



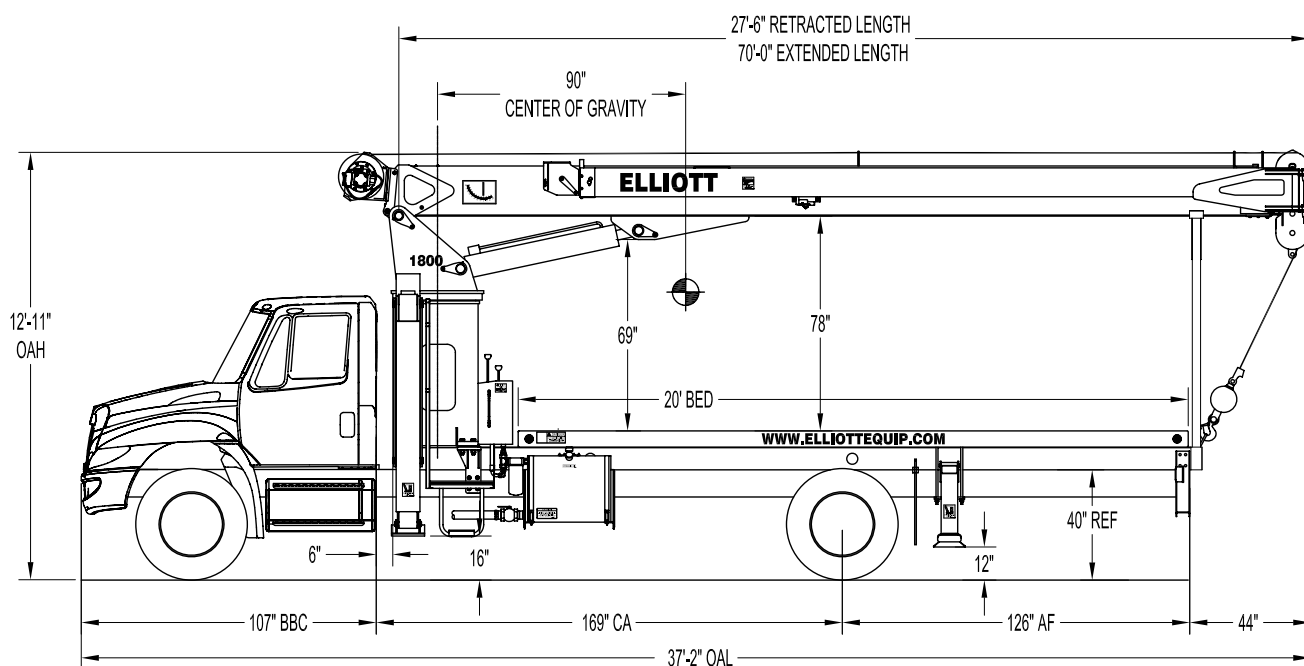
# BoomTruck™

## 1870F

### TECHNICAL SPECIFICATIONS



#### 1870F SIDE VIEW DIAGRAM



- **Maximum Vertical Reach** 120'/36.6 m
- **Working Area** 180 Degrees Standard (360 Optional)
- **Lifting Capacity** 36,000 lbs/16,329 kg
- **Boom Length** 70'/21.3 m
- **Crane Weight (Dry)** 16,235 lbs/7,364 kg
- **Jib Lengths** 23', 23-40'/7 m, 7-12 m
- **Winch Bare Drum Pull** 12,800 lbs/5,806 kg

- **Powered Boom Sections** 3
- **Overall Height** 12'11"/3.9 m
- **Operator Controls** Dual Operator Standup Controls
- **Outrigger Type Front** A-Frame
- **Outrigger Spread Front** 20'10"/6.3 m
- **Outrigger Type Rear** A-Underslung
- **Outrigger Spread Rear** 10'4"/3.1 m

**ELLIOTT**  
EQUIPMENT COMPANY

Elliott Equipment Company  
4427 South 76th Circle  
Omaha, NE 68127

Phone: 402-592-4500  
Fax: 402-592-4553  
Email: [sales@elliottequip.com](mailto:sales@elliottequip.com)

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**BOOMTRUCK - 1870F****TECHNICAL SPECIFICATIONS****TECHNICAL SPECIFICATIONS**

**Crane Capacity:** 36,000 lbs at five feet load radius.

**Maximum Tip Height:** 80' height (120' with optional 40' jib)

**Control Console:** Dual operator standup control stations equipped with four single axis control levers for the main crane controls. Operator station includes LMI display, bubble level gauge, engine start/stop switch, signal horn button, variable speed foot throttle, lifting capacity chart, range diagram chart, boom angle indicator, system pressure gauge, 12V DC power source, and cup holder. Outrigger lever controls at control consoles.

