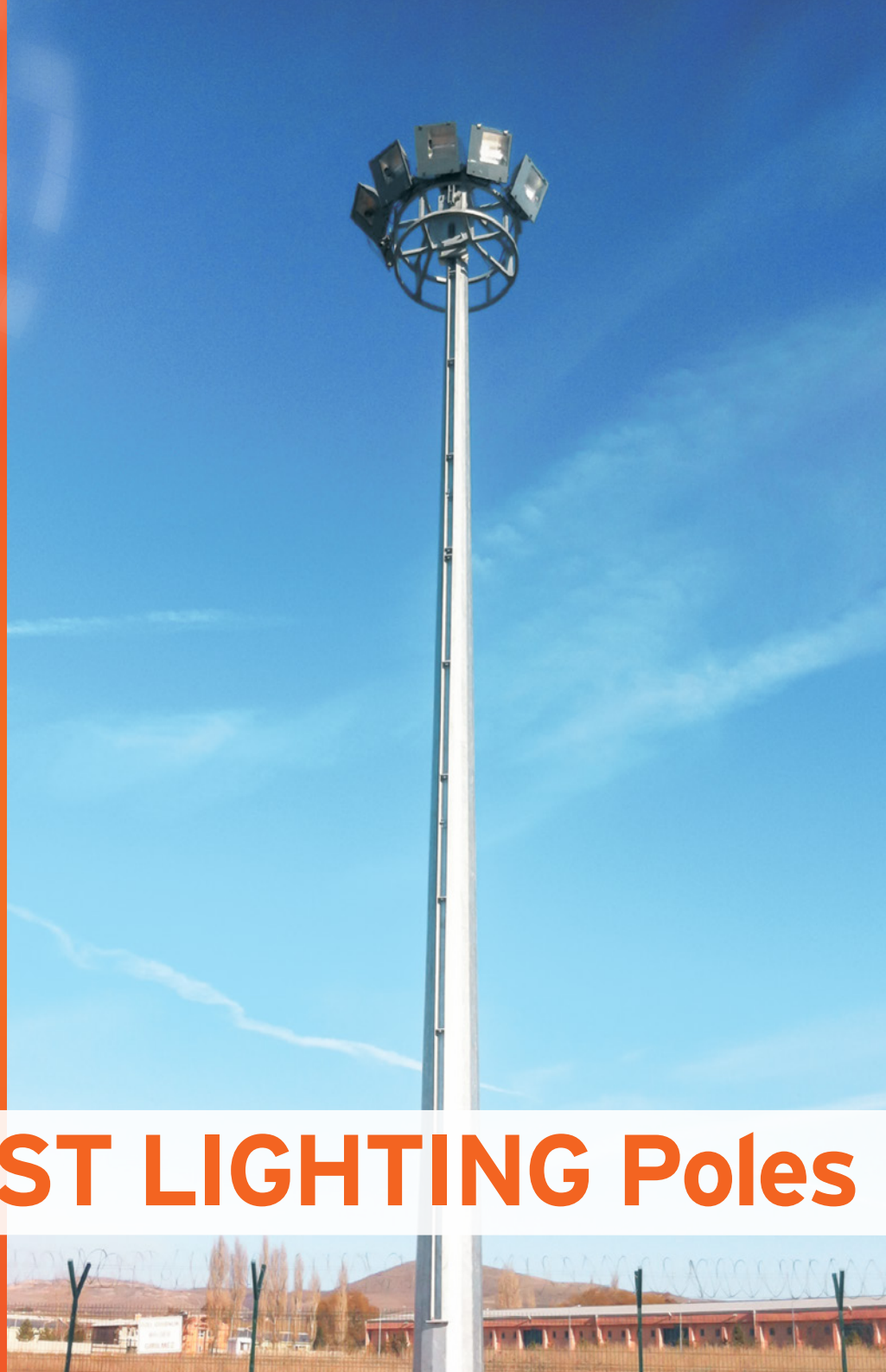




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HIGHMAST LIGHTING Poles



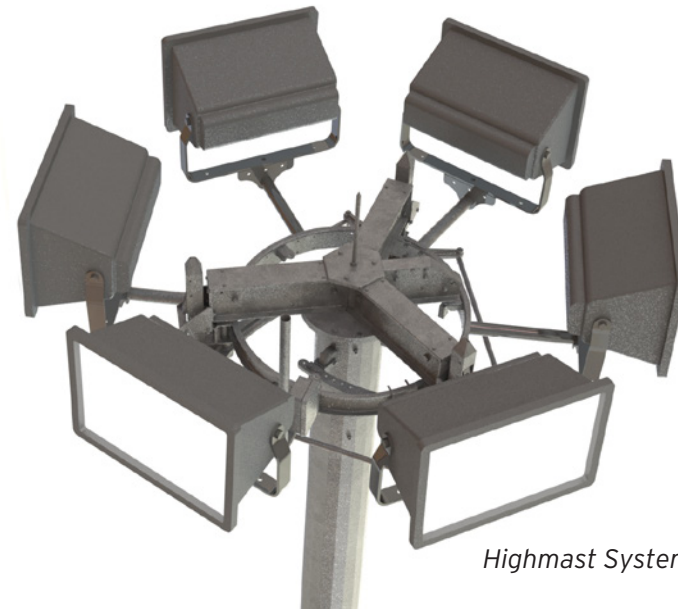
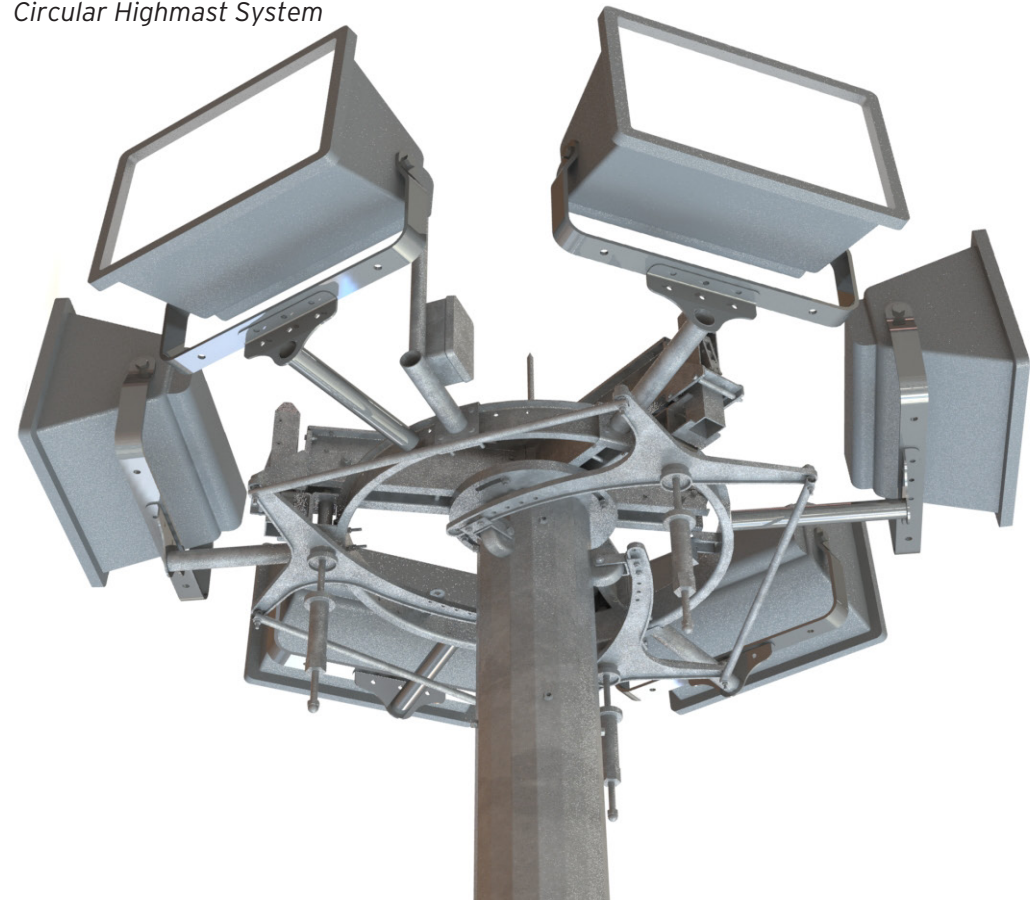
Highmast Lighting Pole

Highmast lighting pole provides repair and maintenance of the projectors by lowering them to the pole base. It creates a solution especially in the difficult and costly fields where the cranes aren't allowed to enter.

Highmast lighting pole consists of platform raising and lowering mechanism, motor, gear-box, command panel, remote control, top locking - latch mechanism, railed guide system (optional), projector, cover, pole, lighting platform, and top system.

The platform, which is attached to the drum rotated by winch, is moved up and down by remote control on the pole. When the platform reaches to the top of the pole, the latch on the platform fixed to the top frame and become fixed. In order to lower the platform by pressing the lowering button, the lock release from top frame and move the platform downward.

When the platform raised to the top position, there would be no load on the rope.



