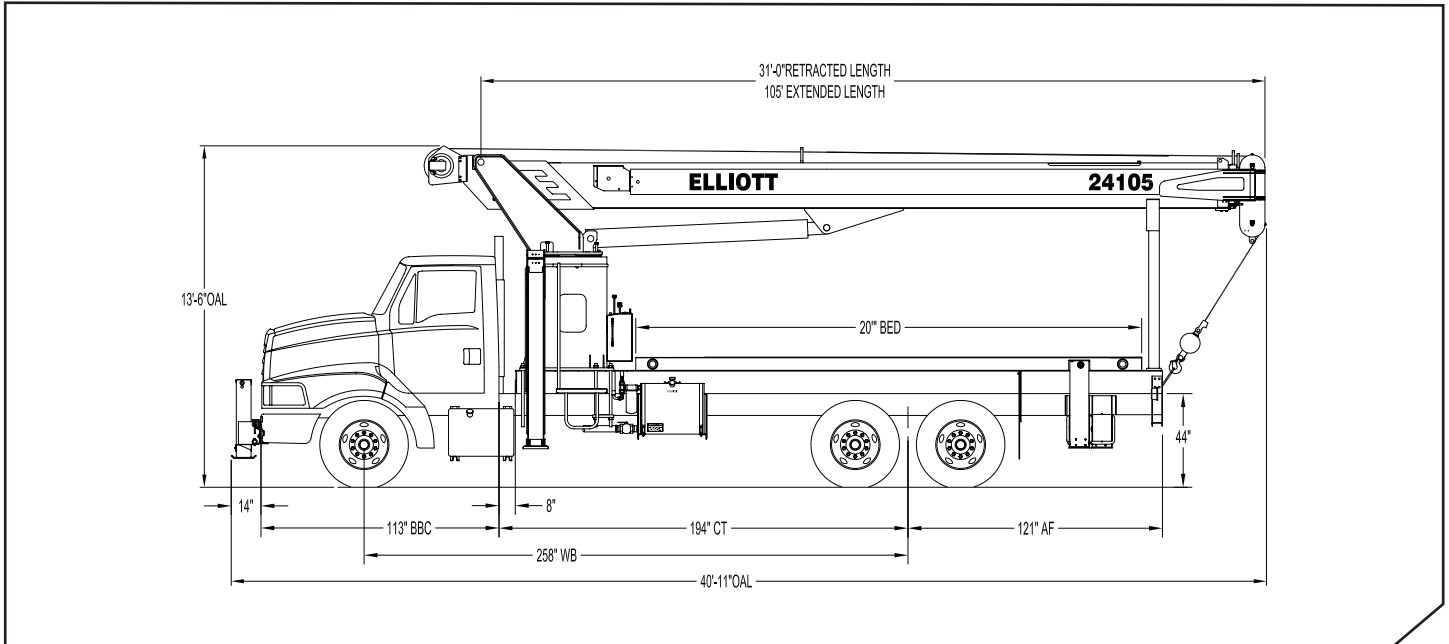


# BoomTruck™ 24105



## GENERAL UNIT DESCRIPTION

**BoomTruck** – When it comes to design and engineering, Elliott’s BoomTruck is generations apart from the traditional crane – making it ideal for the demands of today’s job sites. With a 24-ton capacity and boom length of 105’, the Elliott 24105F delivers high performance with increased efficiency – from its high speed winch and friction-free jib extension to its optional Superlink outriggers which allow for reduced span operation in a restricted area. Plus, our BoomTruck requires very little maintenance and offers the industry’s best warranty. These combined features improve efficiency, safety, control, and performance – to save you time and money.

Basic unit includes base assembly supporting front mounted rotating turret, hydraulically powered rotation mechanism, oil reservoir, oil, and dual operator console with levers linked to manual hydraulic control valve mounted to pedestal. Base mounted “A” frame link type outriggers hydraulically powered, individually controlled main outriggers. Underframe mounted rear stabilizers for rear stabilization. High strength steel three-section hydraulic and cable telescoping boom. Load Moment Indicator system with display and hydraulic function lockout for load capacities. Power take off and pump drive, pressure gauge, three-section gear pump, and holding valves on all cylinders. Control console is equipped with anti-two-block system, engine start/stop switch, variable speed foot throttle, burst of speed winch, and outrigger motion alarm. Additional equipment includes triangle reflector kit, backup alarm, and fire extinguisher. Paint BoomTruck white, outriggers, stabilizers, and boom rest red, and bed, reservoir, and subbase black. Installed on chassis, tested and ready to operate. Unit certified to ANSI B30.5 for Mobile and Locomotive cranes.

