



# 2022 Ham Catalog

## Amateur Radio Towers

Tashjian Towers Corporation has the objective of engineering, designing, and manufacturing the best crank-up towers in the world. This catalog covers the crank-up tower line of products.

The purpose of this catalog is to provide our customers with details of the products that Tashjian Towers can provide. The catalog has general information, tower specifications, and a price list. The catalog lists projected areas for budgetary purposes only. Wind speed requirements may be higher in your specific location. In the event there may be a question of compliance in the design of a tower to state, local, building codes, special engineering calculations and drawings can be prepared at a modest cost.

When a customer orders a tower, the ship date, shipping expenses, sales tax, will be determined. Written quotations will be provided and a signed proposal will constitute an order to proceed. Pay-

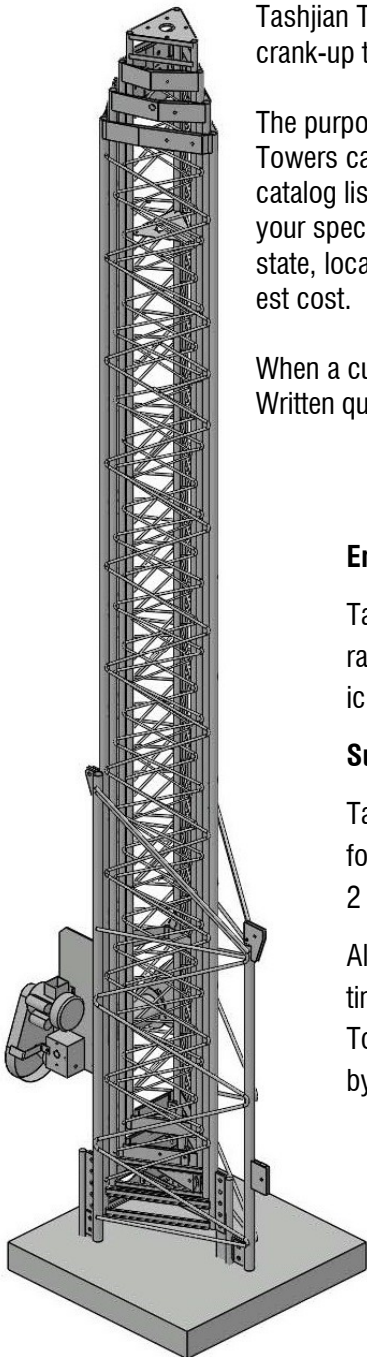
### Engineered Towers

Tashjian Towers are engineered to hold today's bigger amateur antenna. Tashjian Towers are rated to meet the current ANSI EIA RS 222 Standard, Rev. "H". Stamped plans to your specific wind speed, topography are available by experienced registered professional civil engineers.

### Superior Strength

Tashjian uses ASTM A513 1026 Type 5 tubing for tower legs. This high strength tubing allows for larger antennas at code wind speeds. W towers have pulley frames on one side, LM tower 2 sides, and DX towers all three sides.

All Tashjian Towers include the tower base, an operation manual, and winch. Delivery or lead time are 3 months but currently building towers to ship from stock. Cost to ship a Tashjian Tower is lower than other crank up tower manufacturers. Installation is available in California by Tashjian Towers a licensed contractor in Ca.



# Model No. MW33

**TYPE:** Self-supporting, extendable, manual crank-up tower.

**SPECIFICATIONS:**

**TOWER HEIGHT:** Extended 32' - 6". Retracted 11' - 6".

**TOWER SUPPORT:** Self-supporting, no guys.

**WIND LOADING:** Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 45-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

**DEAD LOAD:** The maximum antenna dead load is 250 lbs.

**WEIGHT:** The tower with the base weighs 340 pounds.

**SECTIONS:** The tower is made from four each 10 foot sections, #4, #5, #6 and #7 is the base.

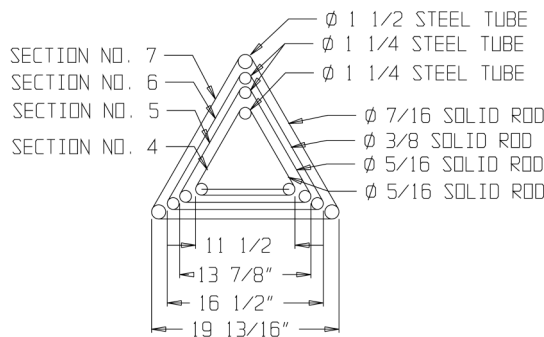
**DESCRIPTION:**

Tower includes a manual crank-up winch and hoisting cables, and a rigid concrete base mount. The tower is designed to extend the tower telescopic sections uniformly. The tower comes with an operation manual and a set of drawings and calculations for the standard tower. This tower has a pulley frame on one face only. The lifting cable is 1/4 x 7 x 19 aircraft cable.

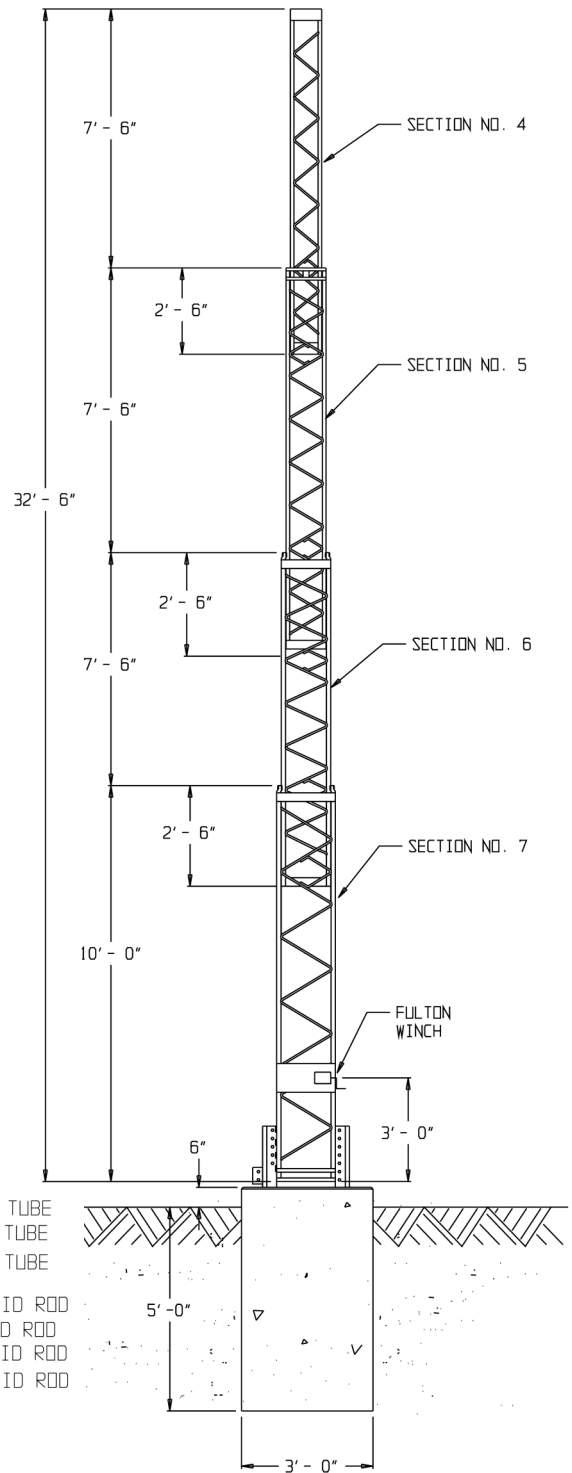
Because of high strength tubing and the bracing of solid rod, this design is considered to be the strongest engineering configuration for towers, yet saves weight, resists torsion load and reduces wind resistance, allowing more useful load to be installed on the tower.

**ACCESSORIES:**

- RCB-54 LT (#7 Wide Section)
- CO-4 for MW-33
- TA-54 Special
- #4 rotator plates
- Cable Kit for MW-33
- Masts
- MW-33 Manual, Drawings & Calculations
- Replacement Pulleys
- TB-2 Thrust Bearing
- Manual Winch



TOWER CROSS SECTION



<b>PART#</b> 433-4000	<b>\$5,365.00 USD</b>
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# Model No. WT-51

**TYPE:** Self-supporting, extendable, manual crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 51'. Retracted 21'-6".

TOWER SUPPORT: Self-supporting, no guys.

**WIND LOADING:** Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 12-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

**DEAD LOAD:** The maximum antenna dead load is 250 lbs.

**WEIGHT:** The tower with the base weighs 355 pounds.

**SECTIONS:** The tower is made from three each 20 foot sections, #4, #5, and #6 is the base

**DESCRIPTION:**

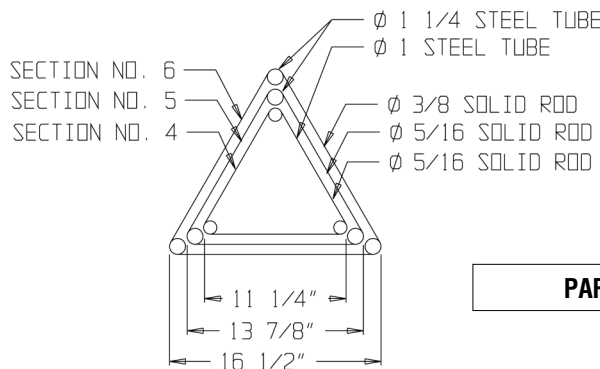
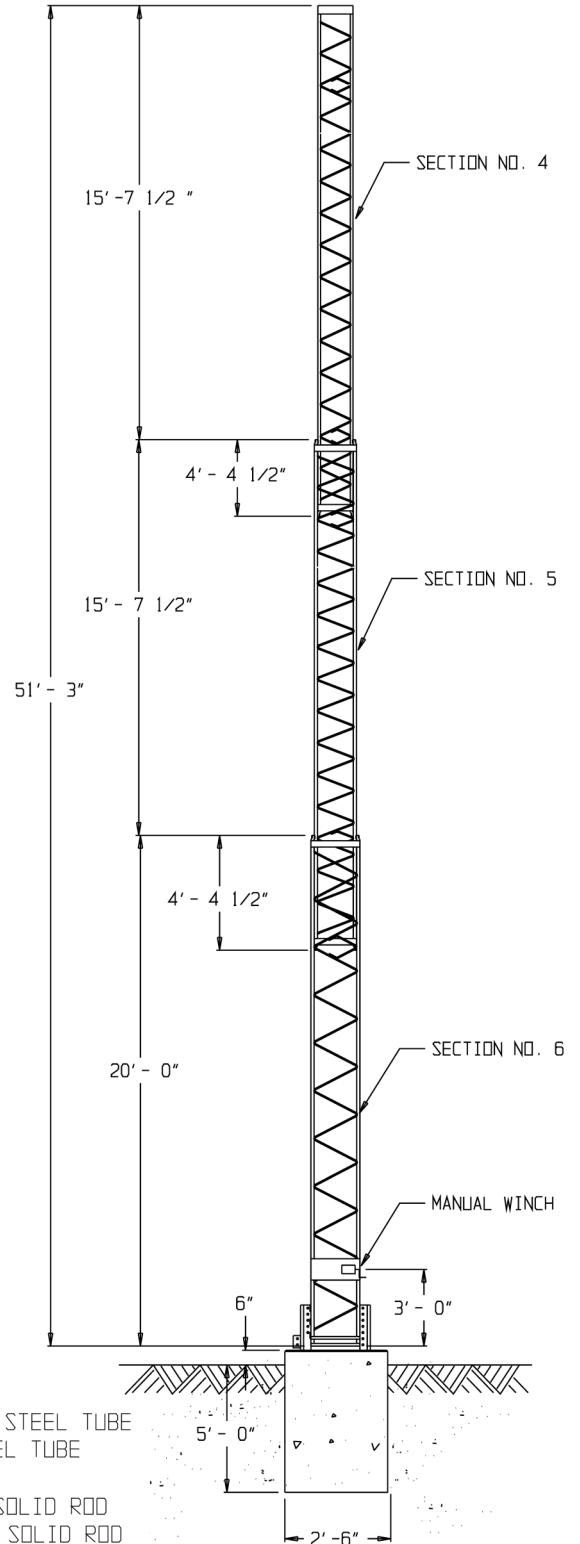
Tower is complete with a manual crank-up winch and hoisting cables, and a rigid concrete base mount. The tower is designed to extend the tower telescopic sections uniformly. The tower comes with an operation manual and a set of drawings and calculations for the standard tower.

This tower has pulley frame on one face only. The lifting cable is 1/4 x 7x19 aircraft cable.

Because of high strength tubing and the bracing of solid rod, this design is considered to be the strongest engineering configuration for towers, yet saves weight, resists torsion load and reduces wind resistance, allowing more useful load to be installed on the tower.

**ACCESSORIES:**

- RCB-37LT (#6 Wide Section)
- WT-51 Manual, Drawings, Calculations
- TB-2 Thrust Bearing
- CO-3 for WT-51
- Masts
- TA-51
- #4 Rotator Plates
- Replacement Pulleys
- Cable Kit for WT-51
- Manual Winch



**PART# 451-4000     \$4,063.00 USD**

TOWER CROSS SECTION

# Model No. WT-67

**TYPE:** Self-supporting, extendable, manual crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 67'. Retracted 21'-6".

TOWER SUPPORT: Self-supporting, no guys.

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 11-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

DEAD LOAD: The maximum antenna dead load is 250 lbs.

WEIGHT: The tower with the base weighs 700 pounds.

SECTIONS: The tower is made from three each 20 foot sections, #4, #5, #6 and #7 is the base

**DESCRIPTION:**

Tower is complete with a manual crank-up winch and hoisting cables, and a rigid concrete base mount. The tower is designed to extend the tower telescopic sections uniformly. The tower comes with an operation manual and a set of drawings and calculations for the standard tower.

This tower has pulley frame on one face only. The lifting cable is 1/4 x 7x19 aircraft cable.

Because of high strength tubing and the bracing of solid rod, this design is considered to be the strongest engineering configuration for towers, yet saves weight, resists torsion load and reduces wind resistance, allowing more useful load to be installed on the tower.