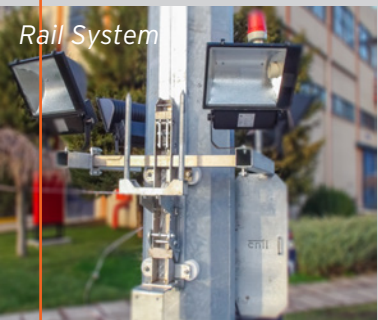
Highmast System for 6 Projectors



One Side Lighting



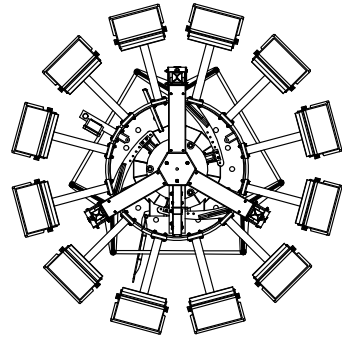
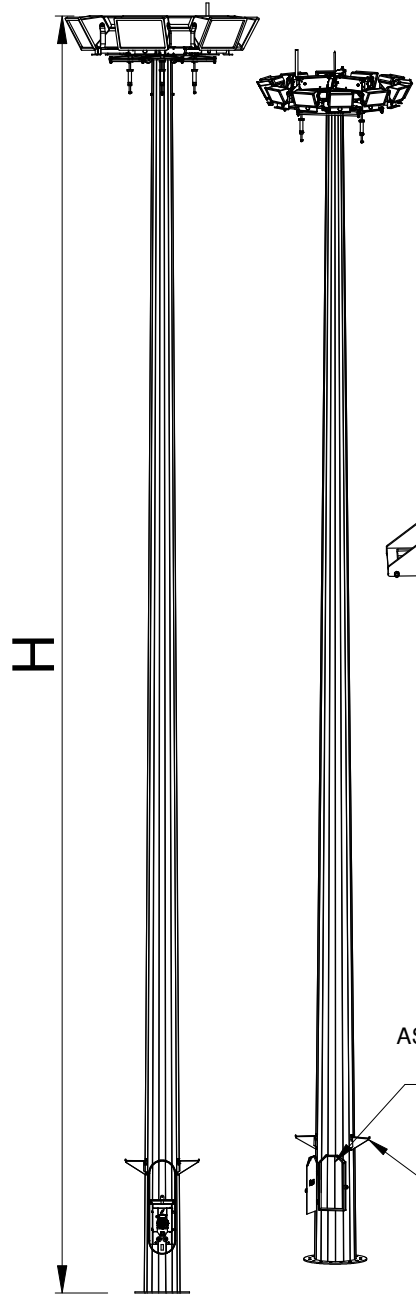
Four side Lighting



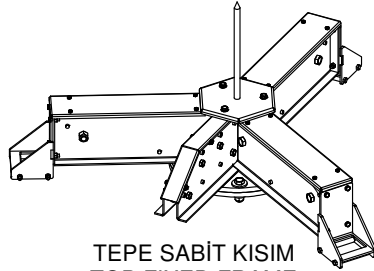
Rail System



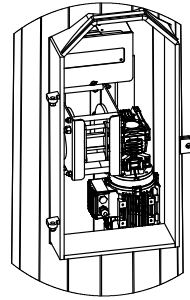
HIGHMAST



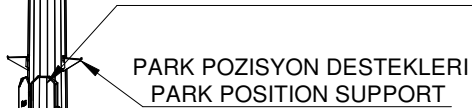
TEPE GÖRÜNÜSÜ
TOP VIEW



TEPE SABİT KISIM
TOP FIXED FRAME

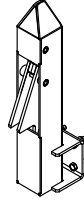


ASANSÖR SİSTEMİ (MOTOR-REDÜKTÖR-PANO)
WINC SYSTEM (MOTOR-GEAR BOX-PANEL)



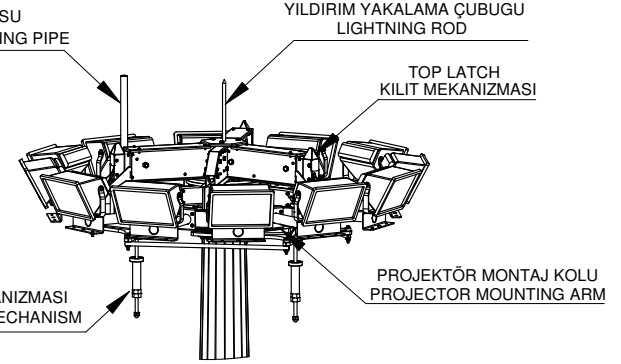
PARK POZİSYON DESTEKLERİ
PARK POSITION SUPPORT

KILIT MEKANİZMASI
TOP LATCH

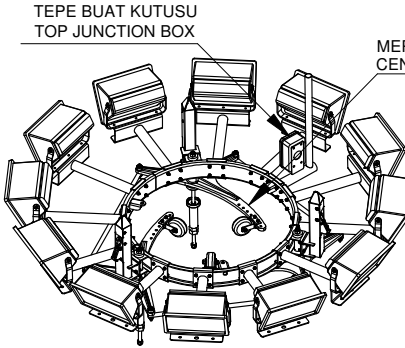


UÇAK IKAZ MONTAJ BORUSU
AIRCRAFT WARNING LIGHT MOUNTING PIPE

HALAT MESAFE AYAR MEKANİZMASI
STEEL ROPE ADJUSTMENT MECHANISM



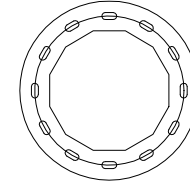
SİSTEM DETAYI / SYSTEM DETAIL



PROJEKTÖR TAŞIYICI RİNGİ
PROJECTOR RING

TEPE BUAZ KUTUSU
TOP JUNCTION BOX

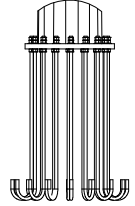
MERKEZLEME KOLU
CENTRALIZING ARM



TABAN PLAKASI
BASE PLATE



L ANKRAJ CIVATASI
L ANCHOR BOLT



St 37 - S235JR - EN 10025	<input checked="" type="checkbox"/>	St 52 - S355JR High Strength Steel	<input type="checkbox"/>
AISI 304 Stainless Steel	<input type="checkbox"/>	AISI 316 Stainless Steel	<input type="checkbox"/>