## Technical Specifications

**Crane Capacity:** 48,000 pounds at five feet load radius.

**Maximum Tip Height:** 117' height (162' with optional 45' jib)

**Control Console:** Dual operator control stations equipped with four single axis control levers for the main crane controls with independent controls for all outriggers for precise leveling. The levers for the outriggers and stabilizers are offset and shorter than the main crane control levers for added safety. Each side includes a bubble level gauge, engine start/stop switch, signal horn button, variable speed foot throttle, lifting capacity chart, range diagram chart, boom angle indicator, 12V DC power source, and cup holder. A system pressure gauge is located on the driver side console.

**Boom:** Four-section fully proportional, high strength steel plated rectangular tube sections. A maximum boom tip height of 117 feet mounted on a truck. The boom nose contains one floating upper sheave and three lower sheaves. Assembly includes heavy-duty cylinder fittings, pivot pins, and replaceable wear pads.

**Winch:** Mounted at the base of the boom for a long fleet angle and flat level spooling of cable. Winch is driven by a planetary reducer and powered by a hydraulic motor. Burst-of-speed winch provides increased line speed. The winch brake is a spring applied, pressure release design. Supplied with 425' of 9/16" diameter rotation resistant wire rope with a single line pull of 9,060 pounds, and a down-haul ball with hook for single part line.

**Load Moment Indicator System:** LMI system senses hoist cylinder pressures, boom length and boom angle with hydraulic function lockout. The display console is equipped with an integrated bar graph showing crane utilization, boom angle or boom length, mode select controls for main boom and jib operation, and an anti-two block with an audio/visual warning and shut-off functions to limit hook-boom point contact.

**Outriggers:** "A" frame link type outriggers for a minimum of 20'10" extended span. Additional stabilization provided by out-and-down rear stabilizers with 18'2" extended span.

**Frame:** Full length, all welded rigid 4-plate design sub-frame for 20' bed that bolts to the truck frame under the pedestal.

**Turret:** Turret is one-piece weldment. Turret rotates on large diameter ball bearing.

**Rotation:** Hydraulic motor drives turret through double reduction planetary swing drive for 372-degree non-continuous rotation. The swing drive system has a spring applied, pressure release brake.

**Boom Extension:** Incorporates a 2-stage hydraulic extension cylinder, attached to the largest boom section, with a proportional cable extension driving the outermost sections.

**Lift:** One double-acting full displacement, long stroke cylinder provides smooth and stable boom elevation. Holding valve prevents boom from lowering in event of hose failure.

**Cylinders:** All cylinders use microhoned cylinder tubing, chrome shafts, top grade packing and protective rod wipers. Cylinder-mounted holding valves provided on all load-holding cylinders.

**Hoses:** All high-pressure hose is wire braid reinforced with a minimum safety factor of 4 to 1.

**Oil Tank Capacity:** 120 gallon mounted to truck frame on roadside.

**Hydraulic System:** Equipped with cable-shift PTO, gear pump, SAE O-ring face seals on pressure lines, a 10-micron return line filter, and shut-off valve on suction line. The control valve distributes all flow to the hoist system, swing circuit, and other crane functions. System is parallel open center type.

**Cab Equipment:** PTO cable and switch with indicator light installed in truck cab. U/L approved 5:BC dry chemical fire extinguisher installed in truck cab.

**Operator Manual:** One hard copy and one CD copy of operation, maintenance, safety and parts manual provided with each unit.

**Installation:** Unit installed on truck, painted, system and tank filled with oil, tested, inspected, certified and ready to operate.

**Standard Paint:** Crane frame, boom, and above bed Elliott white. Main outriggers, rear stabilizers, operator platform, and boom rest red. Crane subbase, bed, and reservoir to be black.