**ACCESSORIES:**

RCB-54LT (#7 Wide Section)

W-67 Manual, Drawings,

& Calculations

TB-2 Thrust Bearing

CO-3 for WT-67

Masts

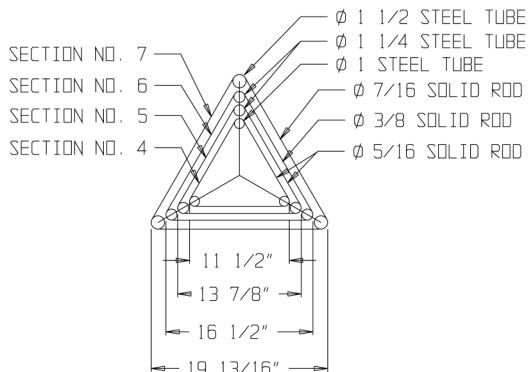
TA-54

#4 Rotator Plates

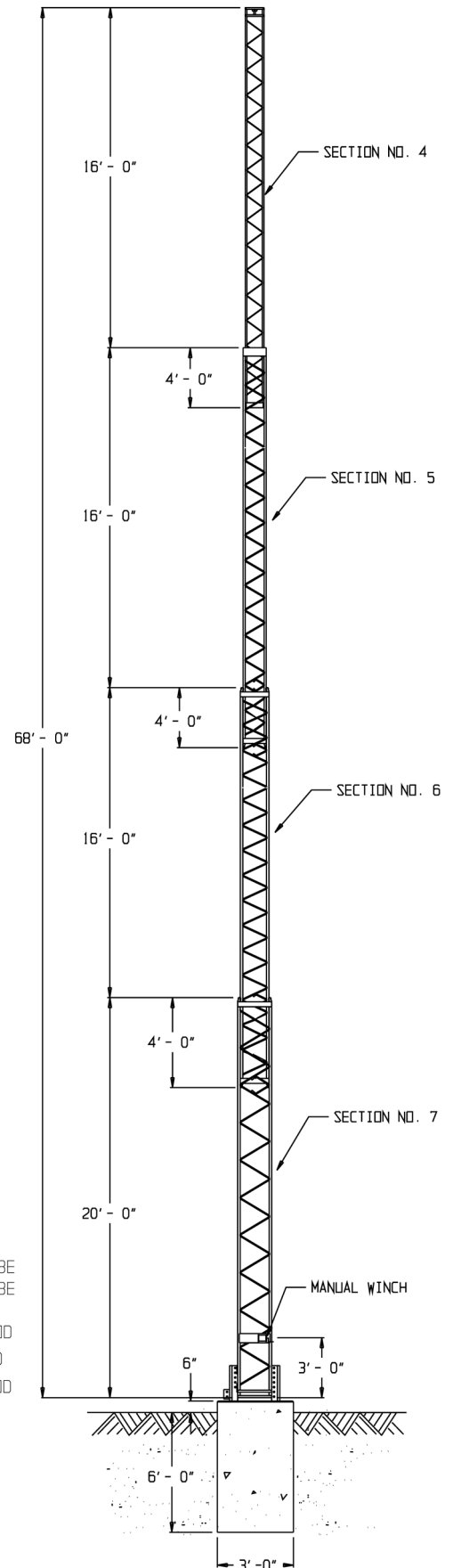
Replacement Pulleys

Cable Kit for WT-67

Manual Winch



TOWER CROSS SECTION



PART# 467-4000 \$7,171.00 USD

# Model No. LM-237

**TYPE:** Self-supporting, extendable, crank-up tower.

**SPECIFICATIONS:**

**TOWER HEIGHT:** Extended 37'. Retracted 20' - 6".

**TOWER SUPPORT:** Self-supporting, no guys.

**WIND LOADING:** Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 20-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

**DEAD LOAD:** The maximum antenna dead load is 350 lbs.

**WEIGHT:** The tower with the base weighs 325 pounds.

**SECTIONS:** There are two each 20 foot sections #5 and #6.

**DESCRIPTION:**

Tower is complete with a manual crank-up winch and hoisting cables, and a rigid concrete base mount. The tower comes with an operation manual and a set of drawings and calculations for the standard tower. The hoisting cable system designed to extend the tower telescopic sections uniformly.

This tower has pulley frame on two faces. The lifting cable is 1/4 x 7 x 19 aircraft cable.

Because of high strength tubing and the bracing of solid rod, this design is considered to be the strongest engineering configuration for tower, yet saves weight, resists torsional loads and reduces wind resistance, allowing more useful load to be installed on the tower.

**ACCESSORIES:**

RCB-37LT (#6 Wide Section)

Cable Kit for LM-237

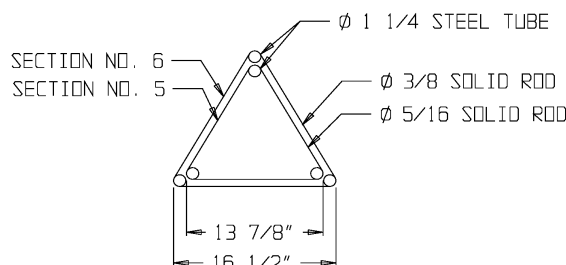
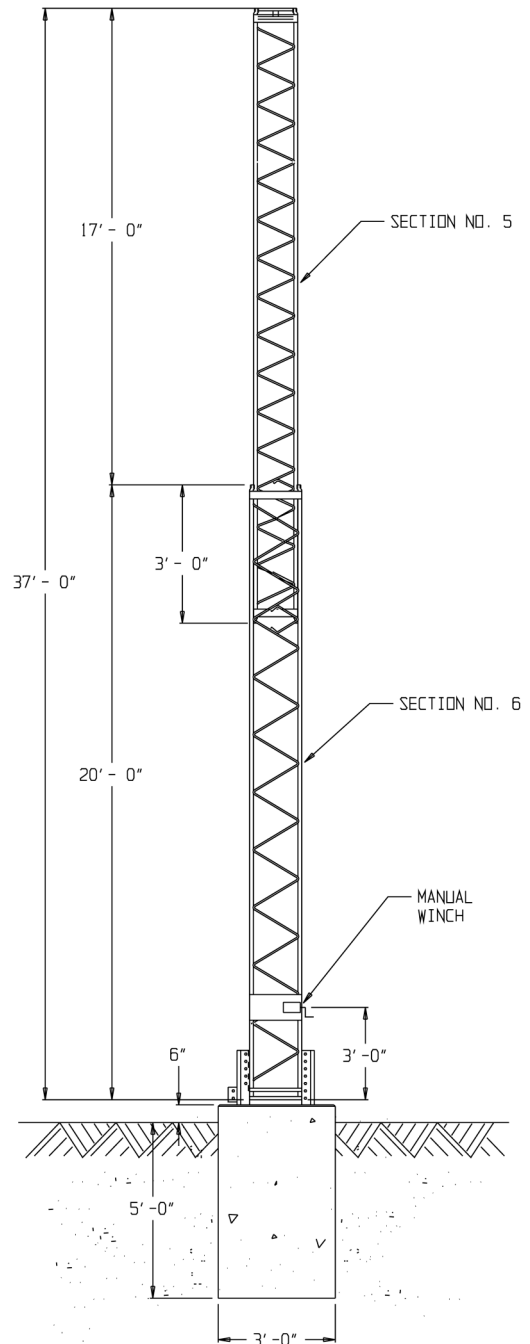
CO-3 for LM-237

TA-37

TB-2 Thrust Bearing

#5 Rotator Plates

Manual Winch



TOWER CROSS SECTION

**PART# 437-4000 \$3,462.00 USD**

# Model No. LM-354

**TYPE:** Self-supporting, extendable, crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 53'-9". Retracted 21'-6".

TOWER SUPPORT: Self-supporting, no guys.

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 18-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

DEAD LOAD: The maximum antenna dead load is 350 lbs.

WEIGHT: The tower with the base weighs 660 pounds.

SECTIONS: The tower is made from three each 20 foot sections #5, #6 and #7.

**DESCRIPTION:**

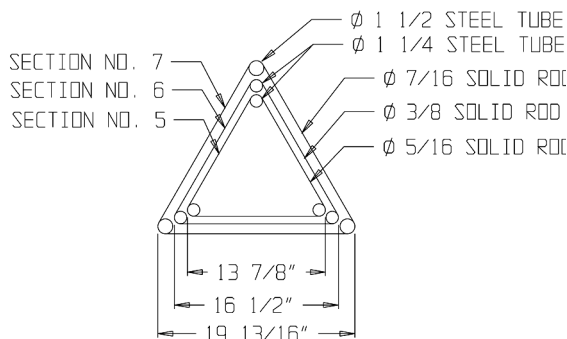
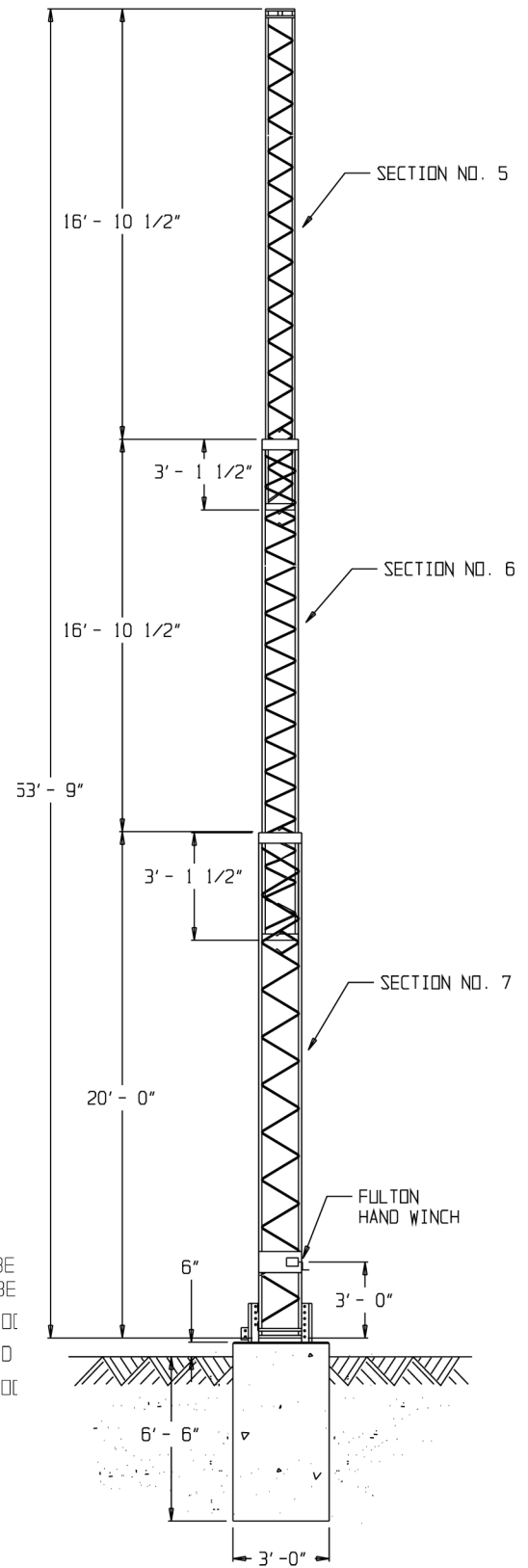
Tower is complete with a manual crank-up winch and hoisting cables, and a rigid concrete base mount. The tower comes with a manual and one set of drawings and calculations for the standard tower. Hoisting cable system designed to extend the tower telescopic section uniformly.

This tower has a pulley frame on two faces. The lifting cable is 1/4 x 7 x 19 Aircraft cable.

Because of high strength tubing and the bracing of solid rod, this design is considered to be the strongest engineering configuration for towers, yet saves weight, resists torsion loads and reduces wind resistance, allowing more useful load to be installed on the tower.

**ACCESSORIES:**

- RCB-54LT (#7 Wide Section)
- Cable Kit for LM-354E
- CO-3 for LM-354E
- Manual Winch
- TA-54
- TB-2 Thrust Bearing
- #5 Rotator Plate



TOWER CROSS SECTION

**PART# 454-4000 \$6,244.00 USD**

# Model No. LM-354HD and HDSP

**TYPE:** Self-supporting, extendable, crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 54'. Retracted 21'-6"

TOWER SUPPORT: Self-supporting, no guys.

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 45-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

DEAD LOAD: The maximum antenna dead load is 450 lbs.

WEIGHT: The tower with the base weighs 960 pounds.

SECTIONS: The tower is made from three each 20 foot sections #6, #7 and #8.

**DESCRIPTION:**

Tower is complete with a gearbox, drum and hoisting cables, and a rigid concrete base mount. The tower comes equipped with a manual, one set of drawings and calculations for the standard tower, and hoisting cable system designed to extend the tower telescopic sections uniformly. The LM-354HD uses a manual crank on the gearbox to extend and retract the tower. This tower does not have a positive pull down.

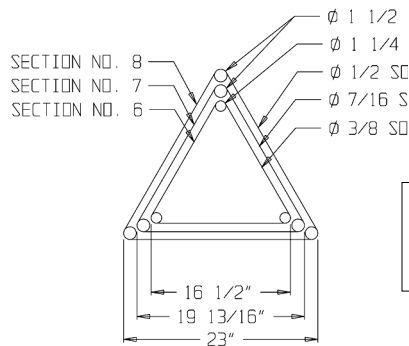
The LM-354HD SP is a motorized version of the above tower, the 1/2 HP electric motor comes with an electric control box and two limit switches. This tower has a positive pull down and has the largest top section offered.

"Positive Control" worm gear winch permits the raising and lowering of LM towers without the aid of stops or locks. LM-354HD uses a 40:1 ratio winch. The LM-354HDSP also includes a pre-wired motor control assembly.

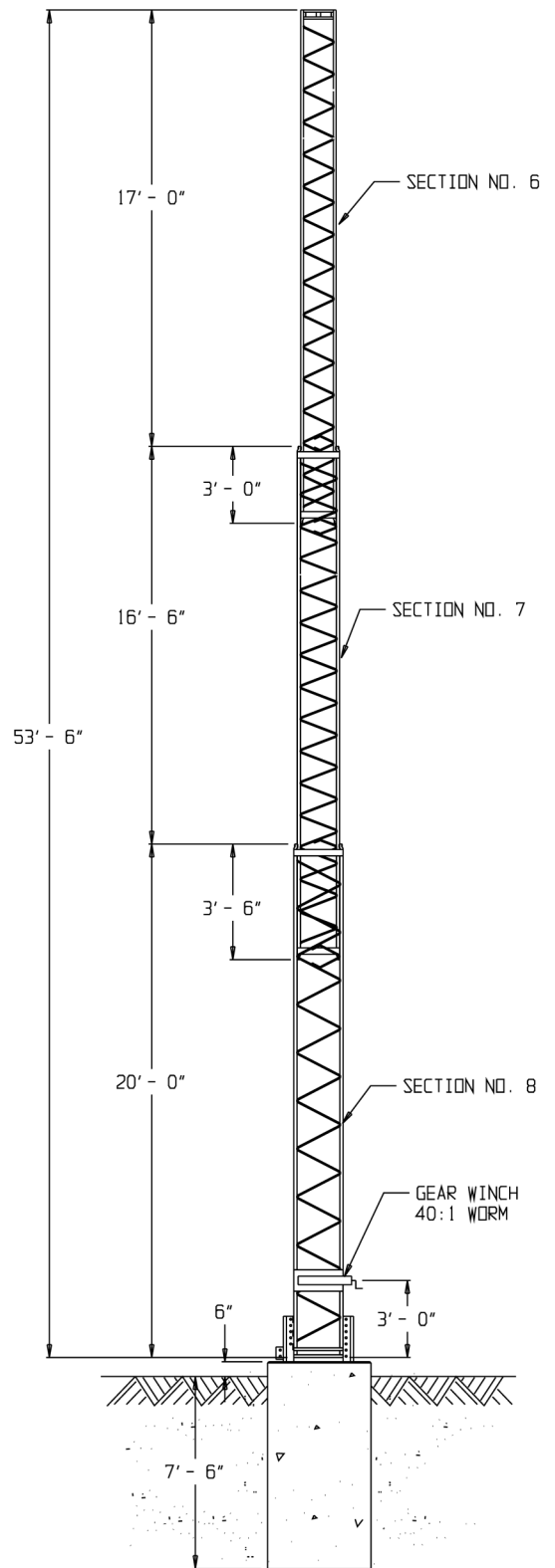
This tower has a pulley frame on two faces. The lifting cable is 1/4 x 7 x 19 Aircraft cable.

