



## STINGER 2857 | Boom Truck Crane

# BOOM TRUCK CRANE STINGER 2857



### FEATURES

- ▶ 28,000 lb (12 700 kg) maximum lifting capacity
- ▶ 67' (20.42 m) maximum sheave height
- ▶ 103' (31.39 m) maximum sheave height with 22-36' (6.70-10.97 m) jib
- ▶ 23-57' (7.01-17.37 m) three-section full power fully synchronized boom
- ▶ Exclusive color coded boom and load charts
- ▶ Easy-to-install optional 22' (6.70 m) one stage or 22-36' (6.70-10.97 m) two stage telescoping jib, man baskets or work platform increase job capacities
- ▶ Electronic Load Moment Indicator and anti-two-block device standard
- ▶ Externally located planetary rotation drive for easy accessibility for maintenance
- ▶ 2-speed planetary winch has 7,600 lb (3 447 kg) maximum permissible 1 part line, 26,600 lb (12 066 kg) breaking strength, 170 ft/min (52 m/min) maximum line speed
- ▶ Dual control station with direct mechanically controlled hydraulic system
- ▶ 70 gal (266 L) capacity hydraulic tank

## LOAD RATINGS

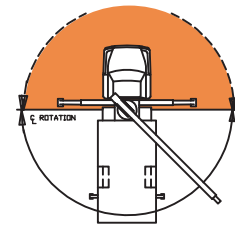
**CAUTION** Do not use this specification sheet as a load rating chart. The format of data is not consistent with the machine chart and may be subject to change.

BOOM LENGTH											
Maximum Load Chart in pounds (lbs) with fully extended outrigger											
OPERATING RADIUS (FT)	23 FT		32 FT		40 FT		48 FT		57 FT		OPERATING RADIUS (FT)
	LOADED BOOM ANGLE (DEG)	LOAD RATING (LB)	LOADED BOOM ANGLE (DEG)	LOAD RATING (LB)	LOADED BOOM ANGLE (DEG)	LOAD RATING (LB)	LOADED BOOM ANGLE (DEG)	LOAD RATING (LB)	LOADED BOOM ANGLE (DEG)	LOAD RATING (LB)	
5	76	28,000*									5
8	68	18,000*	75	12,000*	78	11,700*					8
10	62	14,000*	71	9,900*	75	9,625*	78	9,500*			10
12	56	12,000*	67	8,500*	72	8,200*	75	8,000*	78	7,900*	12
14	50	10,000*	63	7,525*	69	7,225*	73	6,925*	76	6,825*	14
16	44	9,000*	59	6,625*	66	6,425*	71	6,125*	74	5,925*	16
20	24	7,100*	50	5,425*	60	5,225*	65	4,925*	70	4,725*	20
21	16	6,700*	48	5,125*	58	4,925*	64	4,625*	69	4,525*	21
25			36	4,225*	51	4,125*	58	3,925*	64	3,825*	25
30			13	2,825*	40	3,225*	51	3,225*	58	3,125*	30
35					26	2,625*	42	2,725*	52	2,625*	35
38					12	2,025*	37	2,325*	48	2,325*	38
40							32	2,225*	45	2,225*	40
46							11	1,425*	35	1,725*	46
50									27	1,525*	50
55									10	925*	55

NOTE: STRUCTURAL STRENGTH RATINGS IN CHART ARE INDICATED WITH AN ASTERISK (\*).