**Boom:** Three-section fully proportional, high strength steel plated rectangular tube sections. A maximum boom tip height of 80' mounted on a truck. The boom nose contains one floating upper sheave and two 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 spring applied, pressure release design. Supplied with 275' of 9/16" wire rope with a single line pull of 9,600 pounds, and a downhaul ball with swivel hook for single part line.

**Load Moment Indicator System:** System senses hoist cylinder pressures, boom length and boom angle with hydraulic function lockout. The display console is equipped with a bar graph showing crane utilization, boom angle or boom length, a 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:** One set of "A" Frame main outriggers with 20'10" span, and

one set of underslung "A" rear outriggers with a 10'4" span.

**Frame:** Full length, all welded rigid 4-plate design sub-frame. Sub-frame allows for bolt-on addition of 20' bed.

**Turret:** Reverse offset 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.

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

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

**Hoses:** All high pressure hoses are wire braid reinforced with a minimum safety factor of 4 to 1.

**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.

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

**Oil Tank Capacity:** 70 gallon mounted to truck frame on roadside.

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

**Operators Manual & Video:** Two CD copies and one hard copy of operation, maintenance, safety and parts manual provided with each unit. Operational and safety video provided at delivery.

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

**Standard Paint:** Paint turret and boom white, outriggers red, and bed and boxes black.

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

**Weight:** Approximately 15,615 lbs. with 20' steel-floor bed less truck.

**Truck Chassis Required:** Approx. 169" C.T. RBM 1,463,000 in-lb. per rail, 13,000 lb. front axle and 33,000 lb. GVWR required. Trucks must have front frame extension, 12V electrical system with high capacity alternator, cab clearance stop/tail/backup lights, and I.D. lamps. Recommended GVWR is minimum for BOOMTRUCK with flatbed only. Contact factory when additional equipment is to be added.

**Options:**

40' or 23' Telescopic Jib.

Radio Remote Controls.

Superlink Short Jack Outriggers.

Gravity Leveled Steel Basket.

Front Jack for 360 Degree Area of Operation.

Rotation Resistant Wire Rope.

Hydraulic Tool Circuits on Bed.

Much more...

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 Elliott trucks go to [www.elliottequip.com](http://www.elliottequip.com)

**BOOMTRUCK - 1870F****TECHNICAL SPECIFICATIONS****MAXIMUM LIFTING CAPABILITIES****MAIN BOOM LOAD RATINGS WITH FULLY EXTENDED OUTRIGGERS**

