



MODEL 1870F



Qty

1870F BASIC UNIT

1	Front mount subframe for a 20' bed. A 27' retracted to 70' extended 3-section proportional boom. Sheave head shall be equipped with three sheaves. Winch features a burst of speed 12,800 lb. bare drum pull with 275' of 9'16" diameter 6x37 EIPS wire rope and a 9,600 lb. single line pull. Internal boom hard-wired anti-two-block and Load Moment Indicator (LMI) hydraulic overload protection system. 372 degree non-continuous rotation. Hydraulic system includes 3-section gear pump (counterclockwise rotation), 70 gallon oil reservoir with sight and temperature gauge, 10 micron return line filter, and single gate valve on suction line. Dual operator control console and platforms with engine start/stop switch, independently controlled outrigger and stabilizer levers, bubble level gauge, signal horn, variable speed foot throttle, lifting capacity chart, range diagram chart, boom angle indicator, system pressure gauge (roadside), cup holder, and 12V power outlet. "A" frame link type outriggers at crane pedestal with 20'10" spread. "A" frame type rear stabilizers behind rear axle with 10'4" spread. Horizontal, removable type boom rest at end of subframe. Downhaul weight with hook. Maximum tip height of 80' and a maximum lifting capacity of 18 US tons at a 5' radius. 180 degree stability. Unit certified to ANSI B30.5 for Mobile Cranes.
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BED OPTIONS

1	18' Wood Bed With LED Lights (1,600 lbs.)
1	Tie-Down Rails On Both Sides of Bed (20')

JIB OPTIONS

1	23' to 40' 2-Piece Jib With Manual Extension (Side Stows On Boom)(1870 Only)(1,000 lbs.)
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OUTRIGGER/STABILIZER OPTIONS

1	Front Bumper Stabilizer for 360 Degree Area of Operation. (Includes Additional Control Valve)
1	Mounting Charge for Front Bumper Stabilizer. (For Ext Front Frame Rails Only)

LIFTING OPTIONS

1	15-Ton Single Sheave Hook Block For 2/3 Parts of Line. (240 lbs.)
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PTO OPTIONS

1	Hot Shift PTO For Automatic Transmission
1	Clockwise Rotation Pump (Required for Automatic Transmission)

TOOL BOX OPTIONS (STEEL)

1	36" x 20" x 18" Steel Underbody Mounted
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ADDITIONAL OPTIONS

1	Vertical Holder On Bed For 2/3 Part Line Hook Block
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PAINT OPTIONS

1	Paint Crane Pedestal, Turret, Boom, and Control Console White. Subbase, Bed, Rear Stabilizers, and Hydraulic Reservoir to Be Black. Main Outriggers, Operator Platform and Boom Rest to Be Red.
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MOUNTING CHARGES

1	Mounting charge for standard unit on unobstructed truck frame. Includes rear bumper, hydraulic fluid, electronic throttle interface, mud flaps, backup alarm, safety triangle kit, final stability test. (If unit ordered unmounted, requirement of RH Rotation Pump for Automatic Transmission must be indicated with order)
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CHASSIS OPTIONS (Select One)**Minimum Chassis Requirements**

