

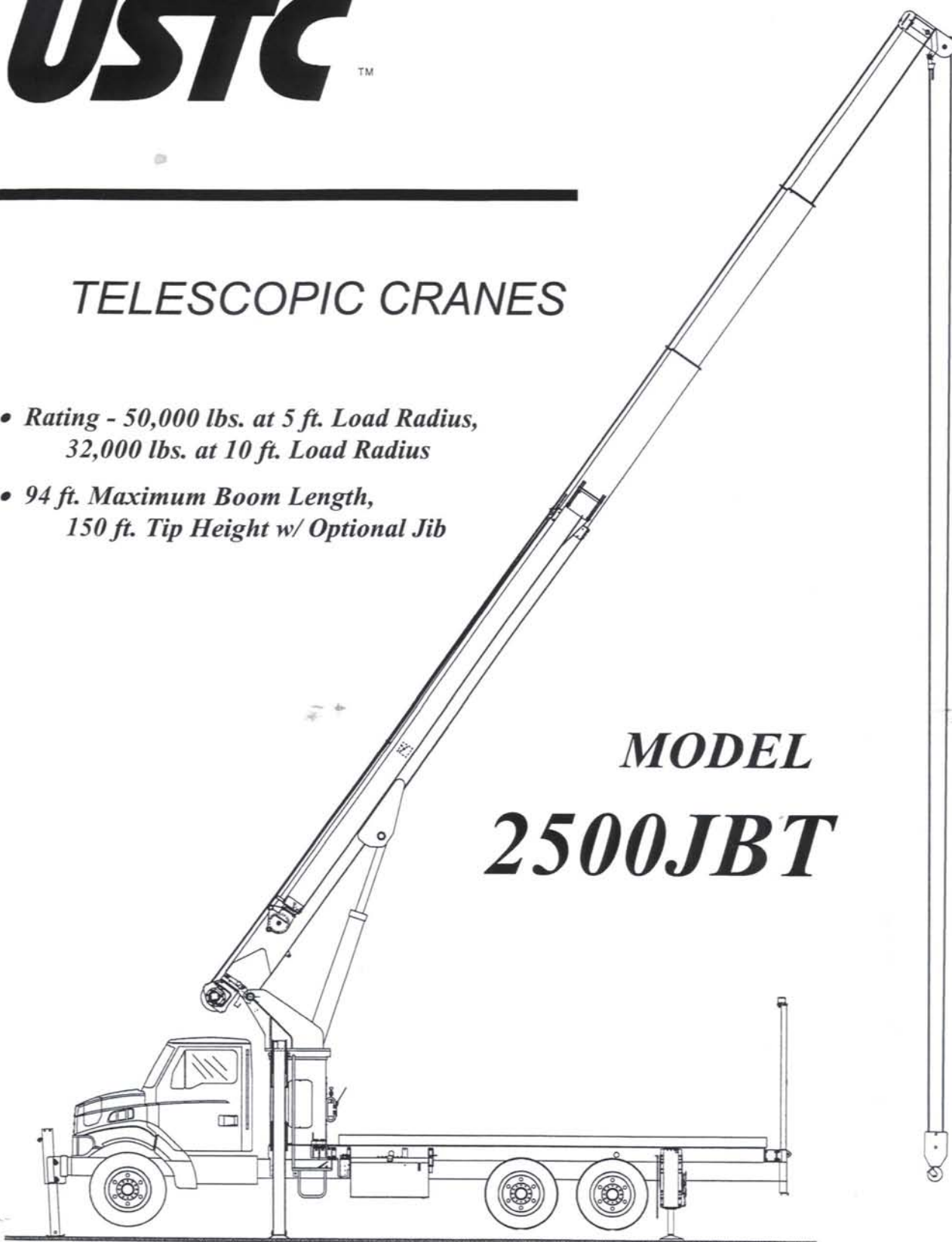


# USTC<sup>TM</sup>

## TELESCOPIC CRANES

- *Rating - 50,000 lbs. at 5 ft. Load Radius,  
32,000 lbs. at 10 ft. Load Radius*
- *94 ft. Maximum Boom Length,  
150 ft. Tip Height w/ Optional Jib*

**MODEL**  
**2500JBT**





# USTC MODEL 2500JBT

## STANDARD CRANE SPECIFICATIONS

### MAIN BOOM

New 29 ft. - 94 ft. four-section boom with inverted top hat cross-section is designed for optimum strength. The outer mid and fly sections are simultaneously extended using 9/16" (14 mm) diameter cables attached to inner and outer mid-sections for proportional boom extension.

