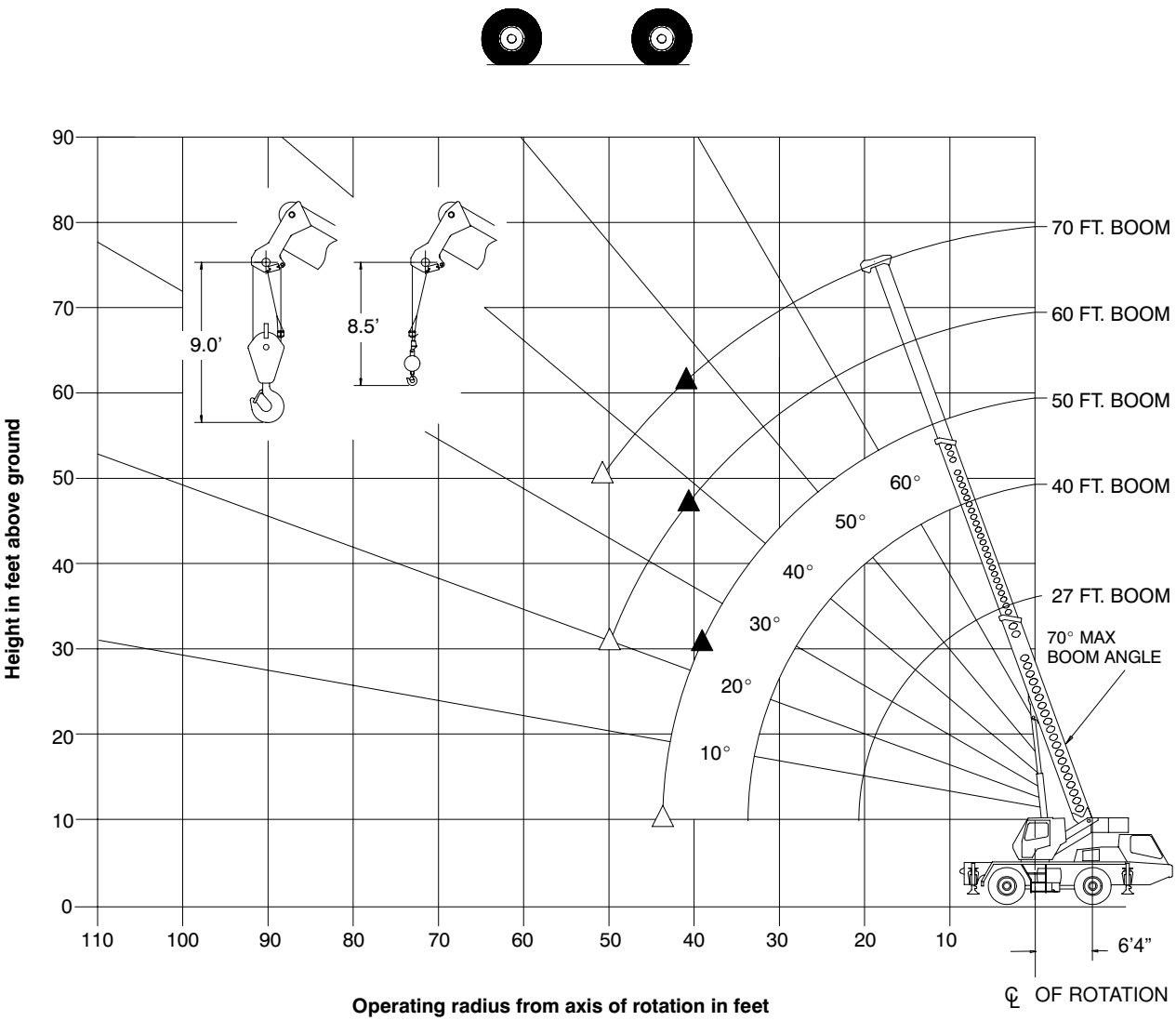
Load Radius (Ft.)	2° Offset		20° Offset		40° Offset	
	∡ °	Load	∡ °	Load	∡ °	Load
25	77.0	6,700				
30	74.5	6,100				
35	72.0	5,500				
40	69.5	5,000	76.0	3,600		
45	67.0	4,600	73.5	3,400		
50	64.0	4,200	70.5	3,200	77.0	2,500
55	61.0	3,900	67.5	3,000	73.5	2,400
60	58.0	3,600	64.5	2,800	70.5	2,300
65	55.0	3,100	61.5	2,600	67.5	2,200
70	51.5	2,600	58.5	2,500	64.0	2,100
75	48.0	2,200	55.0	2,400	60.0	2,100
80	44.5	1,800	51.0	2,100	56.0	2,000
85	40.5	1,500	47.0	1,800	51.5	1,900
90	36.0	1,200	42.5	1,400	46.5	1,600
95			37.0	1,200	40.0	1,200

⚠ WARNING

Do Not Lower 44 Ft. Offset Fly In Working Position Below 32.5° Main Boom Angle Unless Main Boom Length Is 62 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.

WORKING RANGE DIAGRAM

On Tires



Crane Configurations Prohibited:
Boom Angle Greater Than 70°
27 Ft. Offset Fly
44 Ft. Offset Fly

△ **Denotes Main Boom Between Tire Tracks Over Rear Or Boom Centered Over Rear**

▲ **Denotes Main Boom 360°**

Note: Boom geometry shown is for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.