Surface Coating			
Hot Dip Galv. EN ISO 1416	<input checked="" type="checkbox"/>	Powder Coat	<input type="checkbox"/>
Electro galvanizing	<input type="checkbox"/>	Acrylic Paint	<input type="checkbox"/>

Static Design & Verification ANSI/TIA 222-G
Hotdip Galvanize Standart EN ISO 1461
Standart Steel EN 10025
Bolts Standard: ISO 898.1/5.8

ALL DIMENSIONS ARE IN mm



Address: 1202. Street No:99/101 Ostim ANKARA TURKEY

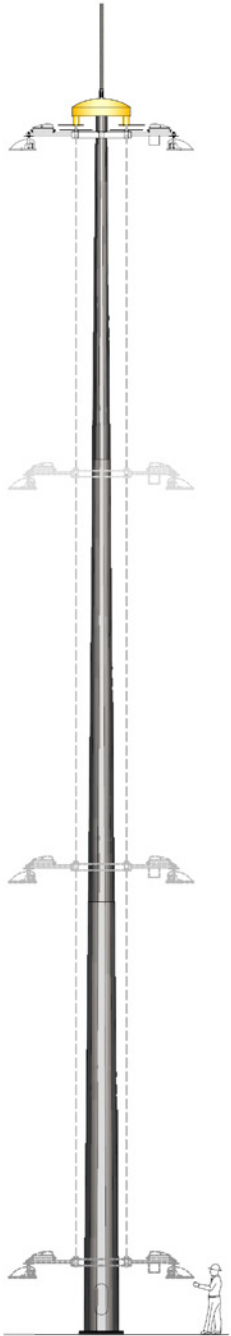
TEL : +90 312 385 86 66 FAX: +90 312 385 86 67

www.entipole.com

PROJECT NAME

PD4 H/12 HIGHMAST





ENTİ HIGH MAST POLES (12-35 mt)										
	Pole Height (H) mt	Base Dia (Db) mm	Top Dia (Dt) mm	Shaft Thickness (t) mm	Anchor Bolt / Hole Circle (mm)	Flange Dia (mm)	Flange Thickness (mm)	Foundation Concrete (m3)	Foundation Reinforcement (kg)	Foundation Width x Height (mm)
PD4 12/12 HIGHMAST - 130 kph	12	450	180	4	12xM20 / DA:550	650	20	4.30	350.00	2300x800
PD4 15/12 HIGHMAST - 130 kph	15	450	180	4-4	12xM20 / DA:550	650	20	5.80	500.00	2400x1000
PD4 18/12 HIGHMAST - 130 kph	18	450	180	4-4	12xM20 / DA:550	650	25	7.30	610.00	2700x1000
PD4 20/6 HIGHMAST - 160 kph	20	500	200	4-4	16xM20 / DA:600	700	20	9.70	855.00	3100x1000
PD4 20/12 HIGHMAST - 160 kph	20	500	200	4-5	16xM24 / DA:600	700	25	9.70	855.00	3100x1000
PD4 25/4 HIGHMAST - 160 kph	25	600	220	4-4-4	16xM24 / DA:700	800	25	13.00	1060.00	3600x1000
PD4 25/8 HIGHMAST - 160 kph	25	600	220	4-4-5	16xM24 / DA:700	800	25	13.00	1060.00	3600x1000
PD4 25/12 HIGHMAST - 160 kph	25	600	220	4-5-5	16xM27 / DA:700	800	25	13.00	1060.00	3600x1000
PD4 30/4 HIGHMAST - 160 kph	30	700	220	4-4-5	16xM27 / DA:820	940	30	15.00	1260.00	4000x1000
PD4 30/8 HIGHMAST - 160 kph	30	700	250	4-5-5	16xM30 / DA:820	940	30	15.00	1260.00	4000x1000
PD4 30/12 HIGHMAST - 160 kph	30	750	250	4-5-5	16xM30 / DA:870	1000	30	15.00	1320.00	3900x1700
PD4 30/15 HIGHMAST - 160 kph	30	800	250	4-5-5	16xM30 / DA:920	1050	30	15.00	1320.00	3900x1700
PD4 35/8 HIGHMAST - 160 kph	35	770	250	4-5-5-6	16xM30 / DA:920	1050	30	16.00	1340.00	4000x1700
PD4 35/12 HIGHMAST - 160 kph	35	800	250	4-5-6-6	16xM33 / DA:950	1050	30	18.00	1515	4300x1850
PD4 35/15 HIGHMAST - 160 kph	35	830	250	4-5-6-6	16xM36 / DA:950	1050	30	18.00	1515.00	4300x1850

Includes: Winch Motor, Gearbox, Electric Panel, Latch Mechanism, Projector Platform, Anchor Bolts, Hot Dip Galvanized

Enter Engineering Ltd. STI; reserves the right to make changes to the value specified in the table of the posts

Designs are according to 130-160 kph for specified number of projectors

Please contact for design of different types of projectors and different types of projector placement.

Foundation dimensions are designed according to the Enti design and load. Do not use for different designs

Highmast Poles Technical Dimensions

Contact us for various poles and revised projects.