| MAIN BOOM LOAD RATINGS                                        |                   |       |                   |         |                   |         |                   |         |                   |         |                   |         |
|---------------------------------------------------------------|-------------------|-------|-------------------|---------|-------------------|---------|-------------------|---------|-------------------|---------|-------------------|---------|
| LOAD RATINGS IN LBS. WITH OUTRIGGERS AND STABILIZERS EXTENDED |                   |       |                   |         |                   |         |                   |         |                   |         |                   |         |
| LOAD RADIUS IN FEET                                           | LOADED BOOM ANGLE | 27-FT | LOADED BOOM ANGLE | A 34-FT | LOADED BOOM ANGLE | B 43-FT | LOADED BOOM ANGLE | C 52-FT | LOADED BOOM ANGLE | D 61-FT | LOADED BOOM ANGLE | E 70-FT |
| 5                                                             | 79                | 36000 |                   |         |                   |         |                   |         |                   |         |                   |         |
| 10                                                            | 68                | 21300 | 73                | 19500   | 77                | 16500   | 80                | 15000   |                   |         |                   |         |
| 15                                                            | 56                | 15200 | 64                | 14500   | 70                | 13500   | 75                | 12000   | 78                | 10500   | 80                | 9600    |
| 20                                                            | 41                | 11500 | 54                | 11100   | 63                | 10000   | 69                | 9000    | 73                | 8000    | 76                | 7300    |
| 25                                                            | 19                | 8600  | 43                | 8500    | 55                | 8000    | 62                | 7200    | 68                | 6500    | 71                | 5800    |
| 30                                                            |                   |       | 27                | 6750    | 47                | 6400    | 56                | 5900    | 63                | 5400    | 67                | 4900    |
| 35                                                            |                   |       |                   |         | 36                | 5000    | 49                | 4700    | 56                | 4400    | 62                | 4200    |
| 40                                                            |                   |       |                   |         | 20                | 4200    | 41                | 4100    | 50                | 3900    | 56                | 3700    |
| 45                                                            |                   |       |                   |         |                   |         | 30                | 3500    | 43                | 3400    | 51                | 3200    |
| 50                                                            |                   |       |                   |         |                   |         | 14                | 2800    | 36                | 2800    | 45                | 2700    |
| 55                                                            |                   |       |                   |         |                   |         |                   |         | 26                | 2400    | 39                | 2300    |
| 60                                                            |                   |       |                   |         |                   |         |                   |         |                   |         | 32                | 1900    |
| 65                                                            |                   |       |                   |         |                   |         |                   |         |                   |         | 22                | 1550    |
|                                                               | 0                 | 6000  | 0                 | 4200    | 0                 | 3000    | 0                 | 1900    | 0                 | 1300    | 0                 | 1000    |
|                                                               | 340               |       | 270               |         | 210               |         | 170               |         | 150               |         | 130               |         |
|                                                               | 530               |       | 420               |         | 330               |         | 270               |         | 230               |         | 200               |         |

| JIB LOAD RATINGS                                              |           |                         |                     |                   |                    |
|---------------------------------------------------------------|-----------|-------------------------|---------------------|-------------------|--------------------|
| LOAD RATINGS IN LBS. WITH OUTRIGGERS AND STABILIZERS EXTENDED |           |                         |                     |                   |                    |
| 23-FT FIXED LENGTH JIB                                        |           | 23-40 FT EXTENDABLE JIB |                     |                   |                    |
| LOADED BOOM ANGLE                                             | 23-FT JIB | LOADED BOOM ANGLE       | 23-FT JIB RETRACTED | LOADED BOOM ANGLE | 40-FT JIB EXTENDED |
| 80                                                            | 4600      | 80                      | 4500                | 80                | 2600               |
| 75                                                            | 3700      | 75                      | 3600                | 75                | 2000               |
| 70                                                            | 3000      | 70                      | 2900                | 70                | 1900               |
| 65                                                            | 2400      | 65                      | 2300                | 65                | 1800               |
| 60                                                            | 2000      | 60                      | 1900                | 60                | 1300               |
| 55                                                            | 1600      | 55                      | 1500                | 55                | 900                |
| 50                                                            | 1400      | 50                      | 1300                | 50                | 800                |
| 45                                                            | 1100      | 45                      | 1000                | 45                | 600                |
| 40                                                            | 900       | 40                      | 800                 |                   |                    |
| 35                                                            | 700       | 35                      | 600                 |                   |                    |
|                                                               |           |                         |                     |                   |                    |
|                                                               |           |                         |                     |                   |                    |
|                                                               |           |                         |                     |                   |                    |
| DEDUCTIONS FOR STOWED FIXED LENGTH JIB                        |           |                         |                     |                   |                    |
| DEDUCTIONS FOR STOWED EXTENDABLE JIB                          |           |                         |                     |                   |                    |

**NOTICE**

- DO NOT DEADHEAD LINE BLOCK AGAINST BOOM TIP WHEN EXTENDING BOOM

- KEEP AT LEAST 5 WRAPS OF LOADLINE ON THE WINCH DRUM AT ALL TIMES

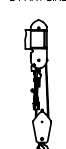
- USE ONLY 9/16" DIAMETER WIRE ROPE, AS SPECIFIED BELOW, WITH THE PROPER BREAKING STRENGTHS LISTED

- ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. SEE OPERATION & SAFETY MANUAL