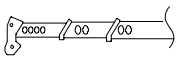
⚠ WARNING

Do Not Lower The Boom Below The Minimum Boom Angle For No Load As Shown In The Above Chart For The Boom Lengths Shown. Loss Of Stability Will Occur Causing A Tipping Condition.

On Tire Capacities In Pounds with 16.00 R20 M Tires
Tire Pressure: 110 PSI

Stationary Capacities
Between Tire Tracks Over Rear
See Operation Note 19

ON TIRES



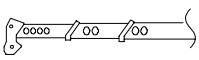
Load Radius (Ft.)	27 Ft.		40 Ft.		50 Ft.	
	∡ °	Load	∡ °	Load	∡ °	Load
9	60.5	23,700				
10	58.0	22,800				
12	52.5	17,200				
15	43.5	11,800	61.5	12,400		
20	19.5	6,900	52.5	7,800	61.5	7,900
25			42.0	5,100	54.5	5,400
30			28.5	3,600	47.0	3,800
35					37.5	2,600
40					25.5	1,800
Min.Bm. Ang./Cap.	0 (20.8)	6,500	0 (33.7)	2,600	0 (43.7)	1,300

Load Radius (Ft.)	60 Ft.		70 Ft.	
	∡ °	Load	∡ °	Load
25	62.0	5,500		
30	56.0	3,900	62.0	4,000
35	49.5	2,800	57.5	2,900
40	42.5	1,900	52.0	2,100
45	34.5	1,300	46.0	1,500
50	23.5	900	39.5	900
Min.Bm. Ang./Cap.	19.5 (50.9)		35.0 (52.4)	

On Tire Capacities In Pounds
with 16.00 R20 M Tires
Tire Pressure: 110 PSI

Pick and Carry Capacities (2.5 mph)
Boom Centered Over Rear
See Operation Note 19

ON TIRES



Load Radius (Ft.)	27 Ft.		40 Ft.		50 Ft.	
	∡ °	Load	∡ °	Load	∡ °	Load
9	60.5	21,200				
10	58.0	19,700				
12	52.5	17,100				
15	43.5	11,800	61.5	12,400		
20	19.5	6,900	52.5	7,800	61.5	7,900
25			42.0	5,100	54.5	5,400
30			28.5	3,600	47.0	3,800
35					37.5	2,600
40					25.5	1,800
Min.Bm. Ang./Cap.	0 (20.8)	6,500	0 (33.7)	2,600	0 (43.7)	1,300

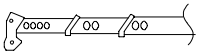
Load Radius (Ft.)	60 Ft.		70 Ft.	
	∡ °	Load	∡ °	Load
25	62.0	5,500		
30	56.0	3,900	62.0	4,000
35	49.5	2,800	57.5	2,900
40	42.5	1,900	52.0	2,100
45	34.5	1,300	46.0	1,500
50	23.5	900	39.5	900
Min.Bm. Ang./Cap.	19.5 (50.9)		35.0 (52.4)	

On Tire Capacities In Pounds
with 16.00 R20 M Tires
Tire Pressure: 110 PSI

Stationary Capacities 360°
See Operation Note 19

360°

ON TIRES



Load Radius (Ft.)	27 Ft.		40 Ft.		50 Ft.	
	∡ °	Load	∡ °	Load	∡ °	Load
9	60.5	18,900				
10	58.0	15,700				
12	52.5	11,500				
15	43.5	7,600	61.5	8,200		
20	19.5	4,100	52.5	4,900	61.5	5,100
25			42.0	3,000	54.5	3,200
30			28.5	1,700	47.0	2,100
35					37.5	1,200
40					25.5	600
Min.Bm. Ang./Cap.	0 (20.8)	3,800	0 (33.7)	1,100	24.0 (40.2)	

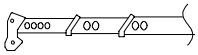
⚠ WARNING
Do Not Raise Boom Above 70° Boom Angle. Loss Of Stability Will Occur Causing A Tipping Condition.

On Tire Capacities In Pounds
with 16.00 R20 M Tires
Tire Pressure: 110 PSI

Stationary Capacities 360°
See Operation Note 19

360°

ON TIRES



Load Radius (Ft.)	60 Ft.		70 Ft.	
	∡ °	Load	∡ °	Load
25	62.0	3,300		
30	56.0	2,200	62.0	2,200
35	49.5	1,400	57.5	1,400
40	42.5	700	52.0	800
Min.Bm. Ang./Cap.	38.0 (42.3)		47.0 (43.1)	

⚠ WARNING
Do Not Raise Boom Above 70° Boom Angle. Loss Of Stability Will Occur Causing A Tipping Condition.