- Single, four-groove 10 in. (254 mm) diameter non-metallic sheave on telescope cylinder.
- Telescope cylinder with integral holding valve.

### BOOM ELEVATION

A double-acting lift cylinder with an integral holding valve provides elevation from -8° to +80°. Mechanical, pendulum angle indicators are visible on either side of boom.

### BOOM NOSE

- Three non-metallic sheaves are mounted on bronze bushings.
- Self-aligning top idler sheave.
- Boom nose contains an integral yoke shaft for installation of operation personnel platforms.

### JIBS

Jibs contain adjustable brackets for ease of alignment during field installation. The jib nose also contains integral yoke shaft for optional gravity hung personnel platform.

- 26 ft. fixed length (Optional)
- 26 ft. - 46 ft. telescoping two-section length (Standard)

### HOIST

USTC's exclusive lay-away feature allows hoist to easily swing away for access to inner boom components such as the telescope cylinder.

- Planetary drive, two-speed hoist with automatic brake.
- Power up and power down for precise control of the load.
- Burst-of-speed allows shifting on-the-fly without the need to stop and change gears.
- Maximum single line speed of 271 fpm on fifth layer in burst-of-speed mode.
- Standard maximum speed is 168 fpm on fifth layer.

### LOAD HANDLING DEVICE

- Two-sheave USTC hook block with swivel hook (equipped for 4-part line) is standard.
- Other load-handling device options available.

### PEDESTAL

All welded box type construction reinforced at critical points to ensure a rigid mount.

### SWING

- Planetary swing drive is equipped with spring-applied, hydraulically released disc brake.
- 375° non-continuous rotation.
- 1.5 rpm maximum swing speed (1.0 rpm recommended).
- Optional continuous rotation available.

### TORSION BOX

Four-plate design with internal cross bracing is welded continuously on all four sides to achieve optimum rigidity and torsional strength.

### DECK OPTION

- Minimum 20 ft. steel deck is standard.
- Optional deck types available.

### OUTRIGGERS

A-frame outriggers, 21 ft.-6 in. extended, 8 ft. retracted. Double acting hydraulic cylinders with integral holding valves on each extension cylinder. Pivoting steel pads that are flared on the leading and trailing edges. All attach pins are plated and wear pads are nylatron.

### STABILIZERS

Under frame out and down type rear stabilizers, 13 ft. - 8 in. extended, 8 ft. retracted. Double-acting hydraulic cylinders with integral holding valves on each extension and jack cylinder. All attach pins are plated and wear pads are nylatron.

- Front center stabilizer is standard.

### CONTROL STATIONS

Comfortable dual operator stations equipped with four main single lever crane controls, arranged to PCSA standards. Fully proportional control valves. Outrigger and stabilizer controls allow independent extension and retraction. Each station contains engine start/stop switch, warning horn and bubble level indicators. Load charts, range diagrams, jib charts and component deduction charts are mounted on pivoting plates directly in front of the operator, for better operator visibility.

### HYDRAULIC SYSTEM

A three-section pump is direct mounted to a power take-off on the truck transmission. Flow distribution is 39 gpm (148 lpm) to the hoist function, 24 gpm (91 lpm) to the crane function, and 9 gpm (34 lpm) to the swing function. A 90-gallon (341 l) reservoir includes a 10-micron high flow filter in the return line. Sight and temperature gauges are integral on the hydraulic tank face plate. Gate valves are used for servicing the hydraulic pump and/or PTO without fluid removal.

### ELECTRICAL SYSTEM

12 volt direct. All internal strips, relays and accessory circuits are enclosed in a NEMA 12X rated weather-resistant electrical box. Wires are terminated individually and color coded for improved circuitry diagnosis and serviceability.

### ANTI-TWO BLOCK SYSTEM

A2B system with reel is equipped with lockout of hoist up and telescope out functions.

### AUDIO/VISUAL CAPACITY ALERT

Audio/visual overload capacity alert with visual display is standard. Hydraulic lockout is optional.

### MOUNTING

Pedestal and torsion sub-frame is bolted directly to the chassis with Grade 8 bolts, minimizing welding required.

### DESIGN/WELDING

Design conforms to ANSI B30.5-1994. All welding conforms to ANSI/AWS D 14.3.