**ACCESSORIES:**

- RCB-70LT (#8 Wide Section)
- Cable Kit for LM-354HD
- CO-3 for LM-354HD
- TA-70
- TB-2 Thrust Bearing
- Manual Winch
- #6 Rotator Plates



TOWER CROSS SECTION



<b>PART# 455-4000 MANUAL</b>	<b>\$8,715.00 USD</b>
<b>PART# 456-4000 MOTORIZED</b>	<b>\$11,187.00 USD</b>

# Model No. LM-470

**TYPE:** Self-supporting, extendable, crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 69'-6". Retracted 25'-6".

TOWER SUPPORT: Self-supporting, no guys.

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 24-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

DEAD LOAD: The maximum antenna dead load is 450 lbs.

WEIGHT: The tower with the base weighs 1,200 pounds.

SECTIONS: The tower is made from 4 each 20 foot sections #5, #6, #7 and #8.

**DESCRIPTION:**

Tower is complete with a gearbox, drum, hoisting cables, and a rigid concrete base mount. The tower comes with a manual and one set of drawings and calculations for the standard tower. Hoisting cable system designed to extend the tower telescopic sections uniformly.

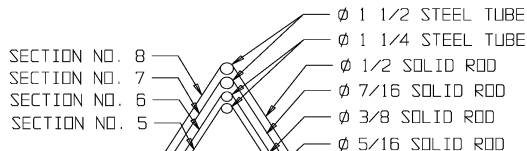
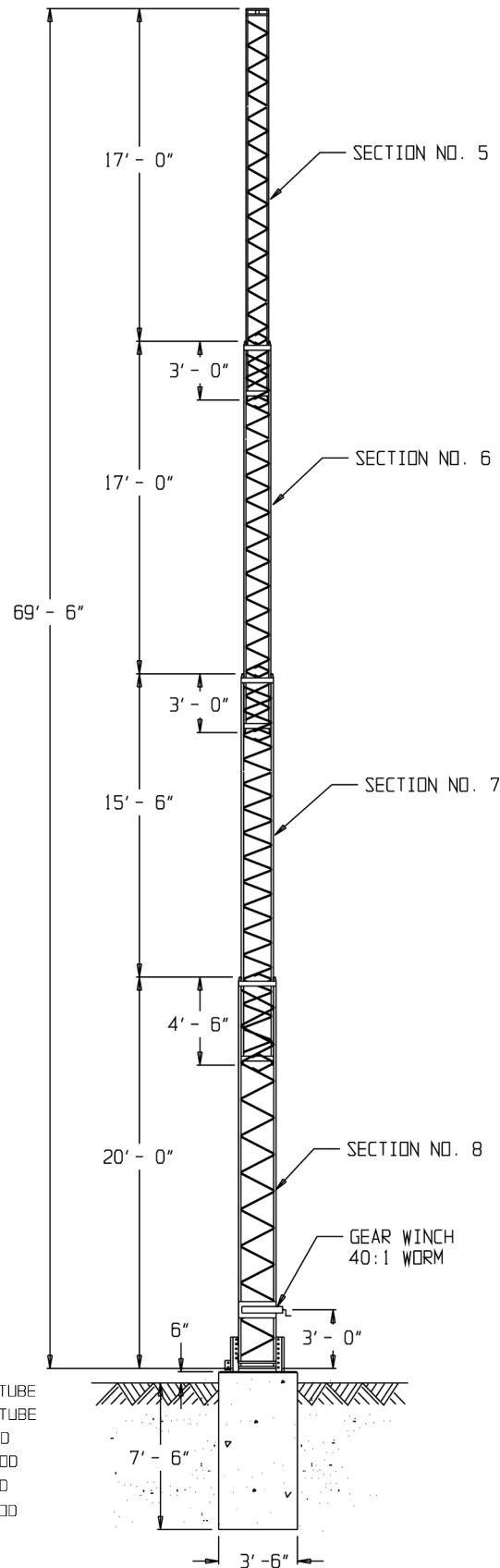
The LM-470 is motorized, and includes 1/2 HP electric motor, electric control box and two limit switches wired for 110. This tower has a positive pull down.

"Positive Control" worm gear winch permits the raising and lowering of LM towers without the aid of stops or locks. LM-470 uses a 40:1 ratio winch. The LM-470 also includes a pre-wired motor control assembly.

This tower has a pulley frame on two faces and uses 1/4 x 7 x 19 aircraft cable.

**ACCESSORIES**

- RCB-70LT (#8 Wide Section)
- LM-470 Manual, Drawings, Calculations
- CO-4 for LM-470
- Replacement Pulleys
- TA-70
- Masts
- #5 Rotor Plates
- TB-2 Thrust Bearing
- Cable Kit for LM-470
- RLT



TOWER CROSS SECTION

**PART# 470-4000 \$12,608.00 USD**



# Model No. DX-70

**TYPE:** Self-supporting, extendable, crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 70'. Retracted 24'-6".

TOWER SUPPORT: Self-supporting no guys.

**WIND LOADING:** Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 45-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

**DEAD LOAD:** The maximum antenna dead load is 500 lbs.

**WEIGHT:** The tower with the base weighs 1975 pounds.

**SECTIONS:** The tower is made from 4 each 20 foot sections #6, #7, #8 and #9.

**DESCRIPTION:**

Tower is complete with a gearbox, drum, hoisting cables, and a rigid concrete base mount. The tower comes with a manual and one set of drawings and calculations for the standard tower. Hoisting cable system designed to extend the tower telescopic sections uniformly.

The DX-70 is motorized with a 1 HP electric motor, electric control box and two limit switches wired for 220 V. This tower has a positive pull down. "Positive Control" worm gear winch permits the raising and lowering of DX towers without the aid of stops or locks. DX-70 uses a 50:1 ratio winch. The DX-70 also includes a pre-wired motor control assembly.

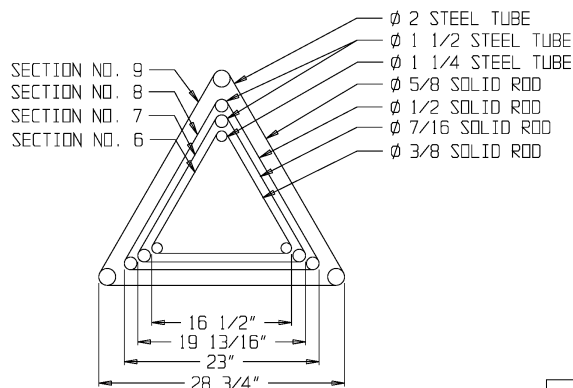
This tower has a pulley frame on 3 faces and uses 5/16 x 7 x 19 aircraft cable.

**ACCESSORIES:**

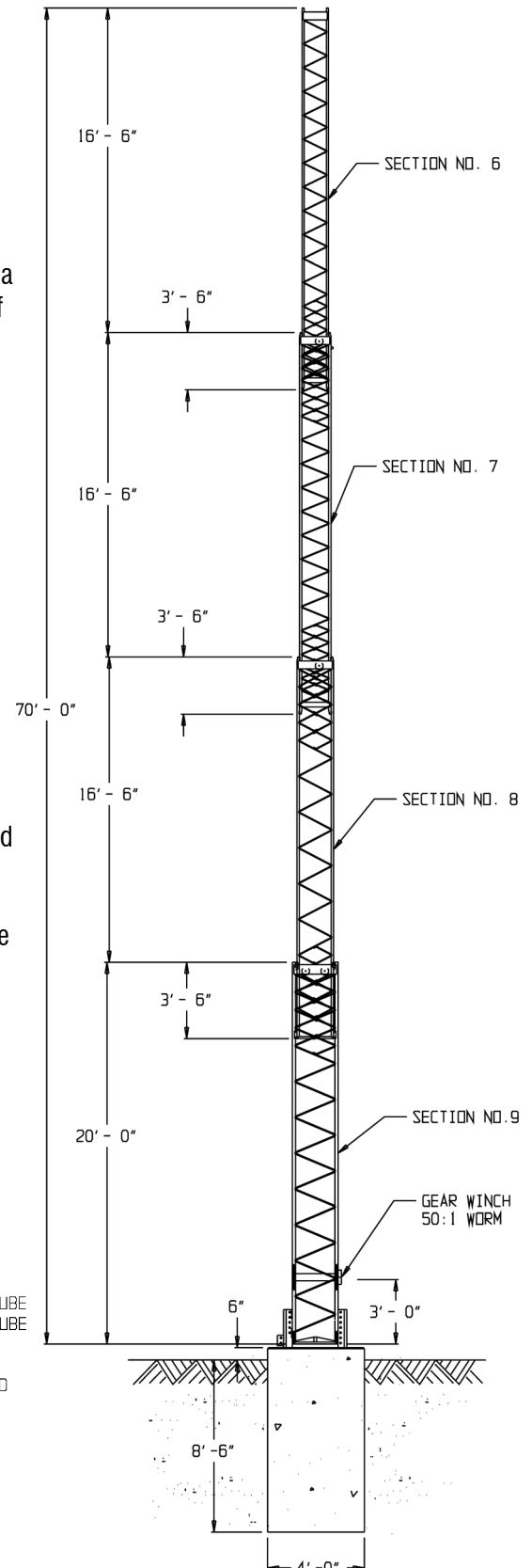
- RCB-86 LT (#9 Wide Section)
- TB-2 Thrust Bearing
- CO-4 for DX-86
- Masts
- TA-86

- Replacement Pulleys
- #6 Rotator Plates

- DX-70 manual, Drawings & Calculations
- Cable Kit for DX-70
- RLT



TOWER CROSS SECTION



**PART NUMBER: 480-4000 \$18,912.00 USD**

# Model No. DX-86

**TYPE:** Self-supporting, extendable, crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 86'. Retracted 22'.

TOWER SUPPORT: Self-supporting no guys.

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 26-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

DEAD LOAD: The maximum antenna dead load is 400 lbs.

WEIGHT: The tower with the base weighs 2100 pounds.

SECTIONS: The tower is made from 5 each 20 foot sections #5, #6, #7, #8 and #9.

**DESCRIPTION:**

Tower is complete with a gearbox, drum, hoisting cables, and a rigid concrete base mount. The tower comes with a manual and one set of drawings and calculations for the standard tower. Hoisting cable system designed to extend the tower telescopic sections uniformly.

The DX-86 is a motorized with an 1 HP electric motor, electric control box and two limit switches wired for 220 V. This tower has a positive pull down. "Positive Control" worm gear winch permits the raising and lowering of DX towers without the aid of stops or locks. DX-86 uses a 50:1 ratio winch. The DX-86 also includes a pre-wired motor control assembly.

This tower has a pulley frame on 3 faces and uses 5/16 x 7 x 19 aircraft cable.

**ACCESSORIES:**

RCB-86 LT (#9 Wide Section)

TB-2 Thrust Bearing

CO-6 for DX-86

Masts

TA-86

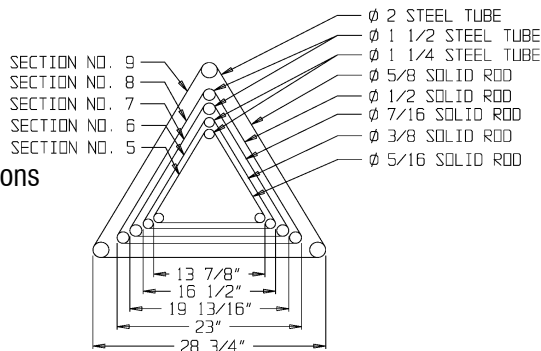
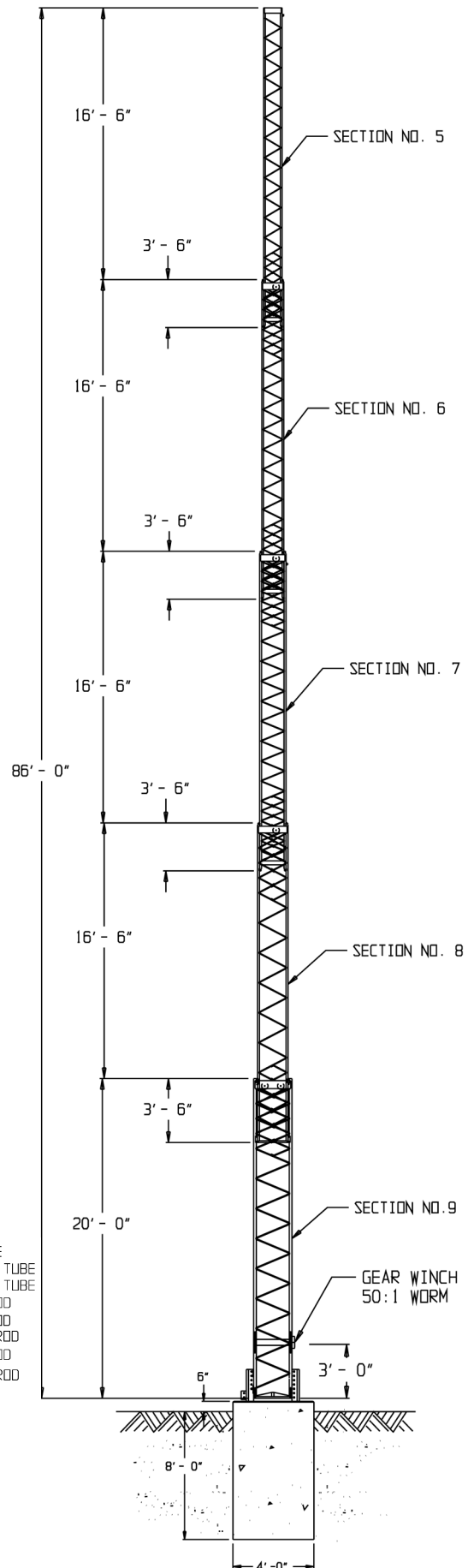
Replacement Pulleys

#5 Rotator Plates

DX-86 manual, Drawings, Calculations

Cable Kit for DX-86

RLT



TOWER CROSS SECTION

**PART# 481-4000 \$20,334.00 USD**

# Model No. DX-100

**TYPE:** Self-supporting, extendable, crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 100'. Retracted 32'.

TOWER SUPPORT: Self-supporting no guys.