Lifting Capacities

Telescopic Boom All Terrain Crane

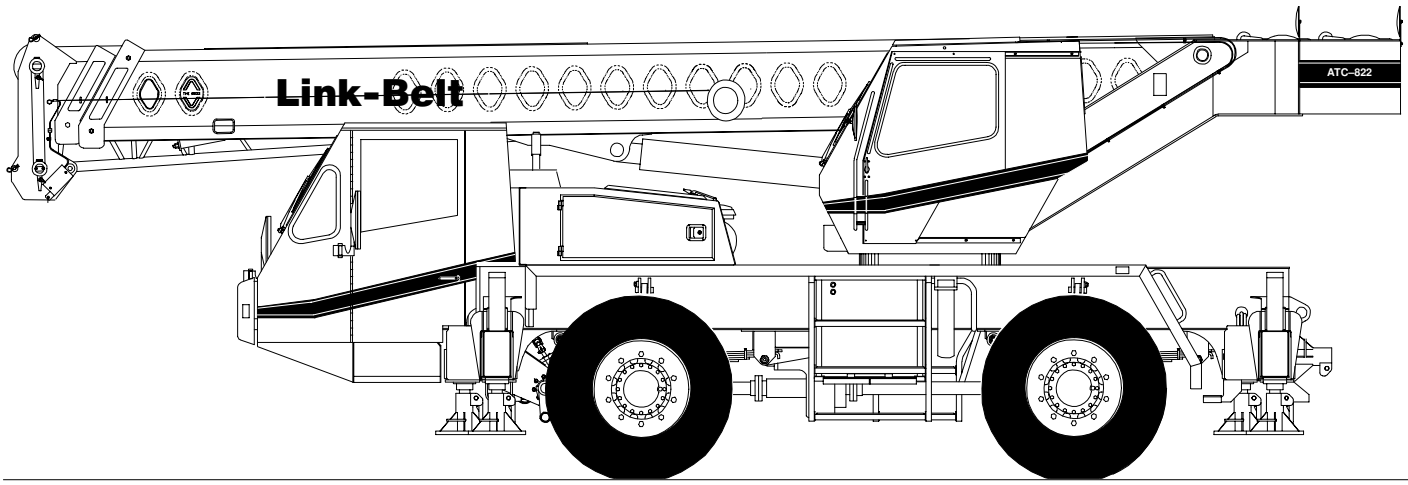
ATC–822 *22*–ton *(20 metric ton)*

3,000 lbs. *(1 361 kg)* Counterweight

Boom and fly capacities for this machine are listed by the following sections:

Fully Extended Outriggers
- Working Range Diagram
- 27.12’ – 70.12’ *(8.27 – 21.37 m)* Main Boom Capacities
- 27’ *(8.23 m)* Offset Fly Capacities
- 27’ – 44’ *(8.23 – 13.41 m)* Two–piece Offset Fly Capacities

On–Tires
- Working Range Diagram
- 27.12’ – 70.12’ *(8.27 – 21.37 m)* Main Boom Capacities



CAUTION: This material is supplied for reference use only. Operator must refer to in–cab Crane Rating Manual to determine allowable machine lifting capacities and operating procedures.

Litho in U.S.A. 2/01

#6295 (Supersedes #6290)

⚠ WARNING

READ AND UNDERSTAND THE OPERATOR'S AND SAFETY MANUALS AND THE FOLLOWING INSTRUCTIONS AND RATED LIFTING CAPACITIES BEFORE OPERATING THE CRANE. OPERATION WHICH DOES NOT FOLLOW THESE INSTRUCTIONS MAY RESULT IN AN ACCIDENT.

OPERATING INSTRUCTIONS

GENERAL:

1. Rated lifting capacities in pounds as shown on lift charts pertain to this crane as originally manufactured and normally equipped. Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity.
2. Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this crane must be in compliance with the information in the Operator's, Parts, and Safety Manuals supplied with this crane. If these manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this crane shall read and fully understand the latest applicable American National Standards (ASME B30.5) safety standards for cranes.
4. The rated lifting capacities are based on crane standing level on firm supporting surface.

SET UP:

1. The crane shall be leveled on a firm supporting surface. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger pontoons or tires to spread the load to a larger bearing surface.
2. When making lifts on outriggers, all tires must be free of supporting surface. All outrigger beams must be extended to the same length; fully retracted, intermediate extended, or fully extended.
3. When making lifts on tires, they must be inflated to the recommended pressure. (See Operation note 19.)
4. Do not exceed 70° maximum boom angle. Loss of backward stability will occur causing a backward tipping condition.
5. For required parts of line, see Wire Rope Capacity and Winch Performance.
6. Before setting up on intermediate outriggers, retracted outriggers, or tires, refer to Working Range Diagrams and rated lifting capacities to determine allowable crane configurations.

OPERATION:

1. Rated lifting capacities at rated radii shall not be exceeded. Do not tip the crane to determine allowable loads. For concrete bucket operation, weight of bucket and load shall not exceed 80% of rated lifting capacities. For clamshell bucket operation, weight of bucket and bucket contents is restricted to a maximum weight of 5,000 pounds or 80% of rated lifting capacity, whichever is less. For magnet operation, weight of magnet and load is restricted to a maximum weight of 5,000 pounds or 80% of rated lifting capacity, whichever is less. For clamshell and magnet operation, maximum boom length is restricted to 50 feet and the boom angle is restricted to a minimum of 35 degrees. Lifts with any fly erected are prohibited for both clam and magnet operation.
2. Rated lifting capacities shown on fully extended outriggers or intermediate extended outriggers do not exceed 85% of the tipping loads. The rated lifting capacities shown on fully retracted outriggers or tires do not exceed 75% of the tipping loads as determined by SAE crane stability test code J–765A.
3. Rated lifting capacities in the shaded areas are based on structural strength or hydraulic limitations. Rated lifting capacities in the non–shaded areas are based on stability ratings. Some capacities are limited by a maximum obtainable 78° boom angle.
4. Rated lifting capacities include the weight of hook block, hook ball, slings, bucket, magnet and auxiliary lifting devices. Their weights must be subtracted from the listed rated capacity to obtain the net load that can be lifted. Rated lifting capacities include the deduct for any fly stowed on the base of the boom. For deducts of any fly erected, but not used, see Capacity Deductions For Auxiliary Load Handling Equipment.
5. Rated lifting capacities are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
6. Rated lifting capacities are for lift crane service only.
7. Do not operate at radii or boom lengths (minimum or maximum) where capacities are not listed. At these positions, the crane can tip or cause boom failure.