Foundation dimensions are calculated according to the design and load. Do not use it for different designs.



Non-standard designs can be done according to the demanded wind load and projector types. Projector positioning, weight and section measure information need to be provided for these kinds of designs.

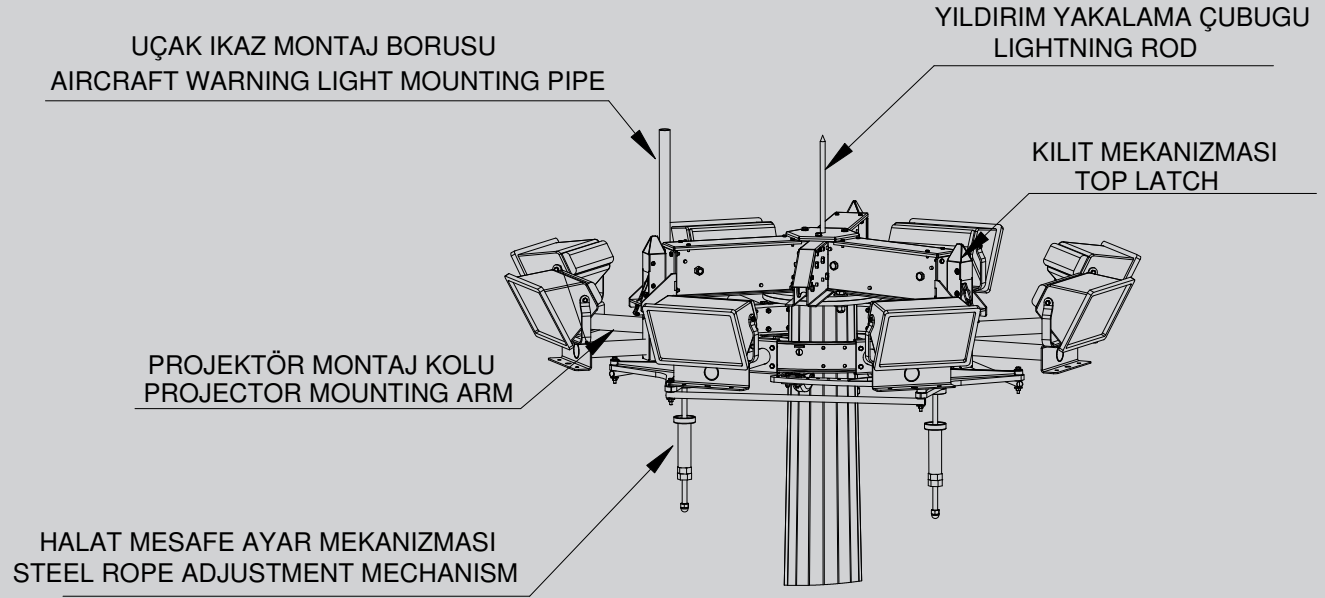
Pole designs can be done according to various standards like TIA 222 G, TIA 222 F, TS 648.



TOP SYSTEM

Top system consists of below stated components:

- Projector carrier ring,
- Projector mounting arms,
- Pulley construction,
- Steel rope adjustment mechanism,
- Top Locking/Latch mechanism,
- Lightning rod,
- Solar warning assembly pipe,
- Connection flange.



Top System

These components are protected against corrosion with hot dip galvanization and geomed coating.

When the platform carrier ring connects with the top system, automatic mechanic locks step in. By these locks, the load on the steel ropes becomes zero.

Top Latching System just before locking



ENTI HIGHMAST LIGHTING LOCKING SYSTEM and CENTERING ARMS

High mast lighting top locking system, which has been developed after 15 years Research & Development, functions with cam mechanism. The locks, connecting top construction, step in automatically and stable the projector carrying ring. By the way, it is not needed automation adjustment like switch, etc. for ring positioning. Top locking system is modular and optional. It has an assembly place on the ring. It may not be used if not demanded.

The pole centering arms, produced from aluminum cast, can move conveniently on the pole during the process thanks to its rubber wheels. Centering arms, which can be used in poles with different diameters, move synchronized.

Ring System with Latch



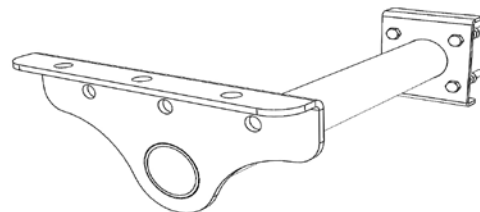
Ring System without Latch



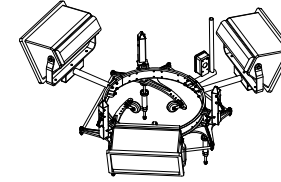
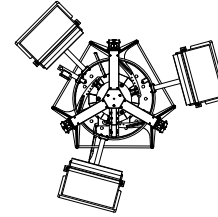
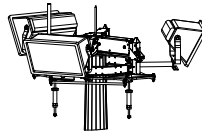
Aircraft warning light arm