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 24-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H.

DEAD LOAD: The maximum antenna dead load is 400 lbs.

WEIGHT: The tower with the base weighs 2500 pounds.

SECTIONS: The tower is made from 6 each 20 foot sections #4, #5, #6, #7, #8 and #9.

**DESCRIPTION:**

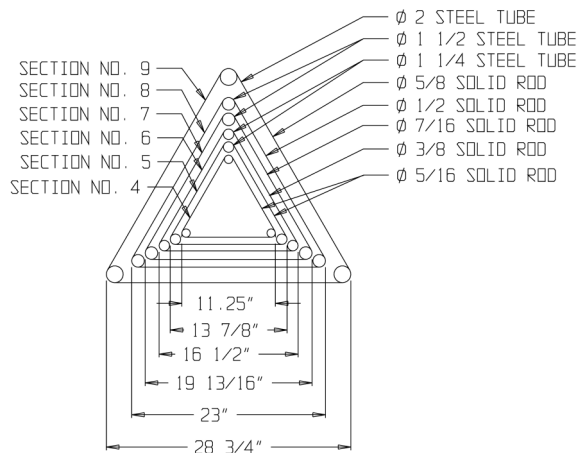
Tower is complete with a gearbox, drum, hoisting cables, and a rigid concrete base mount. The tower comes with a manual and one set of drawings and calculations for the standard tower. Hoisting cable system designed to extend the tower telescopic sections uniformly.

The DX-100 is a motorized tower, with a 1 1/2 HP electric motor and comes with an electric control box and two limit switches wired for 220 volts This tower has a positive pull down. "Positive Control" worm gear winch permits the raising and lowering of DX towers without the aid of locks. DX-100 uses a 50:1 ratio winch. The DX-100 also includes a pre-wired motor control assembly.

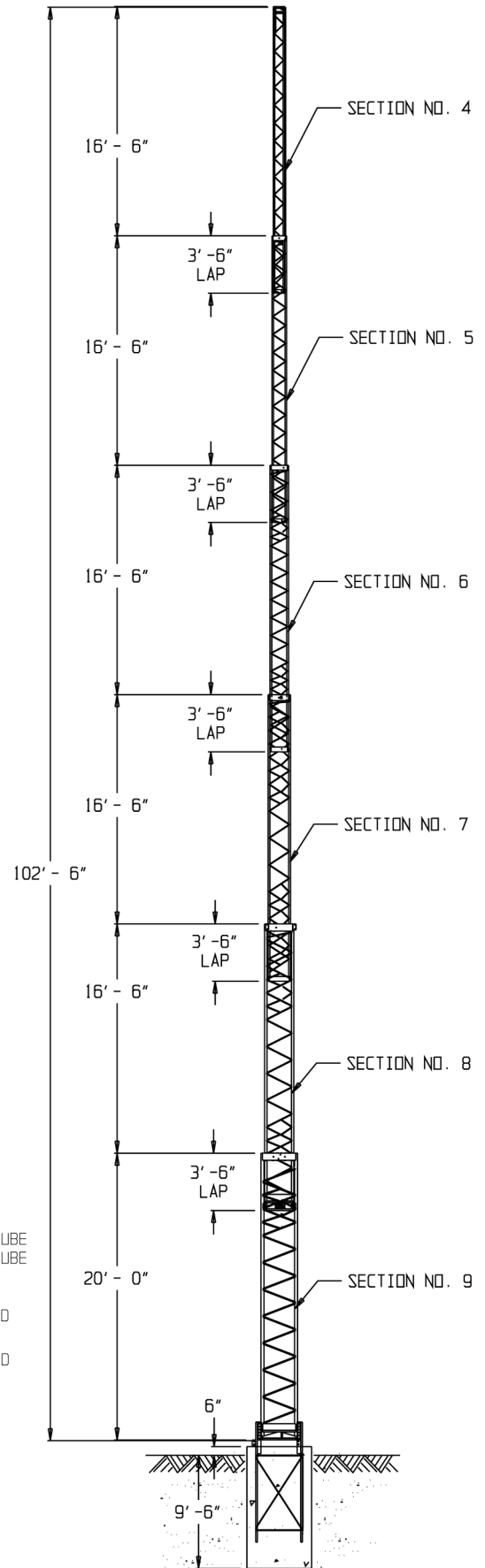
This tower has a pulley frame on 3 faces and uses 5/16 x 7 x 19 aircraft cable.

**ACCESSORIES:**

- RCB-86 LT (#9 Wide Section)
- TB-2 Thrust Bearing
- CO-6 for DX-100
- Masts
- TA-86
- Replacement Pulleys
- #4 Rotator Plates
- DX-100 manual, Drawings & Calculations
- Cable Kit for DX-100
- RLT



TOWER CROSS SECTION



**PART# 482-4000 \$35,227.00 USD**

# Model No. DX-70HD

**TYPE:** Self-supporting, extendable, motorized heavy duty crank-up tower.

**SPECIFICATIONS:**

**TOWER HEIGHT:** Extended 70'. Retracted 25'.

**TOWER SUPPORT:** Self-supporting no guys.

**WIND LOADING:** Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 80-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H. Exposure C, No Crest, Topo

This tower is suggested for high wind areas where heavy loading is required.

**DEAD LOAD:** The maximum antenna dead load is 500 lbs.

**WEIGHT:** The tower with the base weighs 2,700 pounds.

**SECTIONS:** The tower is made from 4 each 20 foot sections #7, #8, #9 and #10.

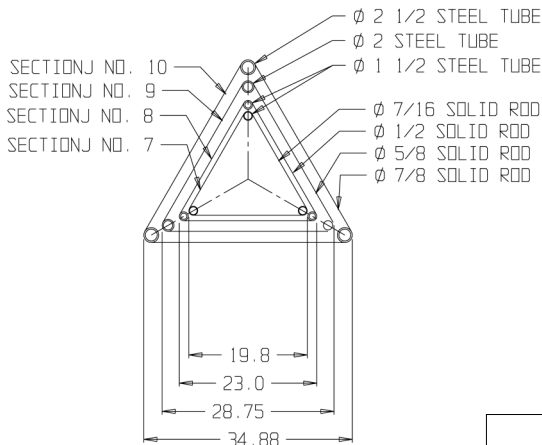
**DESCRIPTION:**

Tower is complete with a 100:1 gearbox, 1.5 hp electric motor, drum, dual 5/16 x 7 x 19 aircraft lift cables, positive pull down and a rigid concrete base mount, RCB #10. The tower is designed to extend the tower telescopic sections uniformly. With your purchase, a user's manual is included. The DX-70HD has pulley frames on all three sides.

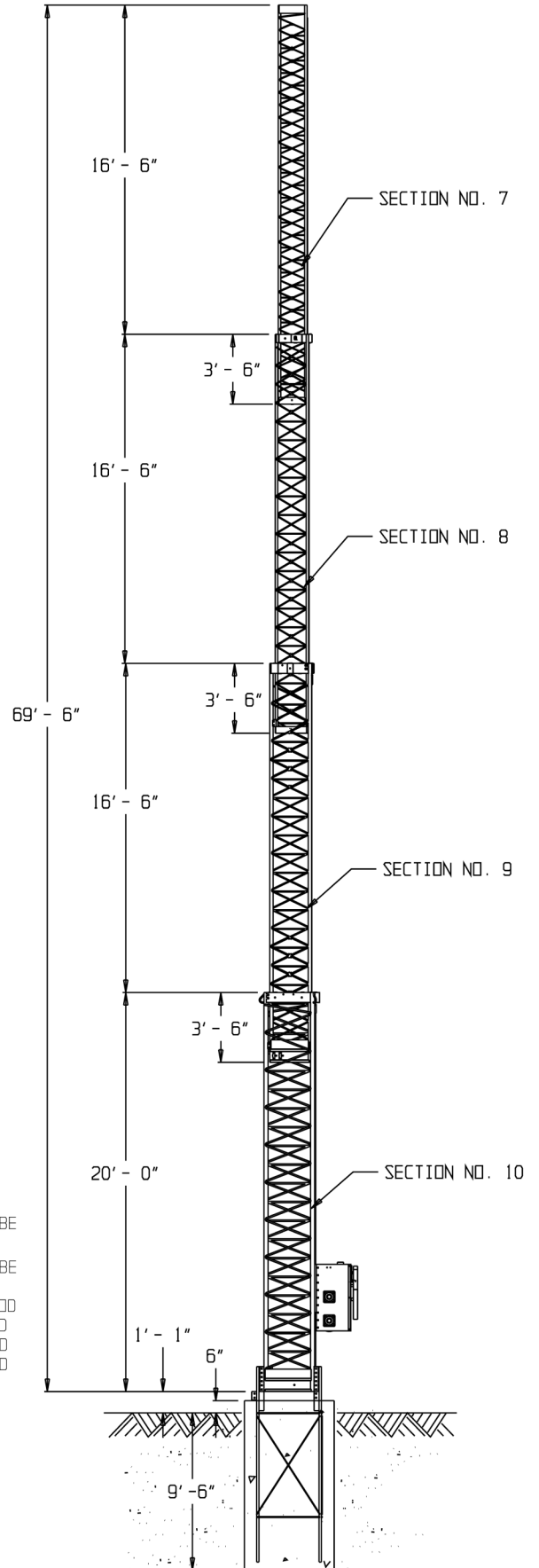
The DX-70HD is built with high strength tubing and the bracing is made of solid rod. This design is a strong engineering configuration, yet saves weight, resists torsion, and reduces wind load, allowing for more antenna load to be installed on the tower.

**ACCESSORIES:**

- DX-70HD manual,
- Drawings & Calculations
- RCB #10
- TB-2 Thrust Bearing
- CO-4 for DX-70HD
- Masts
- TA #10
- Replacement Pulleys
- #7 Rotator Plates
- Cable Kit for DX-70HD
- RLT



TOWER CROSS SECTION



**PART# 483-4000      \$27,749.00 USD**

# Model No. DX-86HD

**TYPE:** Self-supporting, extendable, motorized heavy duty crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 86'. Retracted 26'.

TOWER SUPPORT: Self-supporting no guys.

**WIND LOADING:** Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 38-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H., Exposure C, No Crest, Topo  
This stronger tower is suggested for high wind areas where heavy loading is required.

**DEAD LOAD:** The maximum antenna dead load is 500 lbs.

**WEIGHT:** The tower with the base weighs 3,000 pounds.

**SECTIONS:** The tower is made from 5 each 20 foot sections #6, #7, #8, #9 and #10.

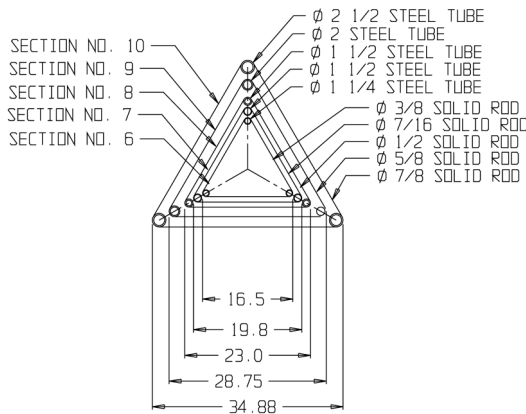
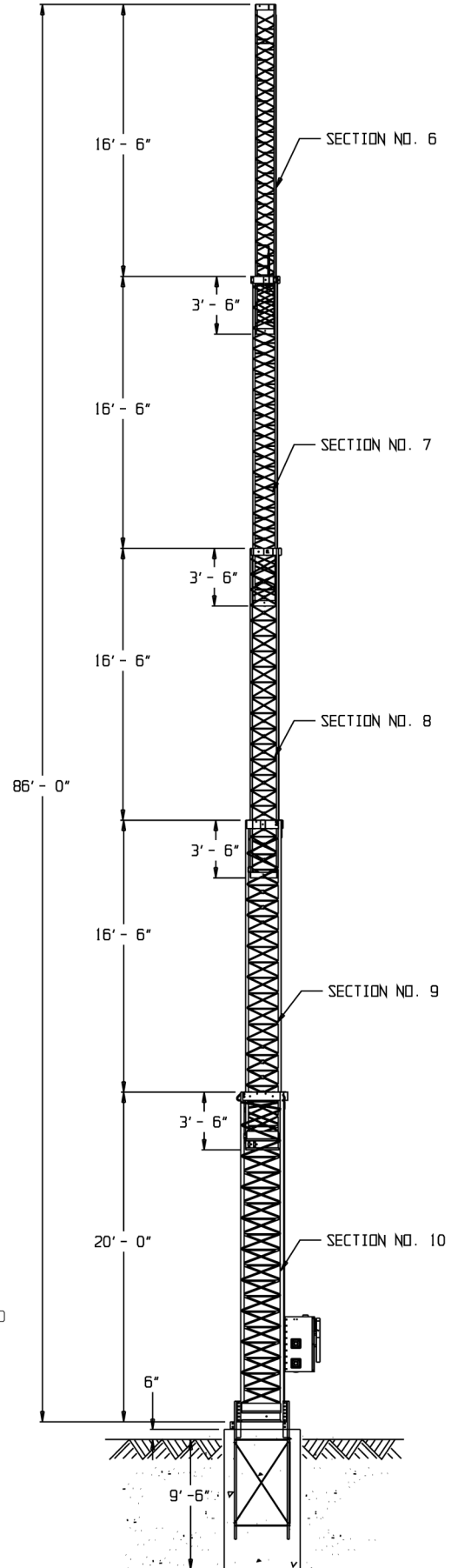
**DESCRIPTION:**

Tower is complete with a 100:1 gearbox, 1.5 hp electric motor, drum, dual 5/16 x 7 x 19 aircraft lift cables, positive pull down and a rigid concrete base mount, RCB #10. The tower is designed to extend the tower telescopic sections uniformly. With your purchase, a user's manual is included. The DX-86HD has pulley frames on all three sides.

The DX-86HD is built with high strength tubing and the bracing is made of solid rod. This design is a strong engineering configuration, yet saves weight, resists torsion, and reduces wind load, allowing for more antenna load to be installed on the tower.

**ACCESSORIES:**

- DX-86HD manual, Drawings, Calculations
- RCB #10
- TB-2 Thrust Bearing
- CO-5 for DX-86HD
- Masts
- TA #10
- Replacement Pulleys
- #6 Rotator Plates
- Cable Kit for DX-86HD
- RLT



TOWER CROSS SECTION

**PART# 484-4000**      **\$29,788.00 USD**

# Model No. DX-100HD

**TYPE:** Self-supporting, extendable, motorized heavy duty crank-up tower.

**SPECIFICATIONS:**

TOWER HEIGHT: Extended 100'. Retracted 32'.