8. The maximum loads that can be telescoped are not definable because of variation in loadings and crane maintenance, but it is permissible to attempt retraction and extension within the limits of the applicable load rating chart.
9. For main boom capacities when either boom length or radius or both are between values listed, proceed as follows:
   a. For boom lengths not listed, use rating for next longer boom length or next shorter boom length, whichever is smaller.
   b. For load radii not listed, use rating for next larger radius.
10. The user shall operate at reduced ratings to allow for adverse job conditions, such as: soft or uneven ground, out of level conditions, wind, side loads, pendulum action, jerking or sudden stopping of loads, hazardous conditions, experience of personnel, traveling with loads, electrical wires, etc. Side load on boom or fly is dangerous and shall be avoided.
11. Rated lifting capacities do not account for wind on suspended load or boom. Rated capacities and boom length shall be appropriately reduced as wind velocity approaches 20 mph.
12. When making lifts with auxiliary head machinery, the effective length of the boom increases by 2 ft.
13. Power sections of boom must be extended equally.
14. The least stable rated working area on fully extended outriggers is over the rear. The least stable working area on intermediate outriggers, fully retracted outriggers, and on tires is over the side.
15. Rated lifting capacities are based on correct reeving. Deduction must be made for excessive reeving. Any reeving over minimum required (see Wire Rope Capacity) is considered excessive and must be accounted for when making lifts. Use Working Range Diagram to estimate the extra feet of rope then deduct 1 lb. for each extra foot of wire rope before attempting to lift a load.
16. The loaded boom angle combined with the boom length give only an approximation of the operating radius. The boom angle, before loading, should be greater to account for deflection. For main boom capacities, the loaded boom angle is for reference only. For fly capacities, the load radius is for reference only.
17. For fly capacities with main boom length less than 70 ft., the rated capacities are determined by the boom angle using the 70 ft. boom and fly chart. For angles not shown use the next lower boom angle to determine the rated capacity.
18. The 27 ft. boom length structural capacities are based on boom fully retracted. If the boom is not fully retracted, do not exceed capacities shown for the 40 ft. boom length.
19. Rated lifting capacities on tires depend on tire capacity, condition of tires, and tire air pressure. On tire capacities require lifting from main boom head only on a smooth and level surface. Pick and carry operations are restricted to speed of 2.5 mph and creep. The boom must be centered over the rear of the crane with two–position travel swing lock engaged and the load must be restrained from swinging. Tire inflation pressure for stationary and 2.5 mph. operation is 110 psi.

DEFINITIONS:

1. Load Radius: Horizontal distance from a projection of the axis of rotation to the supporting surface, before loading, to the center of the vertical hoist line or tackle with load applied.
2. Loaded Boom Angle: $\measuredangle^{\circ}$ The angle between the boom base section and horizontal with freely suspended load at the rated radius.
3. Working Area: Area measured in a circular arc about the center line of rotation as shown on the Working Area Diagram.
4. Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist line.
5. Side Load: Horizontal side force applied to the lifted load either on the ground or in the air.
6. No Load Stability Limit: The radius or boom angle beyond which it is not permitted to position the boom because the crane can overturn without any load on the hook.

WINCH PERFORMANCE

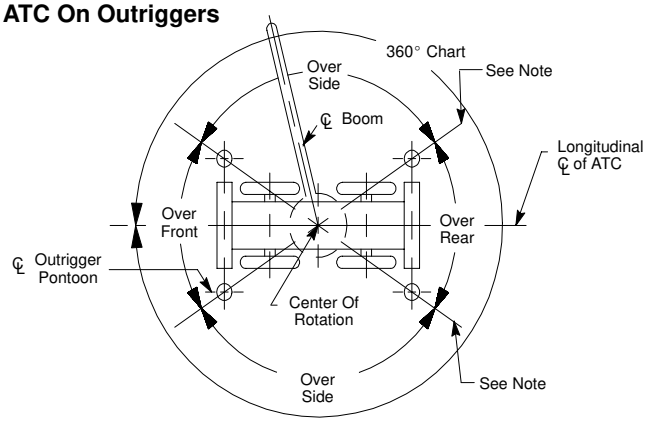
Winch Line Pulls		Drum Rope Capacity (ft.)	
Wire Rope Layer	Single Speed Winch		
	Available Lbs.	Layer	Total
1	8,592	62	62
2	7,733	69	131
3	7,030	76	207
4	6,444	82	289
5	5,948	89	378