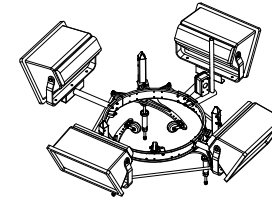
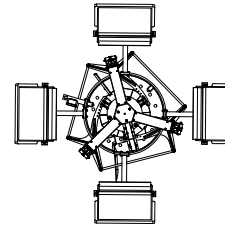
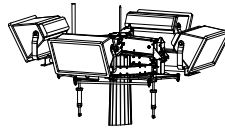
Projector mounting arm



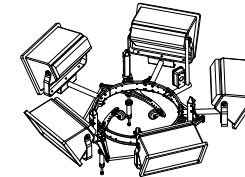
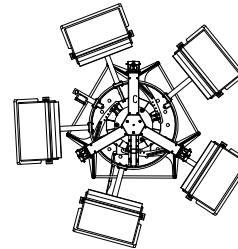
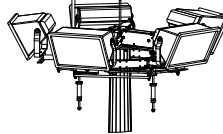
3 Projector



4 Projector



5 Projector



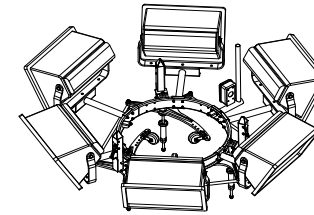
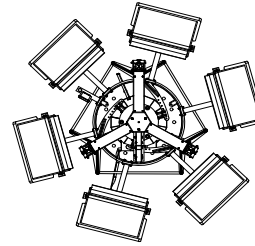
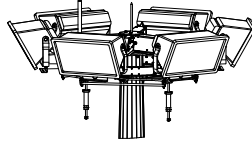
In standard; 3, 4, 5, 6, 8, 10, 12 and 15 projectors can be connected to the projector carrying ring for circular positioning. Upon customer request, new designs for various projector connection can be done.



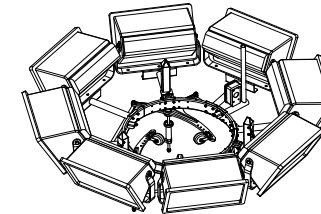
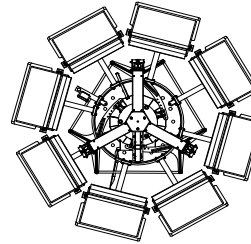
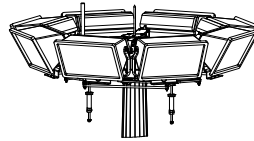
One side rail system



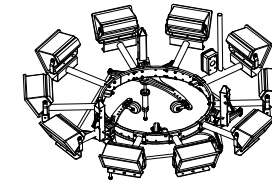
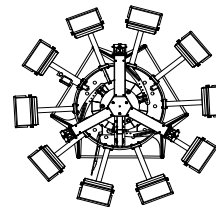
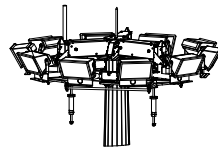
6 Projector



8 Projector



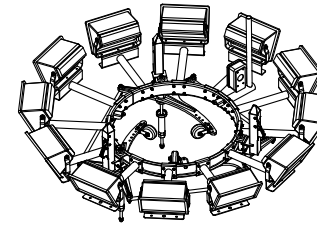
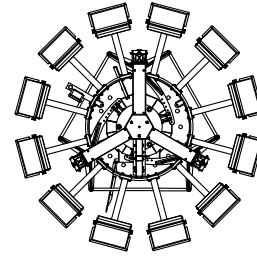
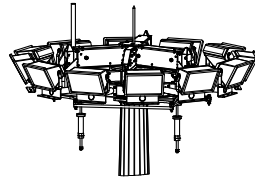
10 Projector



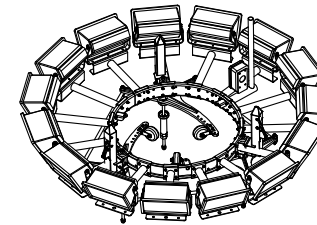
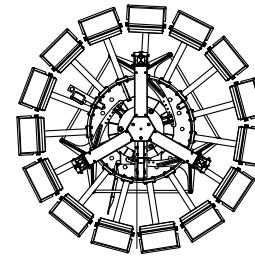
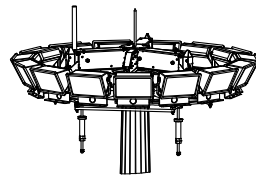
In standard; 3, 4, 5, 6, 8, 10, 12 and 15 projectors can be connected to the projector carrying ring for circular positioning. Upon customer request, new designs for various projector connection can be done.