TOWER SUPPORT: Self-supporting no guys.

**WIND LOADING:** Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 40-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H. Exposure C, No Crest, Topo

This tower is suggested for high wind areas where heavy loading is required.

**DEAD LOAD:** The maximum antenna dead load is 500 lbs.

**WEIGHT:** The tower with the base weighs 3,400 pounds.

**SECTIONS:** The tower is made from 6 each 20 foot sections #5, #6, #7, #8, #9 and #10.

**DESCRIPTION:**

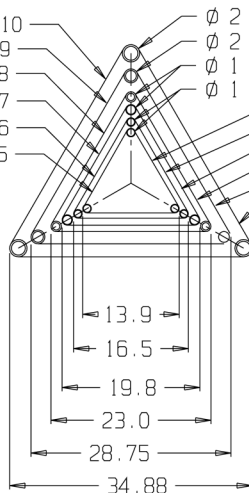
Tower is complete with a 100:1 gearbox, 1.5 hp electric motor, drum, dual 5/16 x 7 x 19 aircraft lift cables, positive pull down and a rigid concrete base mount, RCB #10. The tower is designed to extend the tower telescopic sections uniformly. With your purchase, a user's manual is included. The DX-100HD has pulley frames on all three sides.

The DX-100HD is built with high strength tubing and the bracing is made of solid rod. This design is a strong engineering configuration, yet saves weight, resists torsion, and reduces wind load, allowing for more antenna load to be installed on the tower.

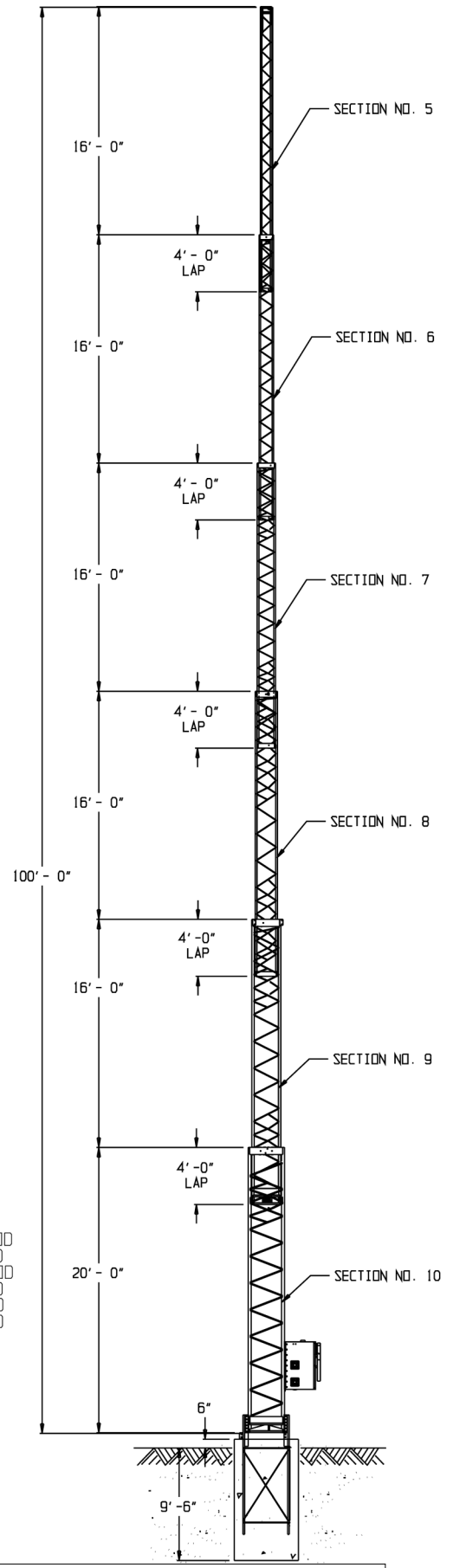
**ACCESSORIES:**

- DX-100HD manual
- Drawings & Calculations
- RCB #10
- TB-2 Thrust Bearing
- CO-6 for DX-100HD
- Masts
- TA #10
- Replacement Pulleys
- #5 Rotator Plates
- Cable Kit for DX-100HD
- RLT

- SECTION NO. 10 → Ø 2 1/2 STEEL TUBE
- SECTION NO. 9 → Ø 2 STEEL TUBE
- SECTION NO. 8 → Ø 1 1/2 STEEL TUBE
- SECTION NO. 7 → Ø 1 1/4 STEEL TUBE
- SECTION NO. 6 → Ø 5/16 SOLID ROD
- SECTION NO. 5 → Ø 3/8 SOLID ROD
- Ø 7/16 SOLID ROD
- Ø 1/2 SOLID ROD
- Ø 5/8 SOLID ROD
- Ø 7/8 SOLID ROD



TOWER CROSS SECTION



**PART# 485-4000 \$38,934.00 USD**

# Model No. TM-358

**TYPE:** Self-supporting, extendable, motorized tubular mast.  
Designed for light weight antenna loads.

**SPECIFICATIONS:**

TUBULAR MAST HEIGHT: Extended 58'. Retracted 23'.

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 10-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H., Exposure C, No Crest, Topo 1.

DEAD LOAD: The maximum antenna dead load is 500 lbs.

WEIGHT: The mast with the base weighs 1,750 pounds.

SECTIONS: The mast is made from 6", 4", and 2 1/2" pipe, Fy= 50 ksi

**DESCRIPTION:**

Tubular mast is complete with a 40:1 gearbox, 3/4 hp, 110V electric motor, 1/4" x 7 x 19 aircraft lift cable lift system and a hinged concrete base mount. The mast is designed to extend the tubular telescopic sections uniformly. A user's manual is included.

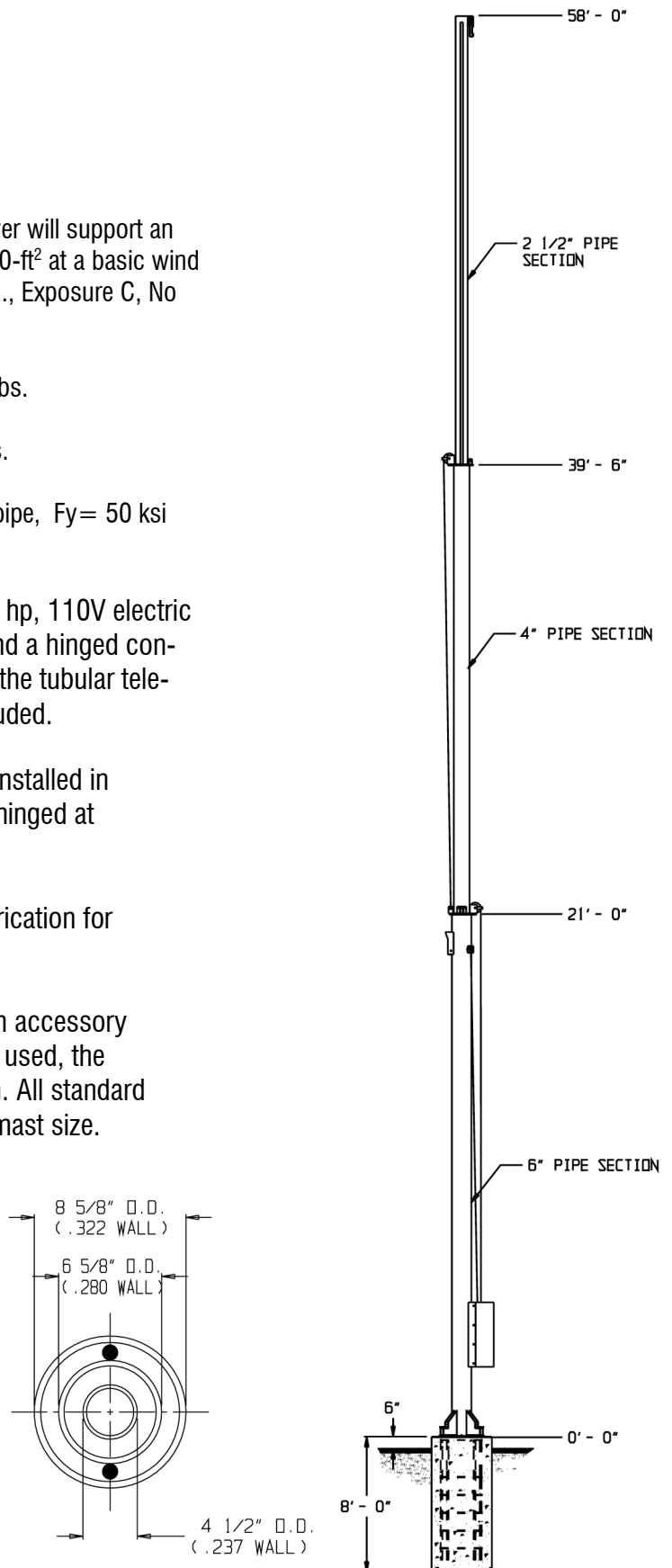
Tubular mast include a hinged base mount that is installed in concrete. This base mount allows the tower to be hinged at ground level and tilted into a vertical position.

The TM towers are hot-dipped galvanized after fabrication for maintenance free finish.

The top section of the mast is adapted to accept an accessory rotator cage assembly. If a rotator assembly is not used, the mast adapter can be ordered as an accessory item. All standard mast adapters accommodate a two (2) inch O.D. mast size.

**ACCESSORIES:**

- TM-358 manual, Drawings, Calculations
- TM-358 Concrete Base
- CO-3 for TM
- Work Platform
- Tilting Gin Pole
- Rotator Cage Assembly
- Cable Kit
- Motor Control Assembly
- TB-2 Thrust Bearing
- Remote Control Kit



CROSS SECTION

**PART# 525-4000 \$9,827.00 USD**

# Model No. TM-370HD

**TYPE:** Self-supporting, extendable, motorized tubular mast.  
Designed for light weight antenna load.

## SPECIFICATIONS:

**TUBULAR MAST HEIGHT:** Extended 68'-6". Retracted 27'-6".

**WIND LOADING:** Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 28-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H. Exposure C, No Crest, Topo 1.

**DEAD LOAD:** The maximum antenna dead load is 600 lbs.

**WEIGHT:** The mast with the base weighs 3,050 pounds.

**SECTIONS:** The mast is made from 10", 8", and 6" pipe,  $F_y = 50$  ksi

## DESCRIPTION:

Tubular mast is complete with a 50:1 gearbox, 1 hp, 220V electric motor, 1/4" x 7 x 19 aircraft lift cable lift system and a hinged concrete base mount. The mast is designed to extend the tubular telescopic sections uniformly. A user's manual is included.

Tubular mast include a hinged base mount that is installed in concrete. This base mount allows the tower to be hinged at ground level and tilted into a vertical position.

The TM towers are hot-dipped galvanized after fabrication for maintenance free finish.

The top section of the mast is adapted to accept an accessory rotator cage assembly. If a rotator assembly is not used, the mast adapter can be ordered as an accessory item. All standard mast adapters accommodate a two (2) inch O.D. mast size.

## ACCESSORIES:

TM-370HD manual, Drawings, Calculations

TM-370HD Concrete Base

CO-3 for TM

Work Platform

Tilting Gin Pole

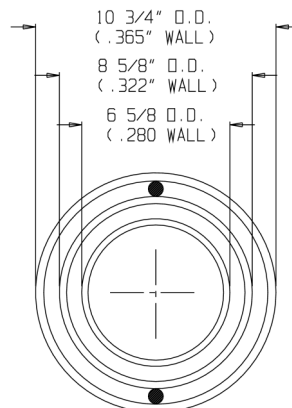
Rotator Cage Assembly

Cable Kit

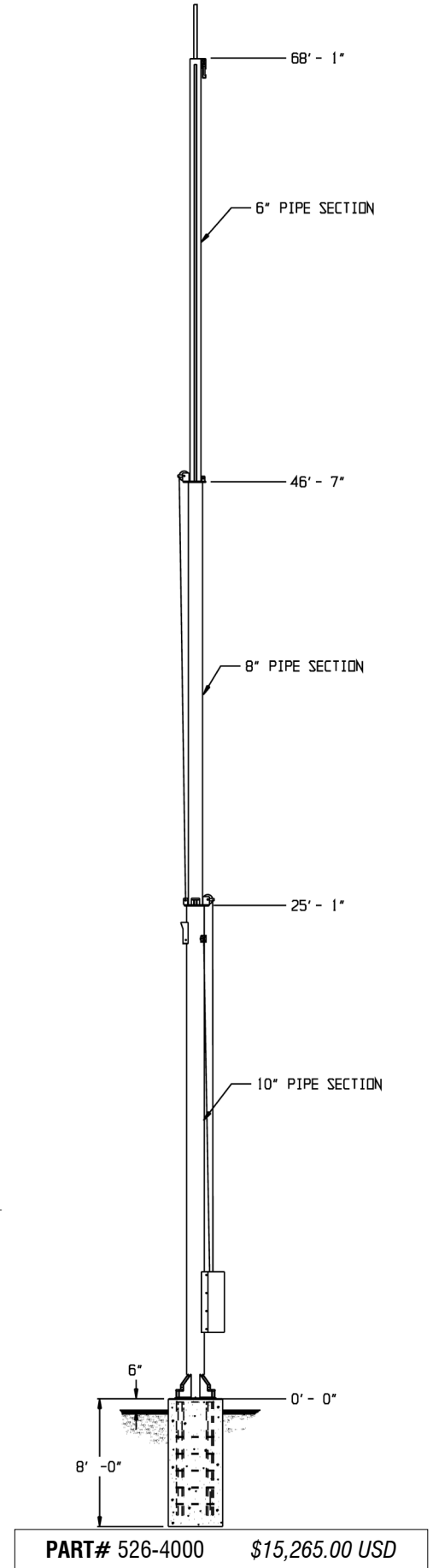
Motor Control Assembly

TB-2 Thrust Bearing

Remote Control Kit



CROSS SECTION





# Model No. TM-490HD

**TYPE:** Self-supporting, extendable, motorized tubular mast.  
Designed for light weight antenna load.

**SPECIFICATIONS:**

TUBULAR MAST HEIGHT: Extended 89'-8". Retracted 28'-0".

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 42-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H., Exposure C, No Crest, Topo 1.

DEAD LOAD: The maximum antenna dead load is 650 lbs.

WEIGHT: The mast with the base weighs 3,975 pounds.

SECTIONS: The mast is made from 12", 10", 8" and 6" pipe, F<sub>y</sub> = 50 ksi

**DESCRIPTION:**

Tubular mast is complete with a 50:1 gearbox, 1 1/2 hp, 220V electric motor, 1/4" x 7 x 19 aircraft lift cable lift system and a hinged concrete base mount. The mast is designed to extend the tubular telescopic sections uniformly. A user's manual is included.