WIRE ROPE CAPACITY

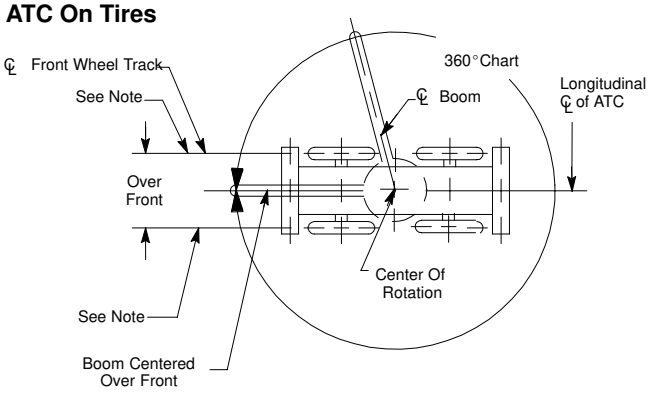
Maximum Lifting Capacities Based On Wire Rope Strength		
Parts of Line	5/8" Type RB	Notes
1	9,080	Capacities shown are in pounds and working loads must not exceed the ratings on the capacity charts in the Crane Rating Manual. Study Operator's Manual for wire rope inspection procedures.
2	18,160	
3	27,240	
4	36,320	
5	45,400	
6	54,480	
7	63,560	
8	72,640	
LBCE TYPE RB	DESCRIPTION: 18 x 19 Rotation Resistant – Compacted Strand – High Strength – Preformed – Right Regular Lay	

WORKING AREAS

ATC On Outriggers



ATC On Tires



Note: These Lines Determine The Limiting Position Of Any Load For Operation Within Working Areas Indicated.

HYDRAULIC CIRCUIT PRESSURE SETTINGS

Function	Pressure (PSI)
Front and Rear Winch	3,500
Outriggers	2,600
Boom Hoist	3,500
Telescope	3,500
Swing	1,350
Steering – Front	2,000
Steering – Rear	2,500
Hydraulic Controllers	500

CAPACITY DEDUCTIONS FOR AUXILIARY LOAD HANDLING EQUIPMENT

Load Handling Equipment:	(lbs.)
Auxiliary Head Attached	75
5–ton Hook Ball (see hook ball for actual weight)	172
8.5–ton Hook Ball (see hook ball for actual weight)	354
25–ton Hook Block (see hook ball for actual weight)	429
25–ton Hook Block with cheek weight kit (see hook ball for actual weight)	653
Lifting From Main Boom With:	**(lbs.)**
Fly Stowed On Boom Base (See Operation Note 4)	0
27 Ft. Offset Fly Erected But Not Used	3,300
44 Ft. Offset Fly Erected But Not Used	6,600
Lifting From 27 ft. Offset Fly With:	
17 ft. fly tip erected but not used	**PROHIBITED**
17 ft. fly tip stowed on 27 ft. offset fly	**PROHIBITED**

Note: Capacity deductions are for Link–Belt supplied equipment only.

PONTOON LOADINGS

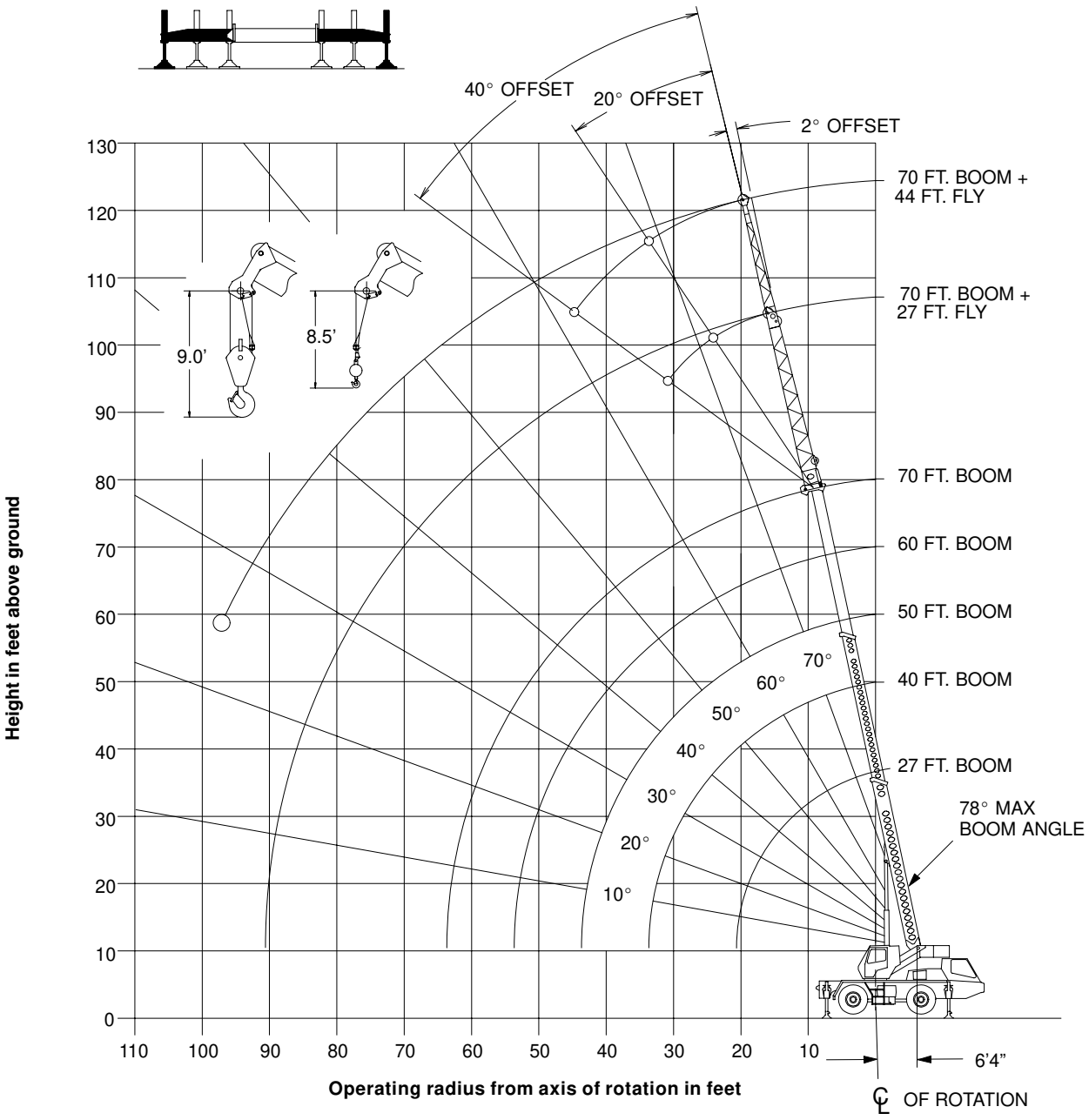
Maximum Pontoon Load:	Maximum Pontoon Ground Bearing Pressure:
40,000 lbs.	200 psi