### AREA OF OPERATION

DO NOT OPERATE IN SHADED AREA WITHOUT OPTIONAL FRONT STABILIZER



### DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES

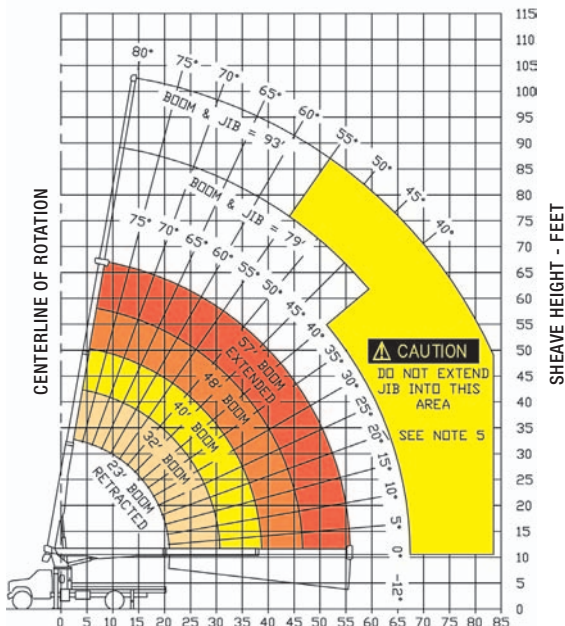
Auxiliary Block	50 lbs
Overhaul Ball	125 lbs
Crane Load Block	200 lbs

STOWED JIB DEDUCTIONS (POUNDS)					
	400	300	225	200	150

## JIB CAPACITIES FOR ALL BOOM LENGTHS VERIFY OPERATIONAL MODE SETTING ON LMI DISPLAY BEFORE LIFTING WITH JIB

Loaded Boom Angle	40°	45°	50°	55°	60°	65°	70°	75°	78°
Retracted 22 ft Jib	500	600	750	1,000	1,200	1,500	2,000	2,600	3,150
Extended 36 ft Jib	See Note 5			550	650	850	1,100	1,480	1,900

RANGE DIAGRAM (23 - 57 FT BOOM)



## GENERAL NOTES

- The operator must read and understand the Owner's Manual before operating this crane.
- Positioning or operation of crane beyond areas shown on this chart is not intended or approved except where specified in Owner's Manual.
- Loaded boom angles at specified boom lengths give only an approximation of the operating radius. The boom angle before loading should be greater to account for deflections. Do not exceed the operating radius for rated loads.
- Use rating of next longer boom for boom lengths not shown. Use rating of next greater radius for load radii not shown.
- Boom must be fully retracted when jib is erected before lowering below minimum angle. Retracted jib has no lifting capacity below a 50° boom angle.
- Use rating of next lower boom angle for boom angles not shown on jib load rating chart.
- Lifting off the main boom point while the swing around jib is erected is not intended or approved.
- Do not lower boom into this area, as hydraulic pressure will not allow raising the boom without retracting boom first.
- Crane load ratings on outriggers are based on freely suspended loads with the machine leveled and standing on a firm uniform supporting surface. No attempt shall be made to move a load horizontally on the ground in any direction.
- Practical working loads depend on supporting surface, wind and other factors affecting stability such as hazardous surroundings, experience of personnel, and proper handling, must all be taken into account by the operator.
- The maximum load which may be telescoped is limited by hydraulic pressure, boom angle, and boom lubrication. It is safe to attempt to telescope any load within the limits of the load rating chart.


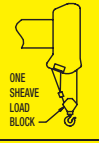


### INFORMATION

- Deductions must be made from rated loads for stowed jib, optional attachments, hooks and loadblocks (see deduction chart). Weights of slings and other load handling devices shall be considered a part of the load.
- Crane load ratings with outriggers are based on outriggers and stabilizers extended and set with all load removed from the carrier wheels.
- Load ratings do not exceed 85% of tipping load.

### DEFINITIONS

- Operating radius is the horizontal distance from the axis of rotation to the center of the vertical hoist line or load hook with load suspended.
- Loaded boom angle as shown in the Load Ratings Chart is the included angle between the horizontal and longitudinal axes of the boom base after lifting rated load at rated radius.