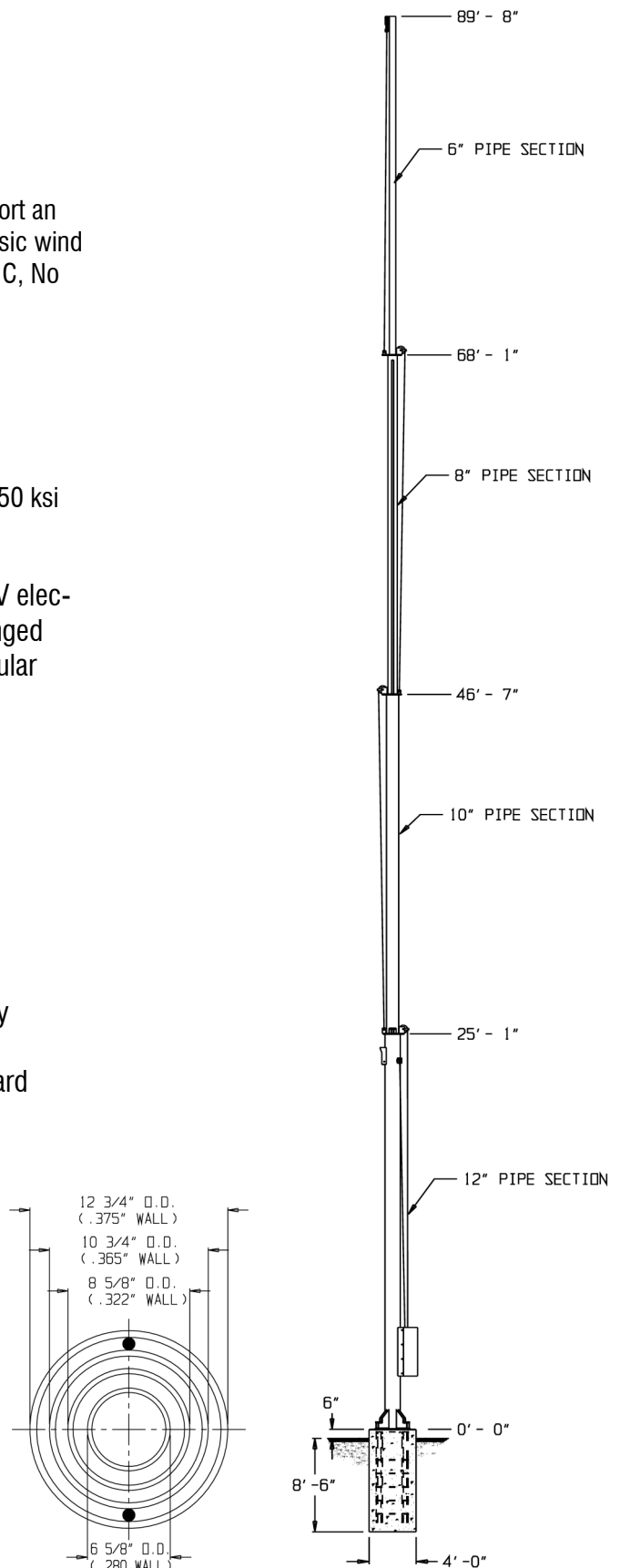
Tubular mast include a hinged base mount that is installed in concrete. This base mount allows the tower to be hinged at ground level and tilted into a vertical position.

The TM towers are hot-dipped galvanized after fabrication for maintenance free finish.

The top section of the mast is adapted to accept an accessory rotator cage assembly. If a rotator assembly is not used, the mast adapter can be ordered as an accessory item. All standard mast adapters accommodate a two (2) inch O.D. mast size.

**ACCESSORIES:**

- TM-490HD manual, Drawings, Calculations
- TM-490HD Concrete Base
- CO-4 for TM
- Work Platform
- Tilting Gin Pole
- Rotator Cage Assembly
- Cable Kit
- Motor Control Assembly
- TB-2 Thrust Bearing
- Remote Control Kit



CROSS SECTION

**PART# 527-4000 \$20,518.00 USD**

# Model No. TM-5100R HD

**TYPE:** Self-supporting, extendable, motorized tubular mast.  
Designed for light weight antenna load.

**SPECIFICATIONS:**

TUBULAR MAST HEIGHT: Extended 100'-1". Retracted 29'-0".

WIND LOADING: Engineering analysis indicates the tower will support an antenna with an equivalent effective projected area of 32-ft<sup>2</sup> at a basic wind speed of 100 MPH, 3-second gust per ANSI/TIA-222-H., Exposure C, No Crest, Topo 1.

DEAD LOAD: The maximum antenna dead load is 650 lbs.

WEIGHT: The mast with the base weighs 4,350 pounds.

SECTIONS: The mast is made from 12", 10", 8", 6" and 4" pipe, Fy= 50 ksi

**DESCRIPTION:**

Tubular mast is complete with a 50:1 gearbox, 1 1/2 hp, 220V electric motor, 1/4" x 7 x 19 aircraft lift cable lift system and a hinged concrete base mount. The mast is designed to extend the tubular telescopic sections uniformly. A user's manual is included.

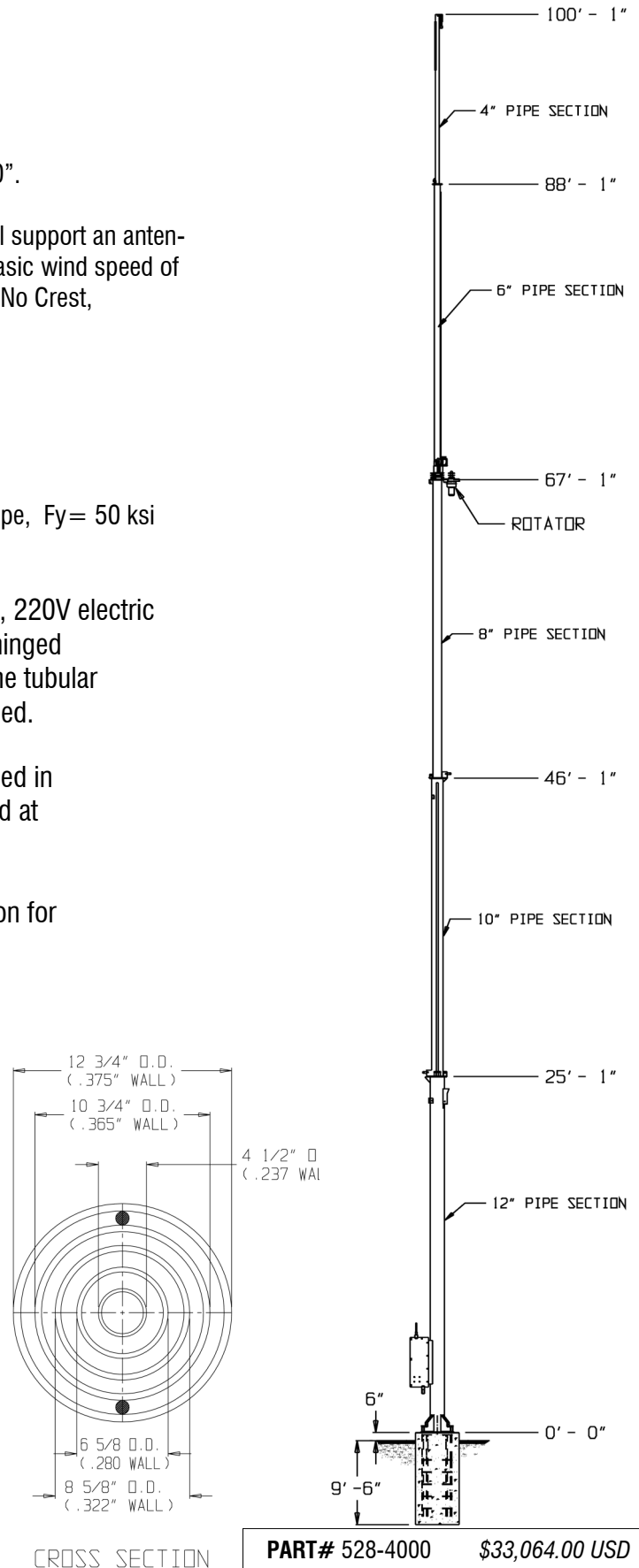
Tubular mast include a hinged base mount that is installed in concrete. This base mount allows the tower to be hinged at ground level and tilted into a vertical position.

The TM towers are hot-dipped galvanized after fabrication for maintenance free finish.

The top (2) sections of the mast rotate and a standard mast adapter fits into the top section to accommodate a two (2) inch O.D. mast size.

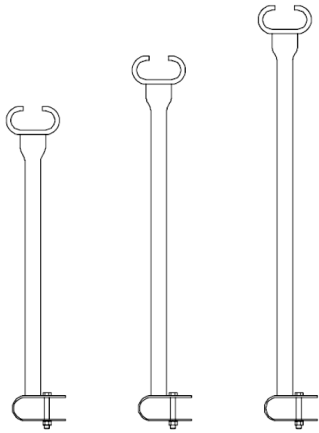
**ACCESSORIES:**

- TM-490HD manual, Drawings, Calculations
- TM-490HD Concrete Base
- CO-4 for TM
- Work Platform
- Tilting Gin Pole
- Rotator Cage Assembly
- Cable Kit
- Motor Control Assembly
- TB-2 Thrust Bearing



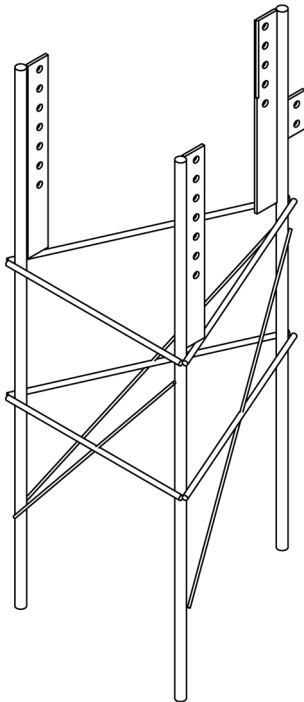
**PART# 528-4000 \$33,064.00 USD**

# Telescoping Tower Accessories



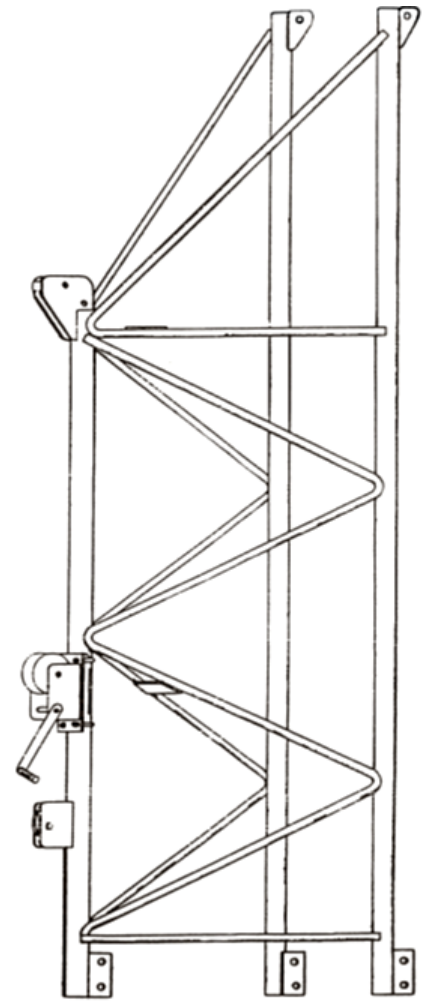
## Coax Standoff Kits

CO-2 for 2	for LM-237	441-00406
CO-3 for 3	for WT-51	441-00404
CO-3 for 3	for LM-354E	441-00407
CO-3 for 3	for LM-354HD	441-00409
CO-4 for 4	for LM-470	441-00408
CO-4 for 4	for DX-70	441-00413
CO-5 for 5	for DX-86	441-00411



## Rigid Concrete Base

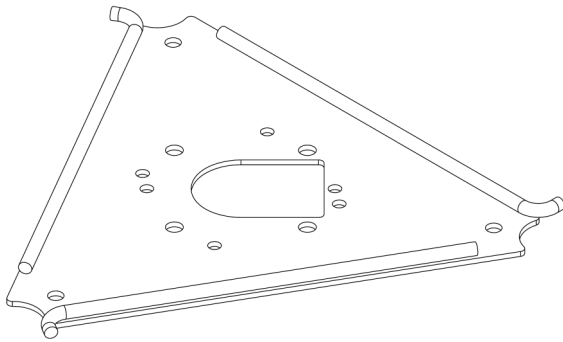
RCB-37/51LT	for LM-237 & WT-51	400-0040
RCB-54LT	for LM-354E	400-00401
RCB-70LT	for LM-354HD & LM-470	460-00170
RCB-86LT	for DX-86 & DX-70	481-00300
RCB-36	for W-36	400-0136
RCB-86HD	for DX-86HD & DX-70HD	486-00300



## Tilt-Over Accessory

TA-37	for LM-237	412-00401
TA-51L	for WT-51	412-00402
TA-54L	for LM-354E	415-00401
TA-70L	for LM354HD & LM-470	417-00401
TA_86L	for DX-86 & DX-70	481-00301
TA_86HD	for DX-86HD & DX-70HD	486-00301

# Telescoping Tower Accessories



## CDR Rotator Plate

480-00004 CDR Rotator Plate  
for WT-51, MW-33 & W-67

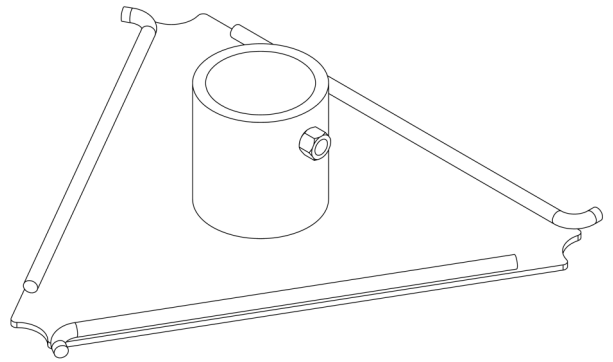
115-00308 CDR Rotator Plate  
for LM-237, LM-354E, LM-470, DX-86 & DX-100HD