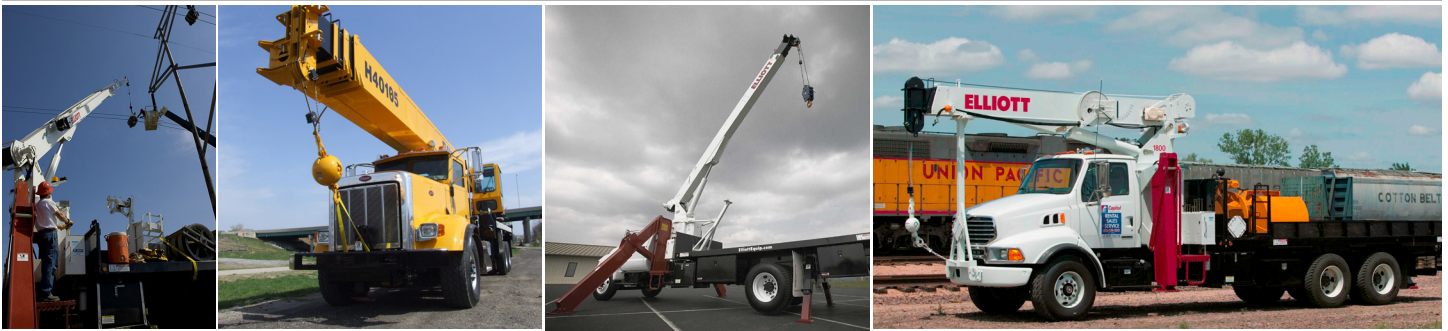
33,000 lb. GVWR (13,000 lb. FA / 20,000 lb. RA)

168" CA/120" AF

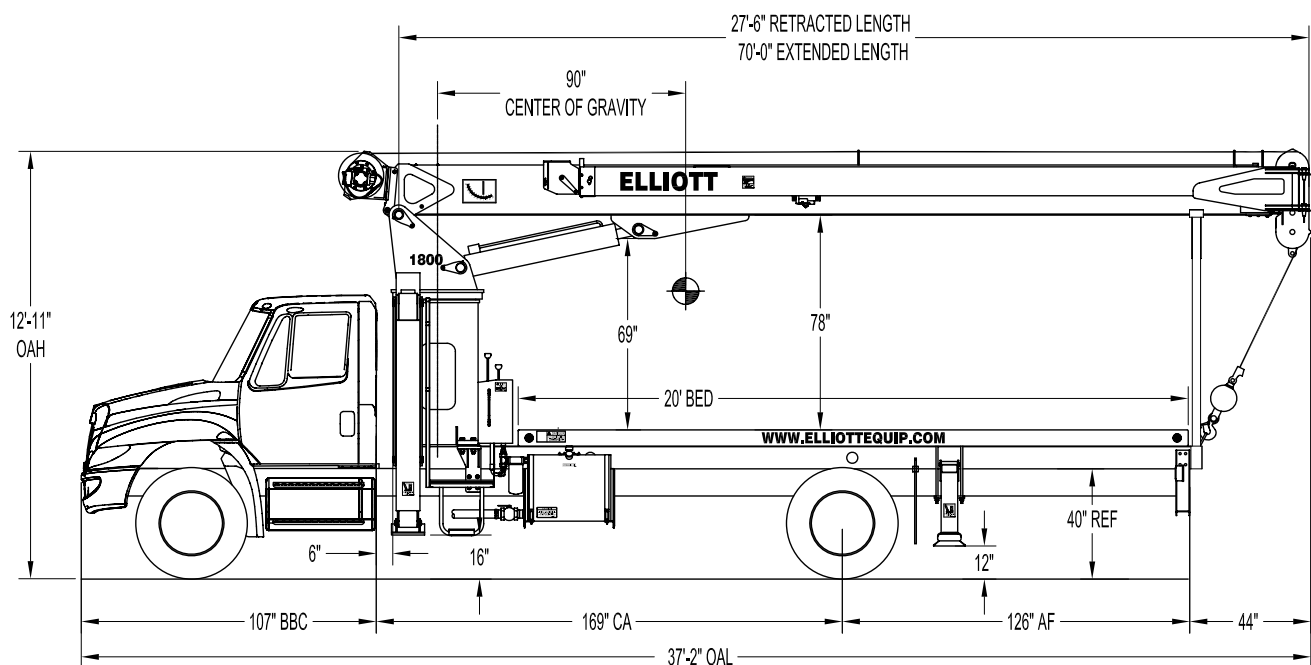
1,463,000 RBM Frame Rails

Extended Front Frame Rails for Front Bumper Stabilizer

1	Upfitting Preparation Charge for Customer Supplied Chassis (Net Price) (Chassis Spec Must Be Approved by Factory Prior to Delivery)
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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/7364 kg
- **Jib Lengths** 23', 23-40'/7 m, 7-12 m
- **Winch Bare Drum Pull** 12,800 lbs/5806 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