## WINCH DATA

Winch	Cable Supplied	1 Part Line	2 Part Line	3 Part Line	4 Part Line
					
Standard Stationary Winch	1/2" Diam IWRC XIP	Lift and Max Speed 7,600 lb 170 fpm	Lift and Max Speed 15,200 lb 85 fpm	Lift and Max Speed 20,000 lb 56.7 fpm	Lift and Max Speed 28,000 lb 42.5 fpm
	1/2" Diam Rotation Resistant	Lift and Max Speed 5,400 lb 170 fpm	Lift and Max Speed 10,800 lb 85 fpm	Lift and Max Speed 16,200 lb 56.7 fpm	Lift and Max Speed 21,600 lb 42.5 fpm

## BLOCK TYPE

Overhaul Ball	Rating: 6.25 ton (5.7 mt)
1 Sheave Block	Rating: 10 ton (9.1 mt)
2 Sheave Block	Rating: 15 ton (13.6 mt)

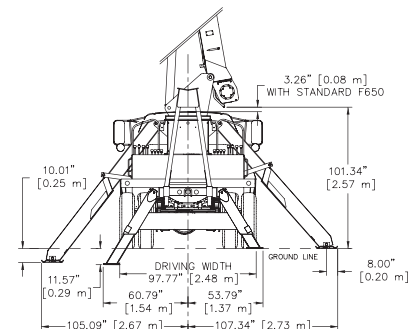
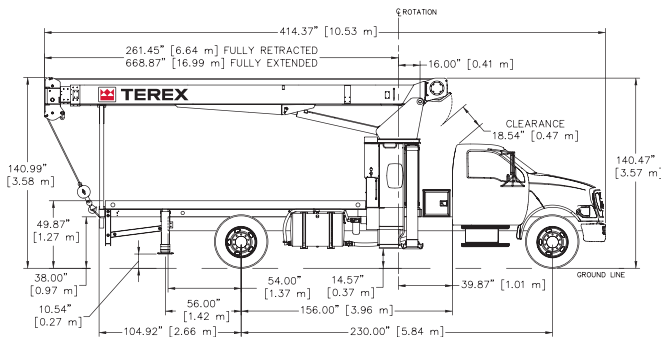
## CAUTION

Overload and anti-two block systems must be in good operating condition before operating crane. Refer to Owners Manual.

Keep at least 3 wraps of loadline on drum at all times.

Use only 1/2" diameter cable with 26,000 lb. breaking strength on this machine.

## 1 MOUNTING CONFIGURATION Behind Cab Mounting Configuration



## CARRIER PROVIDED BY TEREX

### STINGER BT2857 - Behind Cab Mounting Configuration

Manufacturer	Ford F-650 (Non CDL) Chassis
Standard Engine	Ford Powerstroke 6.0 L V-8
Standard Horsepower	200 hp @ 2,600 rpm
Standard Torque	520 lb. Ft. @ 1,500 rpm
Full Tank Capacity	45 gal (170 L)
Standard Transmission	Fuller FS-5406A Speed
Standard Transmission	Manual 6-speed
Max Speed Standard Transmission	74 mph (118.4 km/h)
Max Gradeability	23.3% in 1st
Standard Transmission	22.3% in Rev
Optional Transmission	Allison
Speed Optional Transmission	Automatic 5-speed
Max Speed Optional Transmission	74 mph (118.4 km/h)
Max Gradeability	24.6% in 1st
Optional Transmission	35.7% in Rev
Gross Vehicle Weight Rating	25,999 lb (11 804 kg)
Front Axle Weight Rating	10,000 lb (4 540 kg)
Rear Axle Weight Rating	17,500 lb (7 938 kg)
Front Tires	10R 22.5F Goodyear G159
Rear Tires	10R 22.5F Goodyear G124
Brakes	Hydraulic Anti-Lock System
Exhaust Position	Horizontal Left Side

## INCLUDED OPTIONS

- Fuel Tank (45 gal) 175 L
- Power steering
- Electric Horn
- Factory A/C
- Power Port (Cigar Lighter)
- AM/FM Radio w/ Clock
- Dual West Coast Stainless Rear View Mirrors
- Standard Factory Warranty