DANGER! DO NOT OPERATE WITHIN 10 FT. OF LIVE POWER LINES





## 2500 JBT RATED LIFTING CAPACITIES IN POUNDS

LOAD RADIUS FEET	BOOM LENGTH IN FEET							
	29	45	61	77	94			
5	78° 50000							
10	64° 32000	76° 21000						
12	58° 27000	74° 21000	78° 21000					
15	49° 21000	68° 21000	75° 19000	79° 15600				
20	35° 15600	62° 15600	70° 15200	75° 13000	79° 10000			
25	20° 11600	54° 11600	65° 11600	71° 11100	76° 8800			
30		46° 9500	60° 9500	67° 9500	73° 7900			
35		36° 7700	55° 7700	63° 7700	70° 7000			
40		24° 6300	49° 6300	59° 6300	66° 6100			
45			41° 5200	55° 5200	63° 5200			
50			33° 4300	50° 4300	60° 4300			
55			23° 3500	45° 3500	56° 3500			
60				39° 2900	52° 2900			
65				32° 2400	48° 2400			
70				25° 1900	43° 1900			
75					38° 1600			
80					33° 1300			
85					27° 1000			

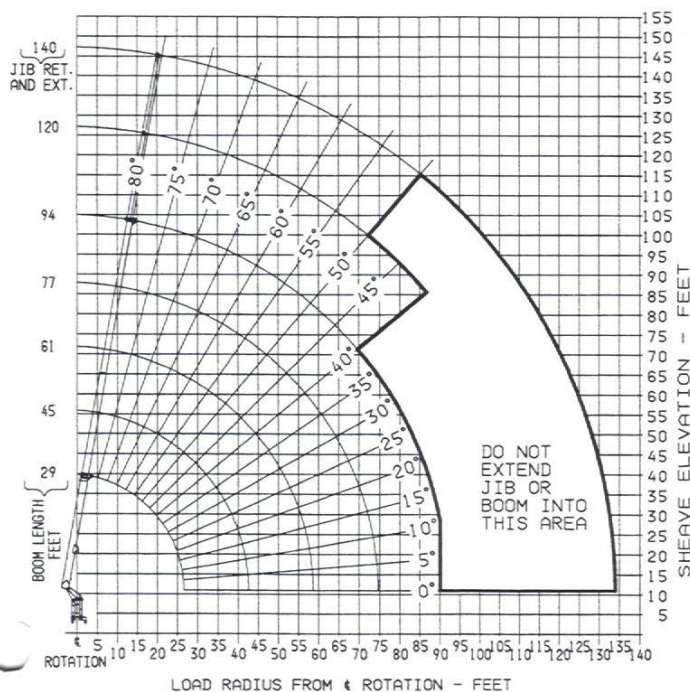
## PERMISSIBLE ROPE PULL

NUMBER PARTS LINE	9/16" DIA. 400' OF LOW ROTATION FLEX X 19 PLUS	NUMBER PARTS LINE	9/16" DIA. 340' OF 6X37 IWRC EIPS
SINGLE	* 8100 LBS.	SINGLE	8500 LBS.
TWO	16200 LBS.	TWO	17000 LBS.
THREE	24300 LBS.	THREE	25500 LBS.
FOUR	32400 LBS.	FOUR	34000 LBS.
FIVE	40500 LBS.	FIVE	42500 LBS.
SIX	48600 LBS.	SIX	50000 LBS.

DO NOT OPERATE THIS CRANE UNLESS YOU KNOW THE DIAMETER AND TYPE ROPE CURRENTLY INSTALLED ON THE CRANE. DO NOT EXCEED PERMISSIBLE ROPE PULL OF ROPE INSTALLED ON THIS CRANE. DO NOT USE 3 PART LINE WITH BOOM LENGTH OVER 61 FEET. DO NOT USE 4 PART LINE WITH BOOM LENGTH OVER 45 FEET. DO NOT USE 5 PART OR 6 PART LINE WITH BOOM LENGTH OVER 29 FEET.

DO NOT OPERATE THIS CRANE UNTIL YOU HAVE READ AND UNDERSTOOD "LIFTING NOTES" DECAL ON PEDESTAL.

\* SINGLE LINE PULL ON 5 TH LAYER OF HOIST DRUM WILL BE 7,800 LB.