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. 168" 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

MAXIMUM LIFTING CAPABILITIES

MAIN BOOM LOAD RATINGS WITH FULLY EXTENDED OUTRIGGERS

MAIN BOOM LOAD RATINGS													JIB LOAD RATINGS					
LOAD RATINGS IN LBS. WITH OUTRIGGERS AND STABILIZERS EXTENDED													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	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
5	79	36000											80	4600	80	4500	80	2600
10	68	21300	73	19500	77	16500	80	15000					75	3700	75	3600	75	2000
15	56	15200	64	14500	70	13500	75	12000	78	10500	80	9600	70	3000	70	2900	70	1900
20	41	11500	54	11100	63	10000	69	9000	73	8000	76	7300	65	2400	65	2300	65	1800
25	19	8600	43	8500	55	8000	62	7200	68	6500	71	5800	60	2000	60	1900	60	1300
30			27	6750	47	6400	56	5900	63	5400	67	4900	55	1600	55	1500	55	900
35					36	5000	49	4700	56	4400	62	4200	50	1400	50	1300	50	800
40					20	4200	41	4100	50	3900	56	3700	45	1100	45	1000	45	600
45							30	3500	43	3400	51	3200	40	900	40	800		
50							14	2800	36	2800	45	2700	35	700	35	600		
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		DEDUCTIONS FOR STOWED FIXED LENGTH JIB					
	530		420		330		270		230		200		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

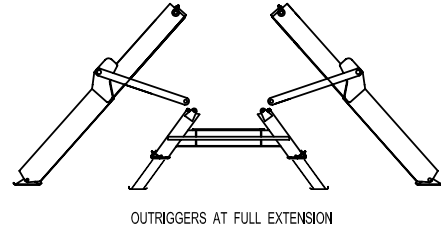
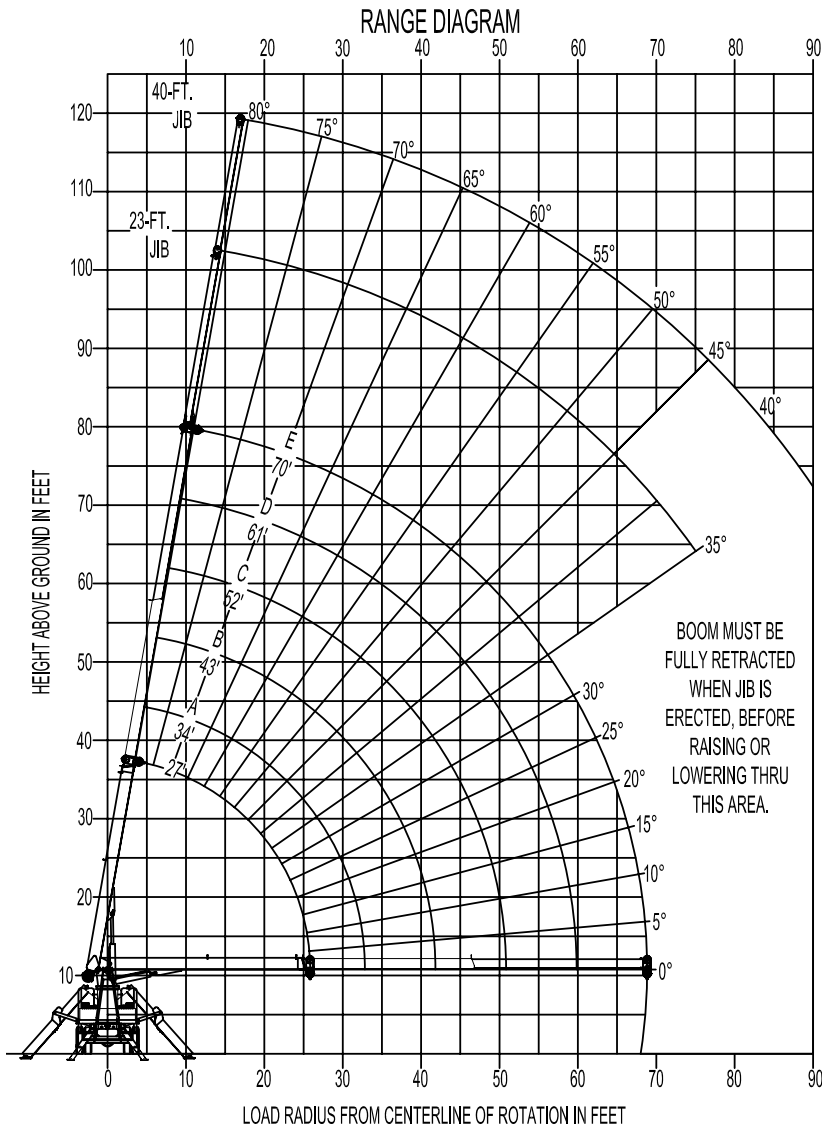
- ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. SEE OPERATION & SAFETY MANUAL