**Bumper:** Bureau of Motor Carrier Safety rear bumper.

**Weight:** Approximately 25,840 lbs. without bed, less truck.

**Truck Chassis Requirements:** Approximately 192" C.T., 120" A.F., 18,000 lb. front axle, 34,000 lb. rear axle, and 52,000 lb. GVWR required. 15.9" cubed section modulus @ 110,000 psi (1,749,000 RBM). Trucks must have extended rear frame, increased cooling, heavy duty front and rear springs, 12V electrical system with high capacity alternator, cab clearance stop/tail/backup lights, and I.D. lamps. Additional equipment to consider: front tow hook, pintle hook, mud and snow tires for highway use. Recommended GVWR is minimum for BoomTruck with flatbed only. Integral extended front frame rails are required for front bumper stabilizer. Contact factory when additional equipment is to be added.

## Options

45' telescopic jib

26' telescopic jib

Superlink "short jack" for "A" style main outriggers

Radio remote control crane operation

Hook block for 2/3-part line load

Hook block for 4-part line load

Rear mount

Tool boxes

24" steel bulkhead

Front jack for 360-degree crane operation

Steel gravity leveled 2-person platform

Continuous rotation

Oil cooler

Boom mounted hose reel

Miscellaneous options: Contact factory for details



4427 South 76th Circle  
Omaha, NE 68127

Phone: 402-592-4500

Fax: 402-592-4553

Email: [info@elliottequip.com](mailto:info@elliottequip.com)

[www.elliottequip.com](http://www.elliottequip.com)

RANGE DIAGRAM WITH FULL SPAN OUTRIGGERS

HEIGHT ABOVE GROUND IN FEET

LOAD RADIUS FROM CENTERLINE OF ROTATION IN FEET

BOOM MUST BE FULLY RETRACTED WHEN JIB IS ERECTED, BEFORE RAISING OR LOWERING THROUGH THIS AREA

## ELLIOTT

EQUIPMENT COMPANY

MODEL 2400 105-FT. BOOM

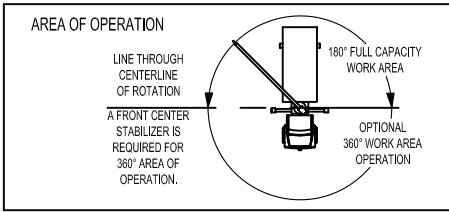
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ALLOWABLE LINE PULL

	1-PART LINE	2-PART LINE	3-PART LINE	4-PART LINE	5-PART LINE	6-PART LINE	<b>NOTICE</b> - DO NOT DEADEND LINE BLOCK AGAINST BOOM TIP WHEN EXTENDING BOOM. - KEEP AT LEAST 5 WRAPS OF LOAD LINE ON THE WINCH DRUM AT ALL TIMES. - USE ONLY 1/2" DIAMETER WIRE ROPE, AS SPECIFIED BELOW, WITH THE PROPER BREAKING STRENGTHS LISTED. - ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. SEE OPERATIONS & SAFETY MANUAL. - MAXIMUM CAPACITY WITH "BURST OF SPEED" IS 800 LBS.
MAX PULL:	9,600 lbs	19,200 lbs	28,800 lbs	38,400 lbs	48,000 lbs	48,000 lbs	
MAX PULL:	9,060 lbs	18,120 lbs	27,180 lbs	36,240 lbs	45,300 lbs	48,000 lbs	

DEDUCTIONS FROM RATED LOADS FOR HANDLING DEVICES SUPPLIED BY ELLIOTT EQUIPMENT CO.  
 OVERHAUL BALL ----- SEE OVERHAUL BALL MFR. NAMEPLATE  
 LOAD BLOCK ----- SEE BLOCK MFR. NAMEPLATE