## RATED JIB LIFTING CAPACITIES IN POUNDS

26-46 FT. 2 SECTION JIB			26 FT. FIXED JIB	
MINIMUM BOOM ANGLE	JIB FULLY RETRACTED	JIB FULLY EXTENDED	MINIMUM BOOM ANGLE	
79°	5400	3400	79°	5500
75°	4400	3200	75°	4500
70°	3600	2700	70°	3700
65°	2900	2100	65°	3000
60°	2400	1800	60°	2500
55°	1500	1300	55°	1600
50°	1200	900	50°	1300
45°	750		45°	850
40°	500		40°	600

1. CAPACITIES BASED ON ANGLE OF MAIN BOOM REGARDLESS OF BOOM LENGTH.
2. RATED LIFTING CAPACITY ABOVE THE BOLD LINE IS BASED ON STRUCTURAL STRENGTH. OVERLOADING THE JIB MAY CAUSE STRUCTURAL COLLAPSE OR UPSET.
3. DO NOT USE JIB FOR MULTI-PART LINE OPERATIONS.
4. IF ACTUAL BOOM ANGLE FALLS BETWEEN CHART VALUES LISTED, USE LIFTING CAPACITY FOR NEXT LOWER BOOM ANGLE.

## WEIGHT REDUCTION FOR LOAD HANDLING DEVICES

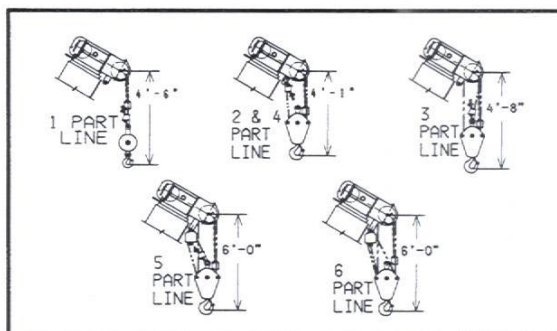
HEADACHE BALL . . . . .	170 LBS.
HOOK BLOCK (SINGLE SHEAVE). . . . .	220 LBS.
HOOK BLOCK (DOUBLE SHEAVE). . . . .	300 LBS.
HOOK BLOCK (TRIPLE SHEAVE). . . . .	500 LBS.
2-SECTION JIB STOWED. . . . .	200 LBS.
2-SECTION JIB ERECTED (RETRACTED). . . . .	1600 LBS.
2-SECTION JIB ERECTED (EXTENDED). . . . .	1800 LBS.
1-SECTION JIB STOWED. . . . .	100 LBS.
1-SECTION JIB ERECTED . . . . .	1200 LBS.

## HOIST SPECIFICATIONS - BRADEN PD12C

PERFORMANCE @ 3200 PSI	LOW SPEED-39 GPM		
	LINE SPEED	LOW ROTATION 6 X 2.57 EIPS	LINE PULL
1ST LAYER	140 FPM	8100 LBS.	8500 LBS.
2ND LAYER	155 FPM	8100 LBS.	8500 LBS.
3RD LAYER	170 FPM	8100 LBS.	8500 LBS.
4TH LAYER	188 FPM	8100 LBS.	8500 LBS.
5TH LAYER	196 FPM	8100 LBS.	7800 LBS.