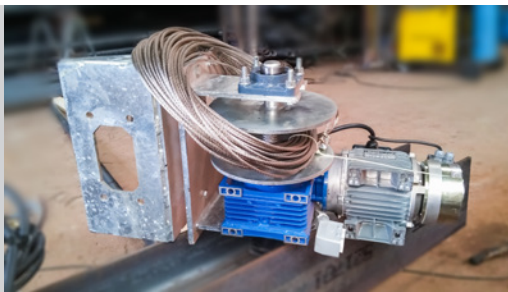
12 Projector



15 Projector



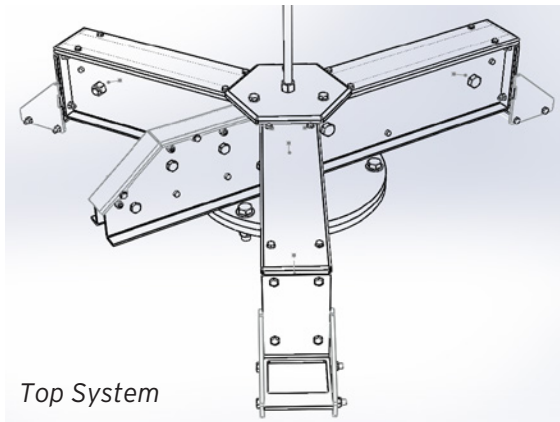
In standard; 3, 4, 5, 6, 8, 10, 12 and 15 projectors can be connected to the projector carrying ring for circular positioning. Upon customer request, new designs for various projector connection can be done.





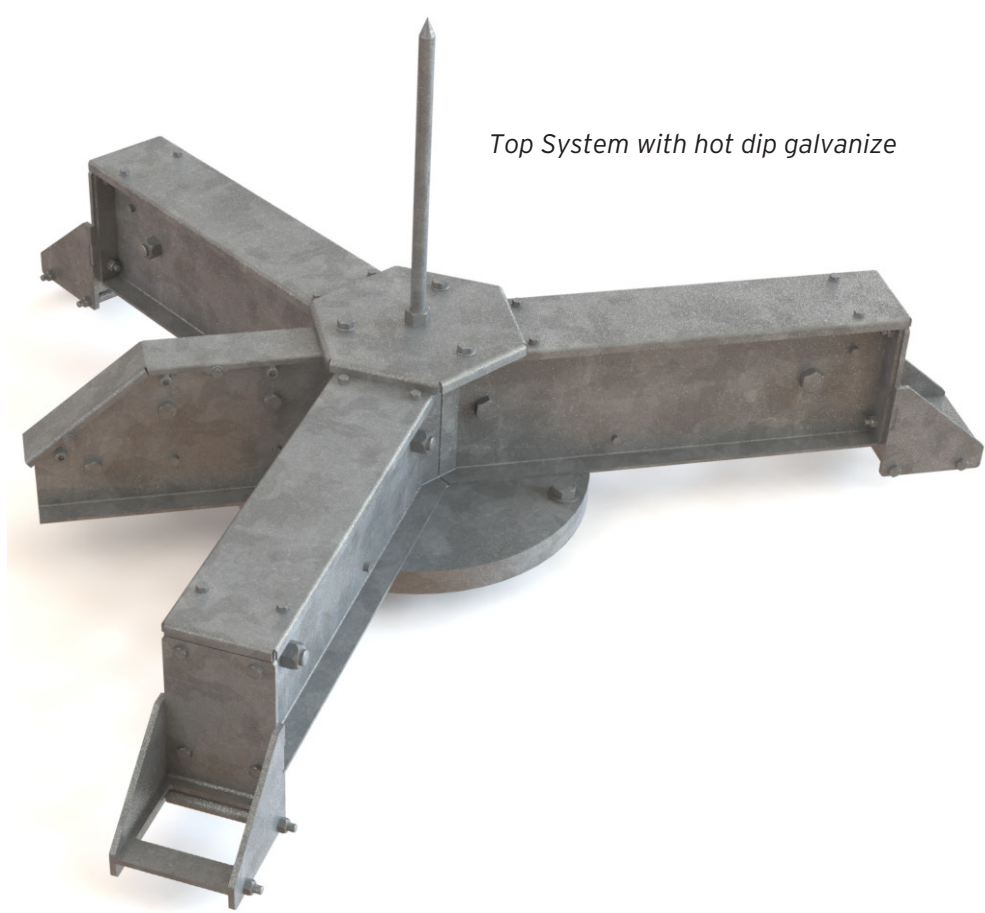
Top System

Top system is installed to the top of the pole with the help of bolt and flange. Its function is to change the direction and displacement of steel carrying ropes and electric cables, coming from inside the pole. It has bolt assembled interference covers. Also, lightning catching rod is assembled to this cover. Locking system's holes are attached to the edge of the top system with the help of bolts. Upon customer request, it may be cancelled.



Top system is produced from standard steel plate welded. It is galvanized for protection against corrosion. The pulley carrying side panel steel plates are produced twisted for more endurance.

Top System with hot dip galvanize



Top system

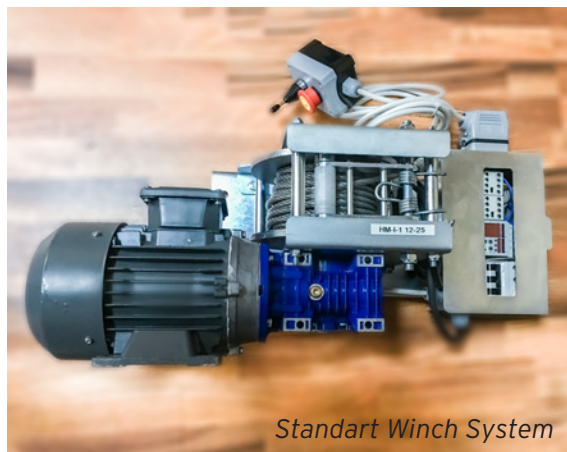




Winch System

It gives vertical movement to ring steel plate. The main components of crane system are drum, gearbox, engine and remote control panel. The drum which steel rope is wrapped, is in the center of the pole and assembled with the bolts to the welded plate in the pole.