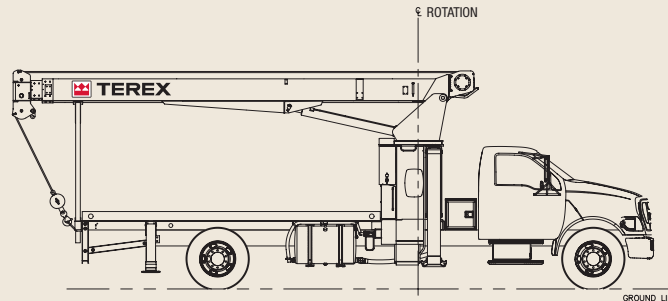
## CHASSIS RECOMMENDATIONS

### STINGER BT2857 - Behind Cab Mounting Configuration

Combined Axle Weight Rating	25,999 lb (11 804 kg)
Front Axle Weight Rating	10,000 lb (4 540 kg)
Rear Axle Weight Rating	17,500 lb (7 938 kg)
Wheel base	230" (5.84 m)
Cab to Axle	156" (3.96 m)
Afterframe	54" (1.38 m)
Frame Section Modulus	14.18 in <sup>3</sup> (232 cm <sup>3</sup> )
RBM per Frame Rail	1,400,000 in/lb (16 130 kg/m)
Frame Height (Unloaded)	40" (7.62 m)
Exhaust Position	Horizontal Left Side



## STINGER 2857 | Boom Truck Crane



### BOOM

- ▶ 23-57' (7.01-17.37 m) three-section full power fully synchronized boom. Patented keel boom design utilizes a keel shaped base plate combined with a deep, four plate boom section to optimize strength / rigidity-to-height ratio. Exclusive, patented color-coded boom and load charts allow the operator to easily determine boom extension, boom angle and load capacity. Maximum tip height with three-section 23-57' (7.01-17.37 m) boom is 67' (20.42 m). Maximum tip height with optional two-stage 22-36' (6.70-10.97 m) jib is 103' (31.39 m).

### WINCH

- ▶ Hydraulic winch with gear motor and planetary reduction gearing provides 2-speed operation. First layer rope pull is 7,900 lb (3 582 kg). Wire rope size is 1/2" (13 mm) with 26,600 lb (12 066 kg) breaking strength.

### OPERATING SPEEDS

- ▶ Mainframe / turret assembly planetary gear rotation provides 180° rotation (370° with optional front bumper outrigger). Swing rotation is 46 seconds. Boom up/down is 16/10 seconds and boom extend/retract is 35/27 seconds.

### HYDRAULICS

- ▶ Three-section pump allows the operator to perform simultaneous crane operations (winch, boom and swing). Capacities are 32, 17 and 8 gpm (122,64 and 30 L/m). Hydraulic tank capacity is 70 gal (265 L).

### CONTROLS

- ▶ Fully proportional, excellent metering characteristics for precise boom movements. Independent outrigger controls allow the crane to be stable and level in rigorous working conditions. Load Moment Indication System has audio alarm and functional shut down when operator encounters an overload situation.

### OUTRIGGERS

- ▶ Front outriggers are Link-Type. The maximum width over main outrigger pad is 17' 11" (5.45 m), main outrigger spread at maximum ground penetration is 17' 6" (5.34 m).
- ▶ Rear outriggers are A-Frame. The maximum width over auxiliary outrigger pads is 10' 2" (3.09 m).

### SUBFRAME

- ▶ Single fabricated, closed-box style subframe yields greater strength and rigidity. Wheelbase for standard truck crane mounting configuration is 230" (5.84 m).

### OPTIONS AND ACCESSORIES

- ▶ Single and two-stage jibs
- ▶ Multi-part load blocks
- ▶ Rotation-resistant load line
- ▶ Radio remote controls
- ▶ One-man or two-man baskets
- ▶ Heavy duty wood flatbeds
- ▶ Extra heavy duty wood flatbeds
- ▶ Oil cooler
- ▶ Extra heavy duty steel flatbeds
- ▶ Winch drum tensioner
- ▶ Continuous rotation
- ▶ Hydraulic hose reel
- ▶ Hydraulic auxiliary tool circuit
- ▶ Tool box
- ▶ Single front bumper outrigger

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