454-00104 CDR Rotator Plate  
for LM-354HD, DX-70 & DX-86HD

460-00129 T2R Rotator Plate  
for WT-51, MW-33 & W-67

460-00128 T2R Rotator Plate  
for LM-237, LM-354E, LM-470, DX-86 & DX-100HD

454-00117 T2R Rotator Plate  
for LM-354HD, DX-70 & DX-86HD

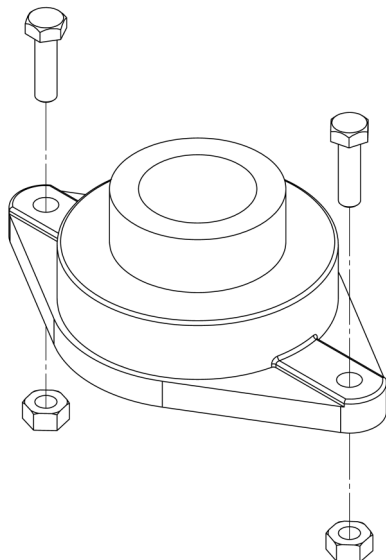


## Mast Anchor Plate

480-00102 Mast Anchor Plate  
for WT-51, MW-33 & W-67

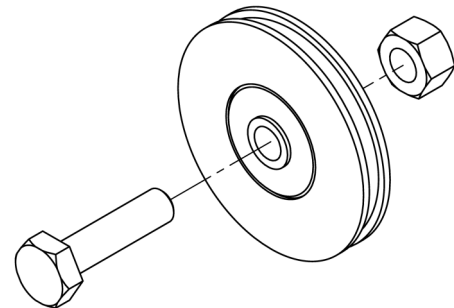
115-00307 Mast Anchor Plate  
for LM-237, LM-354E, LM-470, DX-86 & DX-100HD

454-00103 Mast Anchor Plate  
for LM-354HD, DX-70 & DX-86HD



## TB2 Bearing

For 2" Mast 400-00089



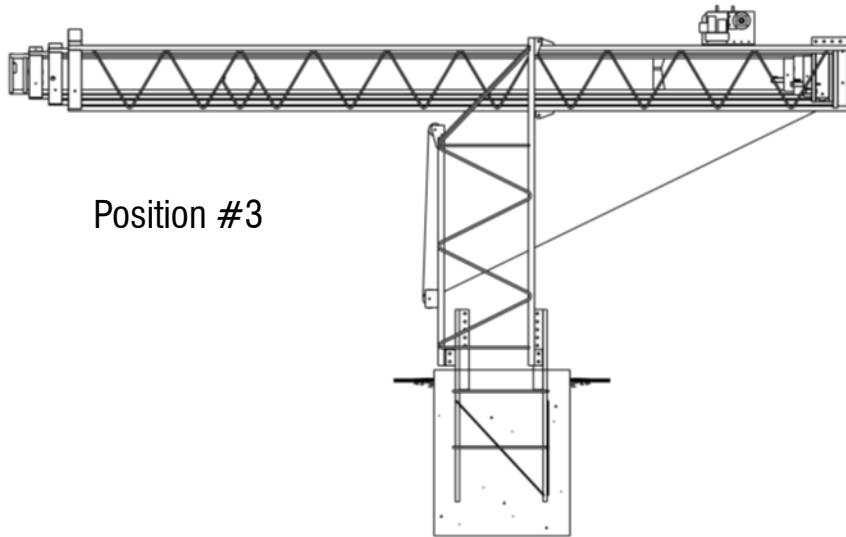
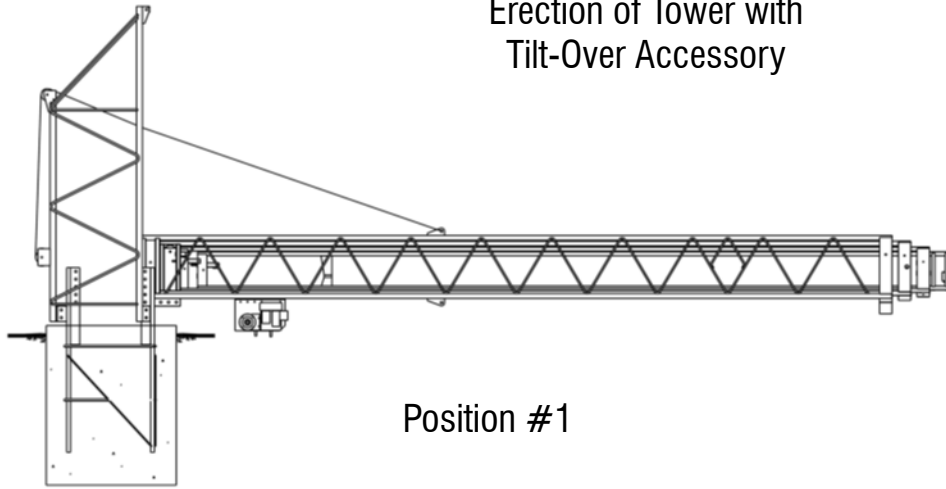
## Pulley Assembly

Pulley Assembly, 4A/K8 Bearing 045-0125

Pulley Assembly, 5A/K8 Bearing 045-0150

# Tilt-Over Accessory

Erection of Tower with  
Tilt-Over Accessory



**Position #1: Installation**

With the Tilt-Over Accessory installed on the Rigid Concrete Base, attach tower in horizontal position

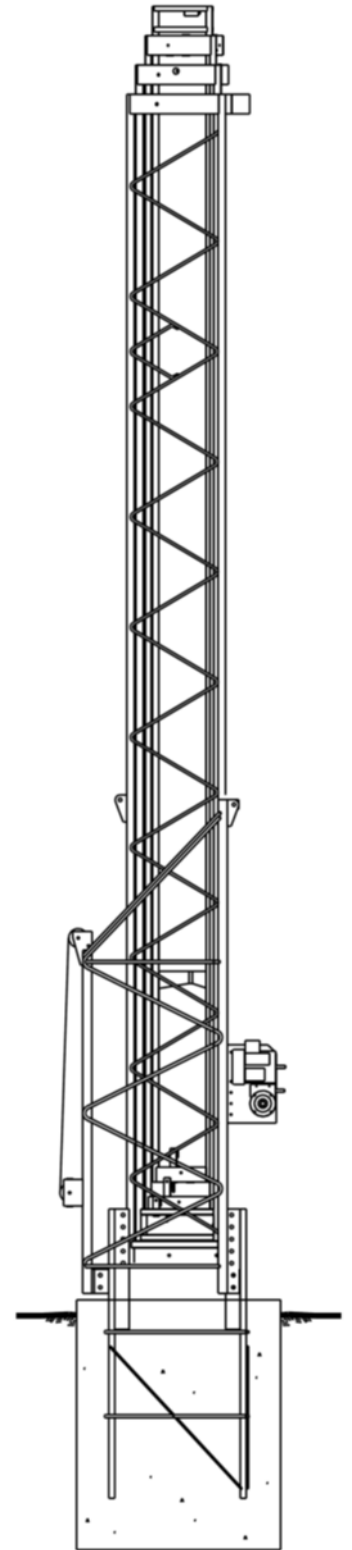
**Position #2: Operation**

Tilt tower to vertical to operate tower

**Position #3: Antenna Adjustment**

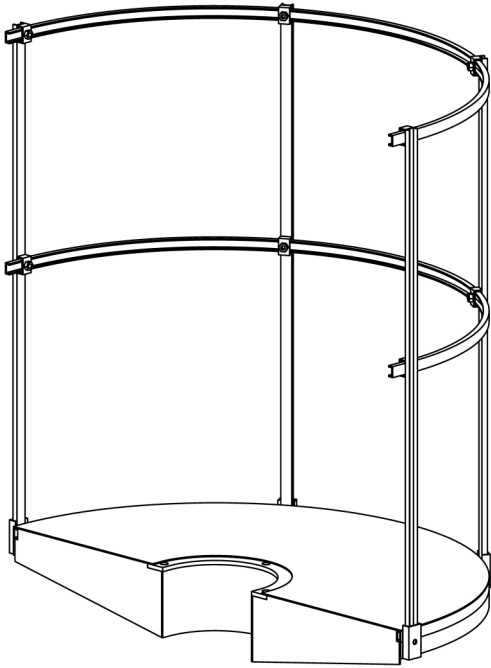
Tilt Tower over to install or adjust antenna

Note: Tower must be nested to use Tilt-Over Accessory

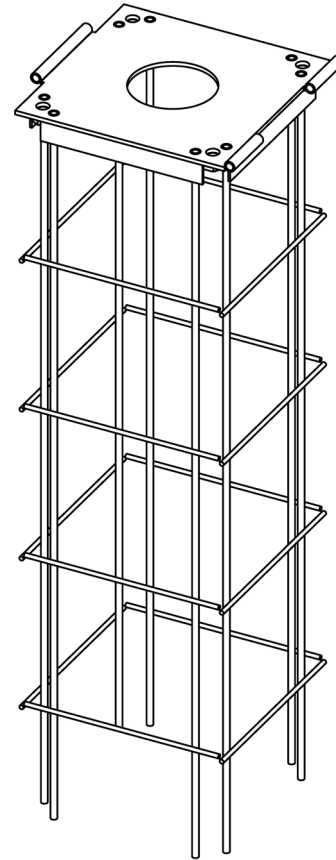


Tilt Accessory Installed on  
Rigid Concrete Base

# Telescoping Mast Accessories



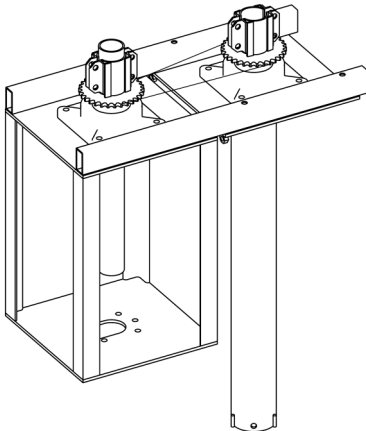
TM Platform Assembly - 525-0101



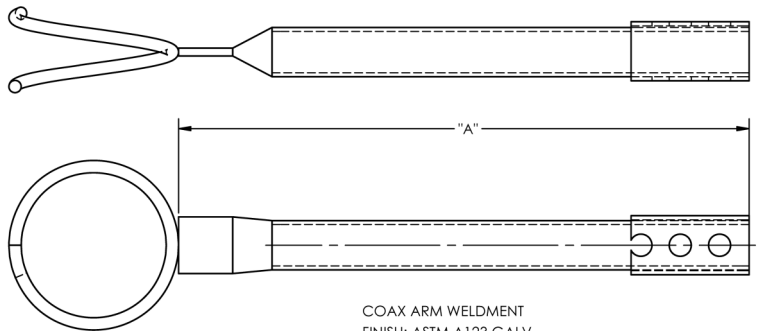
Concrete Base

390-00309 CB-490  
for TM-490, TM-5100, TM370HD

370-00308 CB-370  
for TM-370



TM Rotator Cage Assembly - 525-9490



COAX ARM WELDMENT  
FINISH: ASTM A123 GALV.

DESCRIPTION	SIZE	LENGTH "A"
COAX ARM FOR #10 SECTION	Ø 1 1/4"	12"
COAX ARM FOR #8 SECTION	Ø 1 1/4"	16"
COAX ARM FOR #6 SECTION	Ø 1 1/4"	20"
COAX ARM FOR #4 SECTION	Ø 1 1/4"	24"

## Coax Standoff Kits

CO-3 Stand-off for TM Series 525-00404

CO-3 Stand-off for TM Series 525-00405

CO-3 Stand-off for TM Series 525-00406

# 2022 Tower Price List

Description	Part No.	Weight (lb)	Price
MW-33 33ft Manual Crank-Up Tower	433-4000	340	\$5,365
WT-36 ft Manual Crank-Up Tower	236-0036	360	\$3,367
WT-51 51ft Manual Crank-Up Tower	451-4000	360	\$4,389
WT-67 67ft Manual Crank-Up Tower	467-4000	385	\$7,171
<b>LM Series</b>			
LM-237 37ft Manual Crank up	437-4000	330	\$3,462
LM-354E 54ft Manual Crank up	454-4000	525	\$6,244
LM-354 HD 54ft Manual Crank up with gear box	455-4000	875	\$8,715
LM-354HDSP 54ft Motorized Crank up with tower	456-4000	950	\$11,187
LM-470 70ft Motorized Crank up with tower	470-4000	1,100	\$12,608
LM-584 84ft Motorized Crank up with tower	582-4000	1,500	\$13,535
DX-70 70ft Motorized Crank up tower	480-4000	2,050	\$18,912
DX-70HD 70ft Motorized Crank up tower	483-4000	3,500	\$27,749
DX-86 86ft Motorized Crank up tower	481-4000	2,300	\$20,334
DX-86HD 86ft Motorized Crank up tower	484-4000	4,000	\$29,788
DX-100 100ft Motorized Crank up tower	482-4000	2,750	\$35,227
DX-100 HD Motorized Crank up tower	485-4000	3,250	\$38,934
<b>TM Series</b>			
TM-358	525-4000	1,750	\$9,827
TM-370HD	526-4000	3,050	\$15,265
TM-490 HD	527-4000	3,975	\$20,518
TM-5100R HD	528-4000	4,350	\$33,064
<b>Heavy Antenna Mast (2.0" OD x .188" Wall)</b>			
AD-100H (10' long)	300-00049	37	\$193
AD-150H (15' long)	300-00050	55	\$292
AD-200H (20' long)	300-00051	73	\$367
<b>Extra Heavy Antenna Mast (2.0" OD x .250")</b>			
AD-100EH (10' long)	300-00053	47	\$224
AD-150EH (15' long)	300-00054	71	\$367
AD-200EH (20' long)	300-00055	94	\$465
<b>Mast and Rotator Mounting Plates</b>			
CDR Rotator Plate (WT-51)	480-00004	7	\$100
CDR Rotator Plate (LM-237, LM 354, LM 470)	115-00308	8	\$112
CDR Rotator Plate (LM354HD)	454-00104	9	\$151
T2R Rotator Plate (LM-237, LM354, LM470)	460-00128	8	\$126
T2R Rotator Plate (LM354HD)	454-00117	9	\$162
TM Rotator cage assembly	525-9490	40	\$823
Mast Anchor Plate WT-51	480-00102	11	\$118
Mast Anchor Plate (LM-237, LM 354, LM 470)	115-00307	11	\$126
<b>Coax Standoff Kits</b>			
CO-2 Standoff (LM-237)	441-00406	8	\$100
CO-3 Standoff (WT-51, LM-354E, LM-354HD)	441-00404	12	\$150
CO-4 Standoff (LM-470)	441-00408	16	\$199
CO-5 Standoff (DX-86)	441-00411	20	\$249
<b>Tilt Over Accessories</b>			
TA-37 (LM-237)	412-00401	120	\$960
TA-51L (WT-51)	412-00402	120	\$960
TA-54L (LM354E)	415-00401	137	\$1,052
TA-70L (LM354HD & LM470E)	417-00401	149	\$1,052
TA-86L (DX-86)	481-00301	179	\$4,881
TA-86HD (DX-70HD, DX-86HD)	486-00301	750	\$5,994
GP300TM Sky Needle Ginpole	500-0043	375	\$4,265