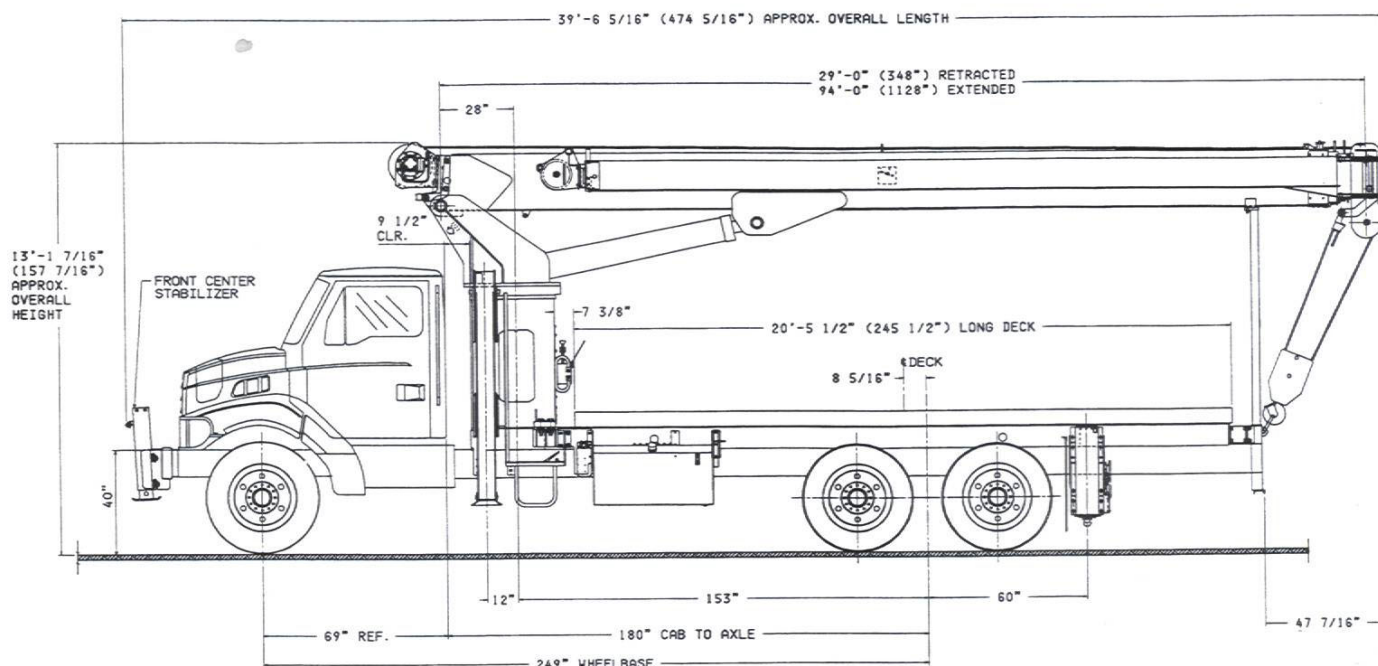
  

PERFORMANCE @ 3200 PSI	HIGH SPEED-63 GPM	
	LINE SPEED	LINE PULL
1ST LAYER	230 FPM	7000 LBS.
2ND LAYER	255 FPM	6315 LBS.
3RD LAYER	285 FPM	5750 LBS.
4TH LAYER	304 FPM	5270 LBS.
5TH LAYER	317 FPM	4870 LBS.





## 2500JBT TELESCOPIC CRANE



### AVAILABLE OPTIONS

- Hydraulic Oil Cooler
- Radio Remote Controls
- Hardwire Remote Controls
- 3'x6' Steel Gravity Hung Platform (Main Boom or Jib)
- 3'x6' Steel Self-Leveling Platform (Main Boom Only)

### TRUCK CHASSIS NOTES

1. Distributor must submit detailed truck specifications before acceptance of a firm purchase order.
2. Truck requires an electric engine shut-off in order for the console stop switch to be functional.
3. Diesel engines with a mechanical governor also must have a variable speed governor.
4. Horizontal exhaust with vertical muffler may require extensive exhaust modifications at an additional charge.
5. Automatic transmission must have a neutral lock up (Chassis manufacturer supplied.)
6. Truck specifications must meet minimum truck requirements.
7. Some chassis equipped with automatic transmissions require a remote mounted pump with a drive shaft and clockwise rotation pump at an additional charge.
8. Truck with longer wheel bases than those specified under minimum recommended specifications will require higher FAWR (Front Axle Weight Rating).
9. If cab height, as measured from the top of the truck frame to the top of the cab roof, exceed 74 in. (without cable tensioner), consult factory.
10. Truck frames with heights greater than 41 in. will increase the overall height of mounted crane and will decrease outrigger ground penetration.
11. Truck frames with heights greater than 34 in. will require special hardware and shims. Truck frames **cannot** exceed 35 in. overall width.
12. Special or heavy duty decks will increase weight on the rear axle, while reducing water level payload availability.

*This information is for marketing only, not to be used during operation. Please refer to the appropriate load charts on crane pedestal.*

Due to continued improvements, we reserve the right to make specification and/or equipment changes without prior notification. Some items shown may be optional.

### RECOMMENDED TANDEM AXLE TRUCK SPECIFICATIONS

Front Axle Weight Rating: 18,000 lbs. Minimum  
Rear Axle Weight Rating: 34,000 lbs. Minimum  
Truck Frame: 21 in.3 on a 110,000 psi Minimum  
Yield Steel Frame.



A Manitowoc Company

Manufacturers of a Full Line  
of Telescopic Cranes &  
Material Handling Equipment

76 Bowman Road  
York, PA 17404  
(717) 505-8800

FAX (717) 505-8811  
Visit us on our website:  
<http://ustc-inc.com>

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