1-PART LINE



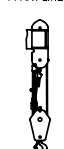
2-PART LINE



3-PART LINE



4-PART LINE



ELLIOTT EQUIPMENT CO. SUPPLIED  
LOADLINE EQUIPMENT DEDUCTIONS:  
DOWNHAUL WEIGHT .....180 lbs  
ONE SHEAVE BLOCK.....375 lbs  
TWO SHEAVE BLOCK.....640 lbs

|                     |            |            |            |                                                                 |
|---------------------|------------|------------|------------|-----------------------------------------------------------------|
| MAX PULL: 9,600 lbs | 19,200 lbs | 28,800 lbs | 36,000 lbs | 9/16" - 6 x 37 IWRC (3.5:1 S.F.) 33,600-lbs. BREAKING STRENGTH  |
| MAX PULL: 9,060 lbs | 18,120 lbs | 27,180 lbs | 36,000 lbs | 9/16" - SPIN RESISTANT (5:1 S.F.) 45,300-lbs. BREAKING STRENGTH |
| MAX PULL: 7,680 lbs | 15,360 lbs | 23,040 lbs | 30,720 lbs | 9/16" - SPIN RESISTANT (5:1 S.F.) 38,400-lbs. BREAKING STRENGTH |

CRANE MEETS ASME B30.1 REQUIREMENTS AT TIME OF MANUFACTURE

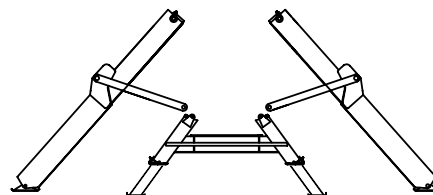
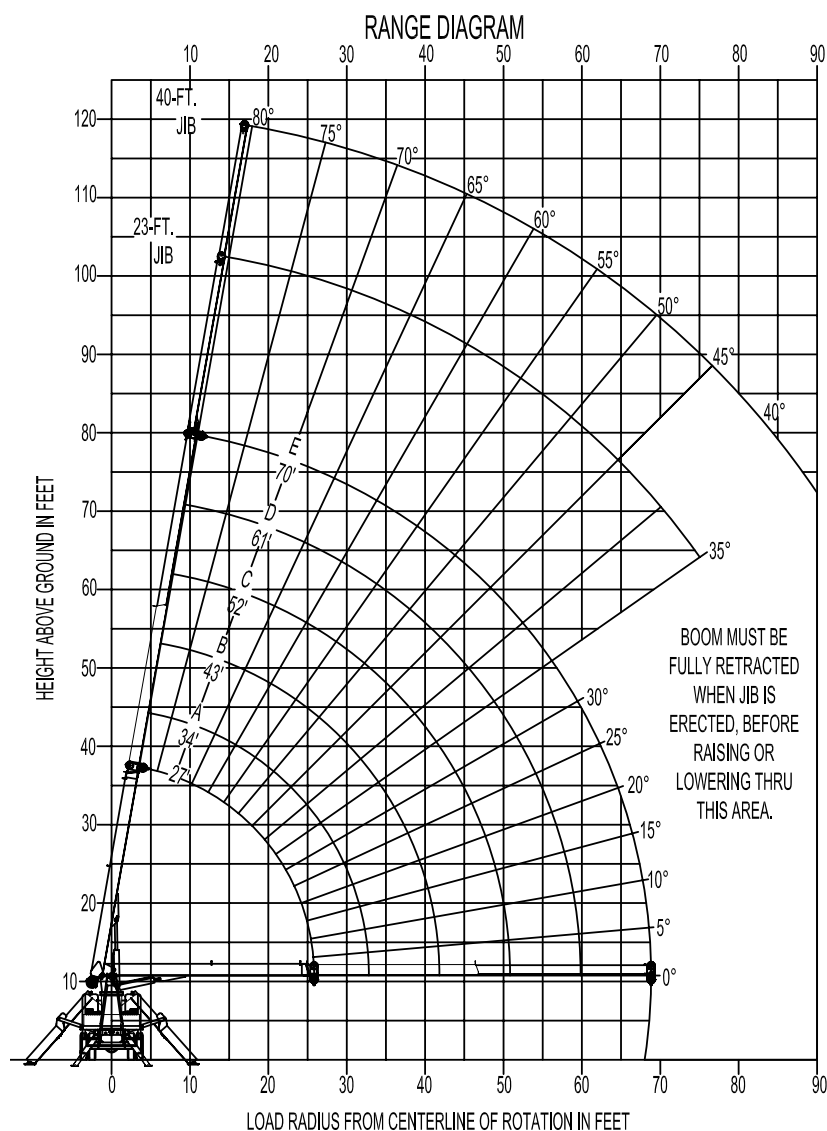
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Elliott Equipment Company  
4427 South 76th Circle  
Omaha, NE 68127