# Tower Price List

Description	Part No.	Weight (lb)	Price
<b>Manual Winch</b>			
2500 Winch	041-0345	30	\$241
<b>Thrust Bearing (W &amp; LM Series)</b>			
TB-2 Bearing	400-00089	10	\$150
<b>Replacement Concrete Bases</b>			
RCB-37/51LT (WT51 and LM237)	400-00400	80	\$490
RCB-54LT (LM354E)	400-00401	86	\$513
RCB-70LT (LM354HD and LM470E)	460-00170X	129	\$550
RCB-86LT (DX86)	481-00300	180	\$1,157
CB-490 (TM490, TM5100R, TM370HD)	390-00309X	325	\$1,466
CB-370 (TM370)	370-00308X	325	\$928
RCB-36 (W36)	400-0136	82	\$458
<b>Remote Control Kit-Less Motor - Towers must have "Pull down" Capability</b>			
RLT (WIRELESS)	370-00328	30	\$2,970
<b>Replacement Cable Kits (with cable diagrams)</b>			
Cable Kit, MW-33	051-0021	25	\$180
Cable Kit, MW-33 - S.S Version 1/4"	051-0022	25	\$280
Cable Kit, WT-51	051-0025	16	\$131
Cable Kit, WT-51 - S.S Version 1/4"	051-0135	16	\$249
Cable Kit, LM 237	051-0105	13	\$138
Cable Kit, LM237 - S.S Version 1/4"	051-0110	13	\$236
Cable Kit, LM354E	051-0115	20	\$193
Cable Kit, LM354HD	051-0120	41	\$390
Cable Kit, LM354HD - S.S Version 1/4"	051-0121	41	\$693
Cable Kit for LM-470	051-0085	80	\$693
Cable Kit for LM-470 1/4 inch S.S	051-0090	80	\$1,026
Cable Kit, DX86	051-0100	106	\$867
Cable Kit, DX100	051-0095	135	\$1,138
Cable Kit, TM370C	051-0125	141	\$1,070
Cable Kit, TM370C - S.S Version	051-0126	141	\$1,361
<b>Motor Control Kits (Towers having 40:1 winch ratio) Includes Motor &amp; Control Box</b>			
MC-50 (1/2HP)	060-50002	60	\$1,026
MC-75 (3/4 HP)	060-2935	60	\$1,138
MC-100 (1 HP)	060-2936	60	\$1,232
<b>Replacement Motors Only</b>			
1/2 HP Motor (washdown)	060-0330	20	\$570
3/4 HP Motor (washdown)	060-0331	25	\$699
1 HP Motor (washdown)	060-0335	30	\$884
<b>Manual Control Motor Kits with Top and Bottom Limit Switch (Towers having 40:1 ratio)</b>			
<b>Includes Motor, Control box, &amp; 2 Limit Switches</b>			
MC-50 LL (1/2 HP)	060-50000	65	\$1,546
MC-75LL (3/4 HP)	060-75000	68	\$1,916
MC-100LL (1 HP)	060-10000	71	\$2,164
<b>Pulleys</b>			
Pulley Assembly, 4A/K8 Bearing	045-0125	1	\$94
Pulley Assembly, 5A/K8 Bearing	045-0150	1	\$118



## TERMS AND CONDITIONS OF SALE

1. All quotations are for immediate acceptance and subject to change without notice.

2. This quotation is based upon the assumption that the materials required for the items quoted can be obtained from the Steel Mills and/or Seller's other suppliers within days after approval by Seller, In the event Seller's suppliers are unable to make deliveries within the period specified, then such delay shall be considered to be a delay in the completion of the work due to causes beyond the control and without the fault or negligence of Seller. Furthermore, the following "force majeure" definition applies: The term "force majeure" as used in this proposal shall mean and

include any cause, act or event beyond the control and without the fault or negligence of Seller, including but not restricted to: acts of God; weather; floods; storms; explosion; fires; labor trouble; strikes; insurrection; riots; freight embargoes; acts of the public enemy; items quoted from Seller's customary suppliers; scarcity of or inability to obtain or use labor or equipment; Federal, State or Local law or orders, rules or regulations of governmental authority, or default of Seller's subcontractors due to any cause. If by reason of "force majeure" seller is prevented, hindered or delayed in satisfying or meeting any condition of this Quotation or is prevented, hindered or delayed in its performance under this Quotation. Seller shall be excused from such performance to the extent that it is prevented, hindered or delayed thereby, and during the continuous of any such happening or event then this quotation shall be deemed suspended so long as and to the extent that any such cause prevents, hinders or delays the performance, and the time while Seller is so prevented shall not be counted against Seller, anything in this Quotation to the contrary notwithstanding; and Seller shall not be liable for any claims or damages in any form or of an kind of nature for excess costs, if nay , for any failure to perform arising out of or any reason of "force majeure".

Seller shall give written notice to Buyer within a reasonable time after the happening thereof of the nature, and, so far as possible, the extent of any "force majeure" condition referred to in the preceding paragraph hereof, in order that said party may be fully advised as to the nature and extent of said condition. In the event that it appears to Seller that Seller's performance shall be delayed, Seller shall so state in said written notice in which even the following shall apply;

(1) The buyer may, by written notice transmitted to Seller within thirty (30) days after receipt of the above Notice, cancel the undelivered or undeliverable portion of the items quoted without liability except for costs and expenses and a reasonable profit allocable to work done.

(2) If the Buyer does not cancel the order in the manner and within the time specified in Paragraph (1) , seller may, by giving to Buyer written notice:

(a) Suspend performance on the undeliverable items quoted pending removal of the causes of delay, under which circumstances the Buyer agrees to immediately pay an equitable proportion of the price of the items if such items are not separately priced;

(b) Cancel the undeliverable portion of the items quoted at any time as long as the causes of delay continue.

(3) If performance is suspended in accordance with (2) (a), the price of the suspended portion of the items quoted shall be subject to revision as follows:

(a) Prior to proceeding with the performance of the items quoted Seller shall notify the Buyer of any price revision applicable and obtain written agreement thereto.

(b) In the event of failure to agree upon such revised price or prices within the time to be specified in the notice described in Paragraph (3) (a), and Seller does not desire to proceed with performance on the basis of the price of the original items, Seller or Buyer may cancel upon delivery of written notice to the other party, without liability except that of the Buyer for costs and expenses and a reasonable profit, allocable to work done prior to the suspension of performance.

(4) Seller shall not be liable for damages in any manner resulting from cancellation or suspension of performance in accordance with the terms of this condition.

3. If construction by others and charges to a designated point are included in the prices herein quoted, we shall not be responsible for switching, spotting, handling storage, demurrage or any charges incurred therefore.

4. Where installation is not included, our responsibility ceases upon delivery of shipments to carrier when sales are f.o.b. point of shipment. Buyers are warned against receiving them until careful inspection has been made.

5. No Federal, State, or local taxes are included in price unless specifically stated in the proposal. All quotations and sales are subject to increase without notice for all present and future Federal, State, and local taxes, including sales, use and excise tax that may be assessed, charged or levied by any governmental action, which taxes are to be added to the quoted price and paid by the Buyer.

- 6.** Manufacturer's guarantee: For a period of one (1) year after shipment, we warrant the article to be reasonably fit for the purpose for which it is Manufactured and sold, and shall be free from defects in material and workmanship. No other warranty to material or workmanship is expressed or implied, and no other claim for damage or charge for labor will be allowed. We reserve the sole right to determine whether or not any part to be replaced is to be furnished free of charge or to be supplied at our regular sales price.
- 7.** Commodities not manufactured by us are warranty and guaranteed only to extent and in the manner warranted and guaranteed to us by the manufacturer and then only to the extent we are able to enforce such warranty or guaranteed.
- 8.** Orders cannot be canceled by Buyer under any circumstances without the Buyer first, reaching an agreement in writing with the Seller covering all damages. In ever event, written permission must be secured prior to returning goods for credit.
- 9.** We reserve the right to change or modify our design and construction and to substitute material equal to or superior to that originally specified.
- 10.** Every effort will e made to maintain shipping schedules shown. However, we shall not be liable for delays or default in filling this order caused by strikes or other disputes, floods, fires, accidents, contingencies or transportation and other causes of like or different character beyond the control of the Seller.
- 11.** No terms or conditions, other than those stated herein and no agreement or understanding, oral or written in any way purporting to modify these terms or conditions whether contained in Buyer's purchase or shipping release forms or elsewhere shall be binding on Seller, unless hereafter made in writing and signed by Seller's authorized representative. All proposals, negotiations and representations, if any made prior and with reference hereto are merged herein.
- 12.** Any controversy or claim arising out of or relating to this agreement or the breach thereof shall be settled by arbitration in accordance with the rules of the American Arbitration Association. All hearings shall be oral and shall be held in Tulare County, California. Judgment upon the award rendered by the arbitrate may be entered in any court having jurisdiction thereof and shall be final both as law and fact.
- 13.** If Buyer requires Seller to delay delivery of material, payment for material or services shall not thereby be postponed or extended. Material held in storage for Buyer shall be at the risk and expense of the Buyer and at a price agreed upon by Buyer and Seller at the time of request for storage by buyer, If Buyer removes has order from Seller's production schedule, then the Buyer automatically relinquishes hiss position in Seller's production schedule. At time buyer instructs Seller to proceed with order, it must at that time take its position in Seller's production schedule existing at time order is reentered.
- 14.** This quotation includes unloading tower material from carrier and hauling to maximum of 20 miles to the construction site. Cost of unloading anchor assemblies to be the expense of the Buyer.
- 15.** Where roof top installations are required, tower material and services are furnished to base of tower only, and all roof modifications, waterproofing steel reinforcements to the roof are not included in this quotation unless specifically noted.
- 16.** Shipments and deliveries shall be subject to approval of Seller's Credit Department. If Buyer fails to fulfill the terms payment, Seller may defer further shipments, or may at its option, cancel the unshipped balance. Seller reserves the right, previous to making any shipments, to require from Buyer satisfactory security for performance of Buyer's obligations. No failure of Seller to exercise any right acceding from any default of Buyer shall impair Seller's rights in case of any subsequent default of Buyer.
- 17.** When export license is required, the acceptance of this quotation is subject to export license being granted and supplied by the Buyer unless otherwise specified.
- 18.** The price and delivery of the tower, and the cost and time of the tower, antenna and transmission lines are based upon furnishing and erecting the exact size and type material shown, and at the location indicated. Modification, if any, of these details must be agreed to by both parties in writing, and it is understood that any such modification will require a revision of both price and delivery.
- 19.** Acceptance of all orders must be approved by the home office of this Company.
- 20.** The above provision set for the sole and only obligation or liability of and warranty made by Tashjian Towers Corporation in connection with the items covered by this agreement, and any provisions in any proposals, specifications or in any other provisions hereof, are merely descriptive and are not to be construed as either obligations or warranties made by Tashjian Towers Corporation.

## CONDITIONS OF SALE - ERECTION OF TOWER

1. This quotation is based on work being carried out in one continuous operation without interruption or delays due to missing materials such as coax lines, transmission line hangers, antenna, reflectors, or electrical power. All material necessary for completing installation to be furnished by Buyer must be on the tower site prior to starting of erection or scheduled in such a manner as to avoid delaying erection crew.
2. Antenna, transmission lines and transmission line clamps must be available when construction work on tower is under way. Drawing showing transmission line installation is to be furnished by customer.
3. Tower site shall be accessible to workmen and erection equipment, using two wheel drive vehicles.
4. This quotation on labor to erect tower and antenna is based upon weather suitable for outdoor construction between the dates of April 15 and November 15. In the event the customer desires the work done under the handicap of snow, ice or severe cold, or between the dates of November 15 and April 15, the cost of erection shall be increased to include the additional cost incurred because of adverse weather conditions, unless otherwise specified in the proposal.
5. Should any conditions exist such that the use of union trades for installation of the tower, accessories and/or foundations are necessary, the prices quoted are subject to adjustment, unless the union stipulation has been specifically noted in the inquiry.
6. Unless provided by Tashjian Towers Corporation, the foundations must be completed so as to permit continuous work from time Seller's crew reports on the job, and must be finished in accordance with Seller's specifications.
7. Installation of all wiring and all transmission lines shall be on the tower to the base of the tower only unless otherwise specified.
8. Seller to carry or cause to be carried Workmen's Compensation, Public Liability and Property Damage Insurance and all Risk Insurance, which is included as part of this quotation and shall be terminated in accordance with the following paragraph.

"Upon notice of the date of completion, the customer shall have seven (7) days from such date of completion to accept or reject the structure, If no notice or rejection is received within such timer, the structure shall be considered the customer's property and our Property Damage Insurance and All risk Insurance on such structure shall be canceled, or should the Buyer commence broadcast operations from the tower before it is accepted the, all Seller's insurance will terminate after the first day of such broadcast operations."
9. All fees, service charges, cost of and expense to obtain permits and/or contractor's licenses to be for the account of the Buyer.
10. This quotation can be changed or varied only by the duly authorized officers of the parties hereto in writing.
11. Whenever regulations require or conditions necessitate working more than an eight (8) hours day and or five (5) day week, all overtime will be charged for in addition to quoted prices.
12. It is also Buyer's responsibility to:
  - (a) Provide (1) tagline (25 t. wide and equal in length to the height of the tower), cleared of all obstruction in order to permit a truck to be driven thereon.
  - (b) Clear a fire land down each guy radial 25 ft. wide on each side of the guy line, and extend this lane 50 ft. beyond the outer guy anchor; a 10 ft. width of this 150 ft. lane must be cleared of all obstructions in order to permit a truck to be driven thereon.
  - (c) So grade the area immediately surrounding the tower so as to permit the moving of trucks, crane and/or other equipment required to handle and erect the tower.
  - (d) Clear an area 250 ft x 250 ft. adjacent to the center of the tower to permit unloading, sorting, assembling and working space.
  - (e) Provide the necessary wooden horses to support the antenna during construction.
  - (f) Provide necessary fittings and gas required in pressure checking all of the transmission lines.
  - (g) Provide electrical power to the base of the tower.
  - (h) Provide the necessary building and construction permit.
  - (i) Provide the necessary police service to direct traffic if in the event the guy lines should cross a public or private road.
  - (j) Provide toilet facilities if required by regulations.
13. Seller shall not be responsible for delays arising from causes beyond its reasonable control.

## CONDITIONS OF SALE - FOUNDATION

1. When the foundations are specified as part of this quotation, it is assumed that this work will be done under normal ground conditions with a soil bearing capacity of at least 4,000 lb. Per sq. ft. in accordance with E.I.A. specifications, It shall be their responsibility of the Buyer to supply soil bearing capacity and Seller shall have an absolute right to rely on written test reports furnished by Buyer in the preparation of foundation drawings and in the installation of foundations. Blasting, cribbing, fill, removal of obstruction planking, snow, road building, and clearance for easy access to the site. Existence of swamp, sand, mud, water and frozen ground are not considered normal. If any of the above conditions are encountered, the foundations price shall be increased to include the additional cost incurred, plus a reasonable profit allocable to the work performed.
2. The foundation price does not include clearing a grading of tower site, profiles, or grounding system.