OUTRIGGER SPREAD

Position	Distance
Fully Retracted	7' 4.75" *(2.25 m)*
Intermediate	12' 11.75" *(3.96 m)*
Fully Extended	18' 6.75" *(5.66 m)*

WORKING RANGE DIAGRAM

Working Range Diagram
On Fully Extended Outriggers



□ **Denotes Main Boom + 27 Ft. Fly**
○ **Denotes Main Boom + 44 Ft. Fly**

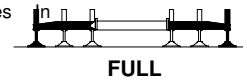
Note: Boom and fly geometry shown are for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.

⚠ WARNING

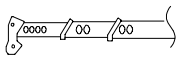
Do Not Lower The Boom Below The Minimum Boom Angle For No Load As Shown In The Above Chart For The Boom Lengths Shown. Loss Of Stability Will Occur Causing A Tipping Condition.

Note: Refer To Page 4 For "Capacity Deductions For Auxiliary Load Handling Equipment". ∡° Loaded Boom Angle In Degrees. ( ) Reference Radius For Minimum Boom Angle Capacities (Shown in Parenthesis) Are In Feet.

Rated Lifting Capacities In Pounds
Fully Extended Outriggers.
See Set Up Note 2.

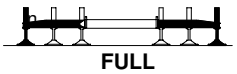


FULL

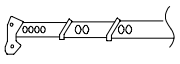


Load Radius (Ft.)	27 Ft.		40 Ft.		50 Ft.	
	∡ °	Load	∡ °	Load	∡ °	Load
9	60.5	44,000	71.5	41,000	75.5	38,800
10	58.0	40,000	69.5	38,800	74.5	36,800
12	52.5	33,500	66.5	33,800	72.0	33,400
15	43.5	26,100	61.5	26,400	68.0	26,600
20	19.5	18,500	52.5	18,700	61.5	18,900
25			42.0	14,600	54.5	14,700
30			28.5	11,300	47.0	11,500
35					37.5	9,500
40					25.5	7,500
Min.Bm. Ang./Cap.	0 (20.8)	17,500	0 (33.7)	9,600	0 (43.7)	4,300

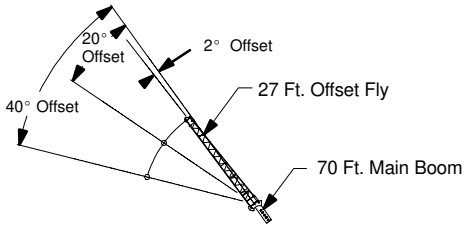
Rated Lifting Capacities In Pounds
Fully Extended Outriggers.
See Set Up Note 2.



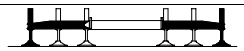
FULL



Load Radius (Ft.)	60 Ft.		70 Ft.	
	∡ °	360°	∡ °	360°
12	76.0	30,500		
15	72.5	26,600	76.0	22,000
20	67.5	19,000	71.5	17,700
25	62.0	14,800	67.0	14,500
30	56.0	11,500	62.0	11,600
35	49.5	9,600	57.5	9,700
40	42.5	7,600	52.0	7,700
45	34.5	6,200	46.0	6,200
50	23.5	5,000	39.5	5,100
55			32.0	4,200
60			22.0	3,500
Min.Bm. Ang./Cap.	0 (53.7)	4,400	0 (63.8)	3,100

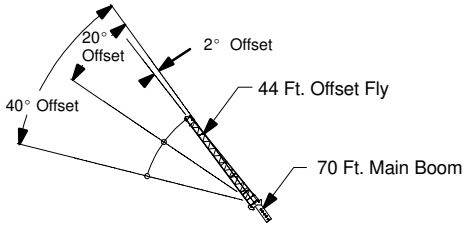


Rated Lifting Capacities In Pounds
Fully Extended Outriggers.
See Set Up Note 2

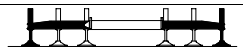


FULL

Load Radius (Ft.)	2° Offset		20° Offset		40° Offset	
	∡ °	Load	∡ °	Load	∡ °	Load
20	77.0	11,300				
25	74.0	11,000				
30	71.0	9,400	75.5	6,800		
35	68.0	8,400	72.5	6,400	77.0	4,900
40	64.5	7,300	69.5	5,900	73.5	4,700
45	61.0	6,300	66.0	5,600	70.0	4,500
50	57.5	5,500	62.5	5,300	66.5	4,400
55	53.5	4,600	58.5	4,900	62.5	4,300
60	49.5	3,800	54.5	4,100	58.5	4,100
65	45.5	3,200	50.0	3,500	53.5	3,700
70	41.0	2,700	45.5	2,900	48.5	3,100
75	35.5	2,300	40.0	2,500	42.5	2,600
80	29.5	1,900	34.0	2,000		
85	22.5	1,600	26.0	1,700		
90	9.5	1,300				
Min.Bm. Ang./Cap.	0	400	0	400	0	500