1-PART LINE	2-PART LINE	3-PART LINE	4-PART LINE	ELLIOTT EQUIPMENT CO. SUPPLIED LOADLINE EQUIPMENT DEDUCTIONS: DOWNHAUL WEIGHT180 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	
MAX PULL: 9,060 lbs	18,120 lbs	27,180 lbs	36,000 lbs	
MAX PULL: 7,680 lbs	15,360 lbs	23,040 lbs	30,720 lbs	
9/16" - 6 x 37 IWRC (3.5:1 S.F.) 33,600-lbs. BREAKING STRENGTH				
9/16" - SPIN RESISTANT (5:1 S.F.) 45,300-lbs. BREAKING STRENGTH				
9/16" - SPIN RESISTANT (5:1 S.F.) 38,400-lbs. BREAKING STRENGTH				

CRANE MEETS ASME B30.1 REQUIREMENTS AT TIME OF MANUFACTURE

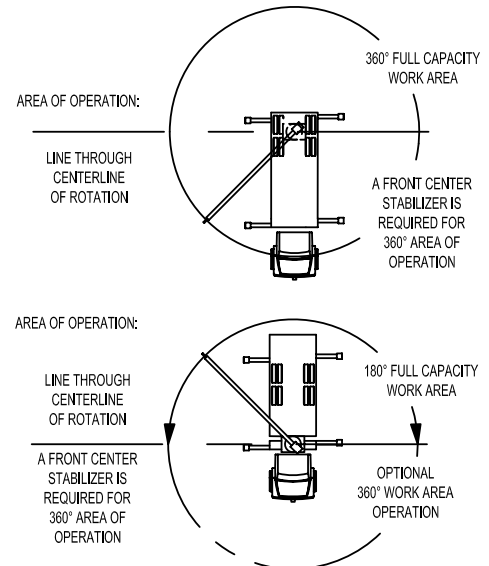
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MAXIMUM RANGE CAPABILITIES



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.



CHASSIS SPECIFICATIONS

	1870F BoomTruck
Wheelbase (WB)	236" / 599 cm
Cab to Axle (CA)	168" / 427 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 / 5896 kg
Rear Axle Gross Weight Rating	20,000 lb / 9072 kg
Integral Front Frame Rails	Required for Front Stabilizer

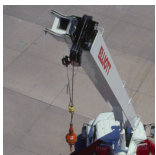
Chassis data is minimum general requirements-not for engineering.
Actual dimensions and truck data will depend on truck selection and axle configuration.
*Minimum chassis weight is required to meet 85% stability requirements.

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 Levelled 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.