BOOM LOAD RATINGS											JIB LOAD RATINGS								
LOAD RATINGS IN LBS. WITH OUTRIGGERS FULLY EXTENDED HORIZONTALLY AND VERTICALLY											LOAD RATINGS IN LBS WITH OUTRIGGERS AND STABILIZERS EXTENDED								
LOAD RADIUS IN FEET	LOADED BOOM ANGLE	A		B		C		D		E		26-ft FIXED LENGTH JIB		26'-45' TWO SECTION JIB					
		31-FT.	46-FT.	58-FT.	70-FT.	82-FT.	94-FT.	105-FT.	LOAD RADIUS IN FEET	LOADED BOOM ANGLE	26-ft JIB	LOAD RADIUS IN FEET	LOADED BOOM ANGLE	26-ft JIB	LOADED BOOM ANGLE	45-ft JIB			
5	80	48,000										30	78.5	4,400	30	78.5	4,150		
6	78	39,000										35	76.5	4,000	35	76	3,750	77	2,350
8	74	32,000	79.5	28,500								40	74	3,600	40	74	3,350	75.5	2,200
10	70	26,500	77	23,800	80	20,300						45	72	3,100	45	71.5	2,850	74	2,100
12	65.5	22,800	74.5	20,300	78	18,900						50	69.5	2,700	50	69	2,450	72	1,950
14	61.5	20,000	71.5	17,800	76	16,400	79	14,700				55	67	2,300	55	66.5	2,050	70	1,750
16	57	17,600	69	15,800	74	14,500	77.5	13,000				60	64.5	2,000	60	64	1,750	68	1,600
18	52	15,900	66	14,300	72	13,200	75.5	11,800	78.5	11,800		65	62	1,700	65	61.5	1,450	66	1,400
20	47	14,300	63	12,800	69.5	11,800	74	10,700	76.5	10,100	79	10,000		70	59	1,250	64	1,250	
25	30.5	10,300	55.5	10,300	64.5	9,500	69.5	8,600	73.5	8,200	76	7,800	78	7,300	75	56.5	1,300	75	56
30			47.5	8,500	58.5	7,900	65	7,000	69.5	6,700	72.5	6,300	75	6,050	80	53.5	850	59.5	850
35			37.5	6,900	52.5	6,600	60.5	5,900	65.5	5,750	69.5	5,400	72	5,100	85	50.5	900	57	750
40			23	5,200	45.5	5,600	55	5,100	61.5	4,950	66	4,700	69	4,450	90	47.5	700	55	650
45					37	4,750	49.5	4,400	57.5	4,350	62.5	4,100	66	3,850					
50					26.5	3,850	43.5	3,800	53	3,800	59	3,600	63	3,350					
55					15	2,700	37	3,250	48	3,350	55	3,100	59.5	2,850					
60						28.5	2,700	43	2,950	51	2,700	56.5	2,500						
65						15.5	2,150	37	2,550	46.5	2,300	52.5	2,050						
70								30	2,150	42	2,100	49	1,850						
75								20.5	1,800	36.5	1,650	45	1,500						
80										30.5	1,000	40.5	1,200						
85										22.5	600	35.5	950						
90												30	650						
0		5,500	0	2,900	0	1,100	0	500											
DEDUCTIONS FOR STOWED JIB (lbs)		850	600	450	400	350	300	250	DEDUCTIONS FOR STOWED EXTENDABLE JIB (lbs)						DEDUCTIONS FOR STOWED FIXED LENGTH JIB (lbs)				
		550	350	300	250	200	150	150											



NOTE: 1. CAPACITIES DO NOT EXCEED 118% STABILITY. 2. PERSONNEL HANDLING IS ALLOWED ONLY WITH FULL SPAN OUTRIGGERS. 3. LOAD RATINGS ABOVE BOLD LINE ARE STRUCTURALLY LIMITED. 4. BOOM LOAD RATINGS ARE BASED ON LOADED BOOM RADIUS. 5. LOADED BOOM ANGLES ARE GIVEN AS A REFERENCE ONLY.

CRANE MEETS ASME B30.5 REQUIREMENTS AT TIME OF MANUFACTURE. DO NOT PAINT OVER ANY LABELS 1096850 071907

**THIS AERIAL DEVICE IS NON-INSULATING. IT PROVIDES NO ELECTRICAL PROTECTION. CONTACT WITH OR INADEQUATE CLEARANCE TO AN ENERGIZED LINE OR APPARATUS IS AN ELECTROCUTION HAZARD.**

Elliott Equipment Company reserves the right to change the specification of any unit at any time without prior notice. This brochure is only a statement of general specifications on the date of this publication. For more detailed info on specific HiReach trucks go to [www.elliottequip.com](http://www.elliottequip.com).