Rated Lifting Capacities In Pounds
Fully Extended Outriggers.
See Set Up Note 2



FULL

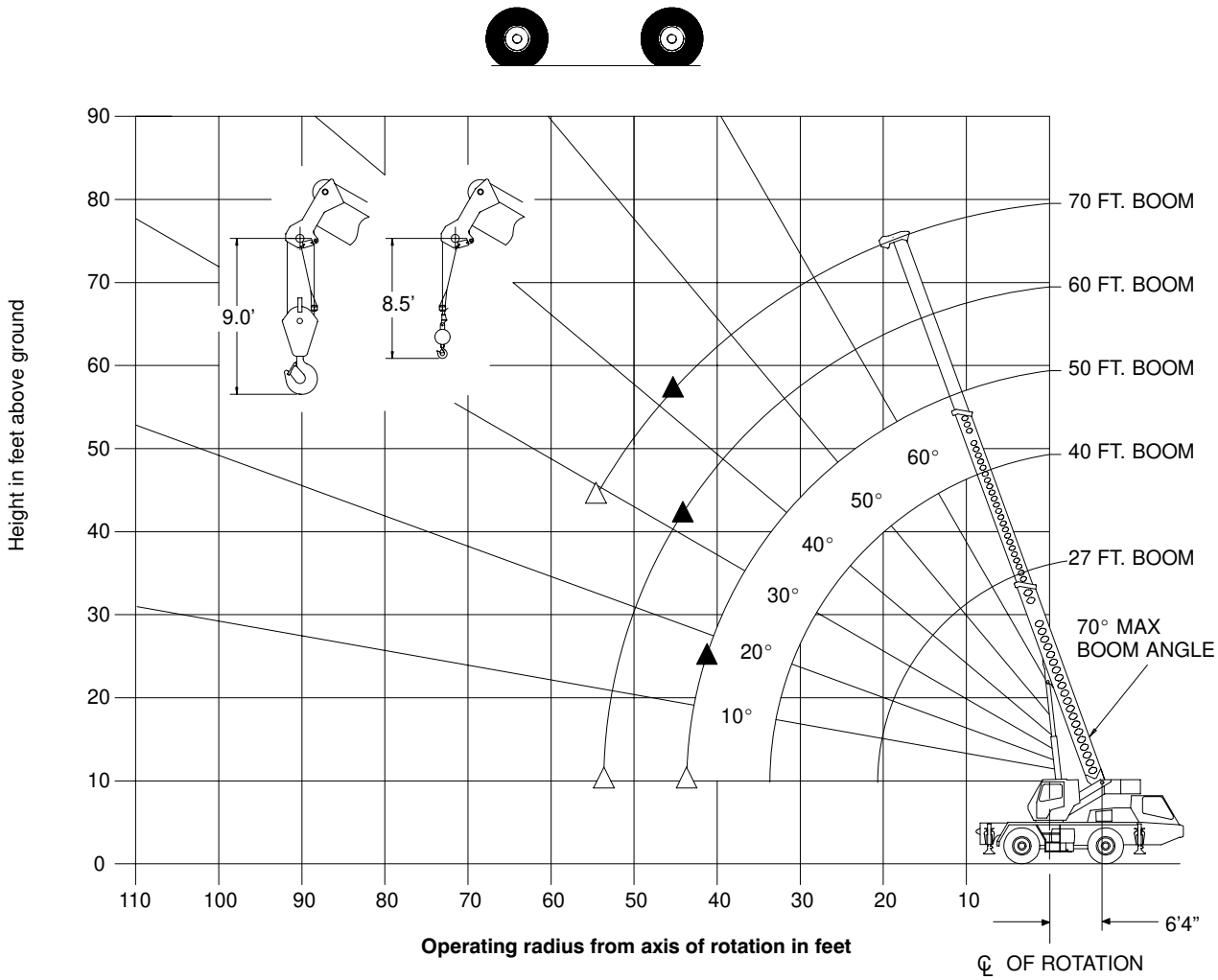
Load Radius (Ft.)	2° Offset		20° Offset		40° Offset	
	∡ °	Load	∡ °	Load	∡ °	Load
25	77.0	6,700				
30	74.5	6,100				
35	72.0	5,500				
40	69.5	5,000	76.0	3,600		
45	67.0	4,600	73.5	3,400		
50	64.0	4,200	70.5	3,200	77.0	2,500
55	61.0	3,900	67.5	3,000	73.5	2,400
60	58.0	3,600	64.5	2,800	70.5	2,300
65	55.0	3,300	61.5	2,600	67.5	2,200
70	52.0	2,900	58.5	2,500	64.0	2,100
75	48.5	2,500	55.0	2,400	60.0	2,100
80	44.5	2,100	51.5	2,300	56.0	2,000
85	40.5	1,800	47.0	2,000	51.5	2,000
90	36.0	1,500	42.5	1,700	46.5	1,800
95	31.0	1,200	37.5	1,400	40.0	1,500
100			31.0	1,100		

⚠ WARNING

Do Not Lower 44 Ft. Offset Fly In Working Position Below 25° Main Boom Angle Unless Main Boom Length Is 66 Ft. Or Less, Since Loss Of Stability Will Occur Causing A Tipping Condition.