Phone: 402-592-4500  
Fax: 402-592-4553  
Email: sales@elliottequip.com

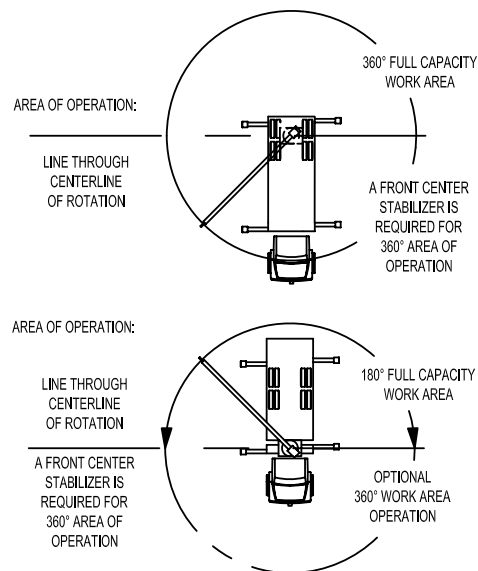
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**BOOMTRUCK - 1870F****TECHNICAL SPECIFICATIONS****MAXIMUM RANGE CAPABILITIES**

OUTRIGGERS AT FULL EXTENSION

**NOTE:**

1. Operate jib by radius when main boom is full extended. Increase boom angle if necessary to maintain load radius.
2. When boom is retracted, operate jib by boom angles. Do not exceed any rated jib capacities at reduced boom lengths.
3. Capacities do not exceed 85% stability.
4. Load ratings above bold line are structurally limited.
5. Personnel handling is allowed only with full span outriggers.
6. Boom load ratings are based on loaded boom radius. Loaded boom angles are given as reference only.



**BOOMTRUCK - 1870F****TECHNICAL SPECIFICATIONS****CHASSIS SPECIFICATIONS**

|                                | 1870F BoomTruck                    |
|--------------------------------|------------------------------------|
| Wheelbase (WB)                 | 236" / 599 cm                      |
| Cab to Axle (CA)               | 169" / 429 cm                      |
| Cab to End of Frame (EOF)      | 295" / 749 cm                      |
| Frame Section Modulus          | 13.3 in3-110,000 psi / 758,428 kPa |
| Front Axle Gross Weight Rating | 13,000 lb / 5,896 kg               |
| Rear Axle Gross Weight Rating  | 20,000 lb / 9,072 kg               |
| Integral Front Frame Rails     | Required for Front Stabilizer      |

Chassis data is minimum general requirements-not for engineering.  
Actual dimensions and truck data will depend on truck selection and axle configuration.  
\*Minimum chassis weight is required to meet 85% stability requirements.

**OPTIONS****Radio Remote Control**

Interference protected radio remotes let you get closer to your work and have full control over your machine.

**Pin-On Jib Attachments**

One piece & two piece telescoping or fixed jibs that stow on the side of the boom for easy placement while on the worksite.

**Continuous Boom Rotation**

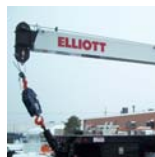
Add the convenience of 360 degree area of operation by adding a special boom rotation bearing for swinging without stops.

**Superlink Short Jack Outriggers**

Reduce your outrigger spread with Elliott's patented Superlink outriggers that allow straight down outrigger deployment on one side and full crane operation on the other.

**Tool Boxes**

Optional tool boxes and bed storage can accommodate any storage need for tools, work materials and more.

**Hook Block for Multi-Part Line**

Elliott can install a 2-3 part hook block or a 4 part-hook block to improve lifting capabilities. The block can be stored at the rear of the bed.

**Gravity Leveled Basket**

Elliott's pin-on work platform pins onto the boom for easy installation and removal. Gravity leveling and mechanical rotation makes it a great accessory for any worksite.

**Body Mounted Hose Reels and Circuits**

Let us work with you to customize your tool compatability by adding hose reels or hydraulic circuits to the crane bed.