WORKING RANGE DIAGRAM

On Tires



Crane Configurations Prohibited:
Boom Angle Greater Than 70°
27 Ft. Offset Fly
44 Ft. Offset Fly

△ **Denotes Main Boom Between Tire Tracks Over Rear Or Boom Centered Over Rear**
▲ **Denotes Main Boom 360°**

Note: Boom geometry shown is for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.

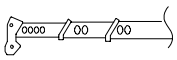
⚠ WARNING

Do Not Lower The Boom Below The Minimum Boom Angle For No Load As Shown In The Above Chart For The Boom Lengths Shown. Loss Of Stability Will Occur Causing A Tipping Condition.

On Tire Capacities In Pounds
with 16.00 R20 M Tires
Tire Pressure: 110 PSI

Stationary Capacities
Between Tire Tracks Over

ON TIRES



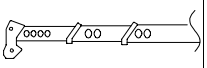
Load Radius (Ft.)	27 Ft.		40 Ft.		50 Ft.	
	∡ °	Load	∡ °	Load	∡ °	Load
9	60.5	24,400				
10	58.0	22,700				
12	52.5	18,800				
15	43.5	13,000	61.5	13,600		
20	19.5	7,800	52.5	8,600	61.5	8,800
25			42.0	5,800	54.5	6,100
30			28.5	4,100	47.0	4,400
35					37.5	3,100
40					25.5	2,200
Min.Bm. Ang./Cap.	0 (20.8)	7,300	0 (33.7)	3,100	0 (43.7)	1,800

Load Radius (Ft.)	60 Ft.		70 Ft.	
	∡ °	Load	∡ °	Load
25	62.0	6,200		
30	56.0	4,500	62.0	4,500
35	49.5	3,300	57.0	3,400
40	42.5	2,300	57.5	2,500
45	34.5	1,700	46.0	1,900
50	23.5	1,200	39.5	1,200
55			32.0	800
Min.Bm. Ang./Cap.	0 (53.7)	900	29.0 (56.1)	

On Tire Capacities In Pounds
with 16.00 R20 M Tires
Tire Pressure: 110 PSI

Pick and Carry Capacities (2.5 mph)
Boom Centered Over Rear

ON TIRES



Load Radius (Ft.)	27 Ft.		40 Ft.		50 Ft.	
	∡ °	Load	∡ °	Load	∡ °	Load
9	60.5	20,800				
10	58.0	19,200				
12	52.5	16,600				
15	43.5	13,000	61.5	13,600		
20	19.5	7,800	52.5	8,600	61.5	8,800
25			42.0	5,800	54.5	6,100
30			28.5	4,100	47.0	4,400
35					37.5	3,100
40					25.5	2,200
Min.Bm. Ang./Cap.	0 (20.8)	7,300	0 (33.7)	3,100	0 (43.7)	1,800

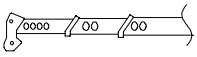
Load Radius (Ft.)	60 Ft.		70 Ft.	
	∡ °	Load	∡ °	Load
25	62.0	6,200		
30	56.0	4,500	62.0	4,500
35	49.5	3,300	57.5	3,400
40	42.5	2,300	52.0	2,500
45	34.5	1,700	46.0	1,900
50	23.5	1,200	39.5	1,200
55			32.0	800
Min.Bm. Ang./Cap.	0 (53.7)	900	29.0 (56.1)	

On Tire Capacities In Pounds
with 16.00 R20 M Tires
Tire Pressure: 110 PSI

Stationary Capacities
360°
See Operation Note 19

360°

ON TIRES



Load Radius (Ft.)	27 Ft.		40 Ft.		50 Ft.	
	∡ °	Load	∡ °	Load	∡ °	Load
9	60.5	20,200				
10	58.0	17,700				
12	52.5	13,000				
15	43.5	8,800	61.5	9,400		
20	19.5	4,900	52.5	5,700	61.5	5,900
25			42.0	3,600	54.5	3,900
30			28.5	2,200	47.0	2,500
35					37.5	1,600
40					25.5	1,000
Min.Bm. Ang./Cap.	0 (20.8)	4,600	0 (33.7)	1,600	17.0 (42.1)	

⚠ WARNING

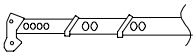
Do Not Raise Boom Above 70° Boom Angle. Loss Of Stability Will Occur Causing A Tipping Condition.

On Tire Capacities In Pounds
with 16.00 R20 M Tires
Tire Pressure: 110 PSI

Stationary Capacities
360°
See Operation Note 19

360°

ON TIRES



Load Radius (Ft.)	60 Ft.		70 Ft.	
	∡ °	Load	∡ °	Load
25	62.0	4,000		
30	56.0	2,700	62.0	2,700
35	49.5	1,800	57.5	1,900
40	42.5	1,100	52.0	1,200
45	34.5	600	46.0	700
Min.Bm. Ang./Cap.	32.0 (45.7)		42.0 (47.3)	

⚠ WARNING

Do Not Raise Boom Above 70° Boom Angle. Loss Of Stability Will Occur Causing A Tipping Condition.