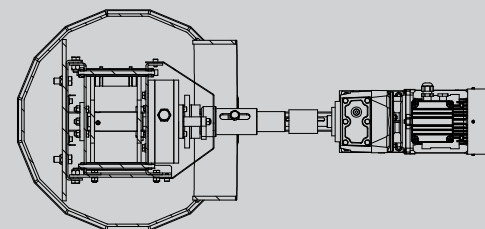
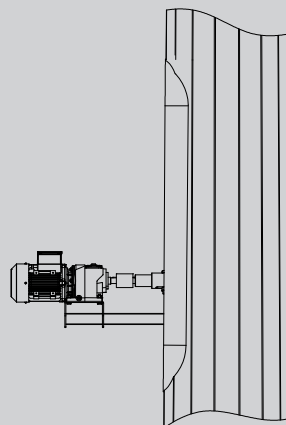
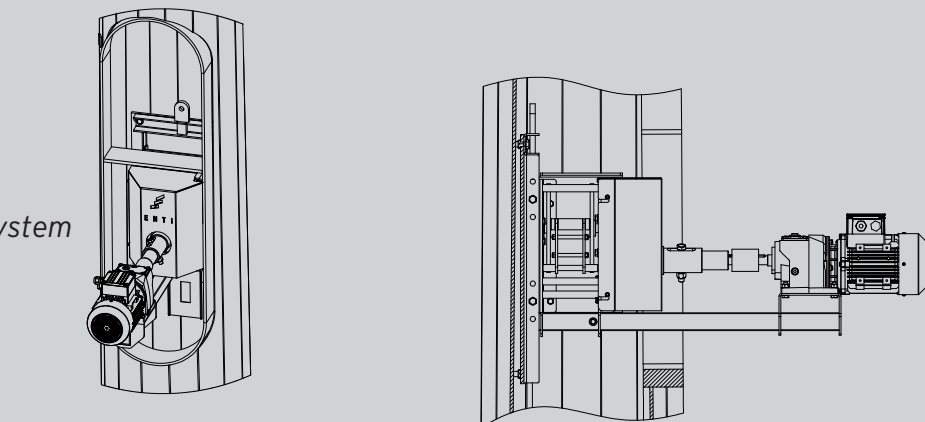
Basically, there are 2 kinds of winch system which are standard and portable. Standard winch system includes engine, gearbox and remote control panel which are in the pole.



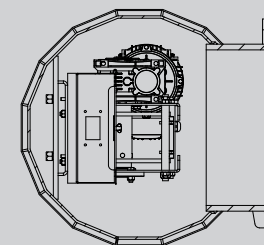
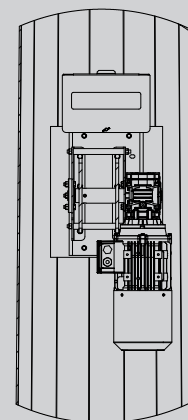
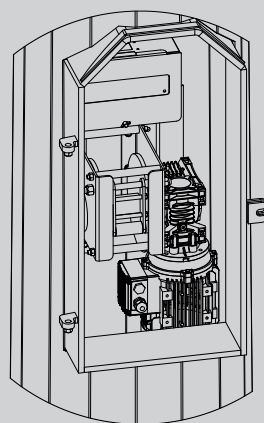
Standart Winch System

In the fields where multi poles are used, a portable winch system is used. It includes 1 or 2 motor gearbox system. The operator assembles the winch system to the pole in order to perform raising - lowering movement. This system which provides advantage in terms of total cost is preferred in multi pole fields.

Portable Winch System



Standart Winch System



Area Lighting

Especially, the Highmast system which is preferred in high projector poles for field lighting provides important advantages in below stated issues:

- Total cost,
- Safety,
- Maintenance & repair speed.

Also, they are mainly used in:

- Parking areas,
- Airports and aprons,
- Open areas,
- Road junctions and squares.



In the places, which are not convenient for crane and lift bucket intervention, where projector poles are used, it provides an advantage to use high mast poles.



Highmast System Production

The high mast poles, which are mass produced by Enti are accepted in the market in terms of technical and system convenience, has a market share in 10 countries including Türkiye. The properties which take the lead Enti highmast poles, preferred in mass projects are:

- High reliability,
- Safety,
- Supreme protection to corrosion,
- Quick assembly,
- Proper performance,
- Easy adjustment.

For standard systems, thanks to mass production, a quick supply can be done from the inventory. If necessary, Enti can give assembly consultancy.



ENTI Production

Galvanized Pole Production

Within Enti, production of galvanized poles are done besides high mast poles. In this field, according to the demand, with / without pole production is done.

We have design measures of standard poles in our catalogue. If demanded, a non-standard design can be done according to the preferred wind speed and number of projectors.

Besides pole design, foundation design can be done according to the specified foundation properties.



HIGHMAST



Highmast with Camera



Highmast System with Camera

Usually, cameras can be connected to the high mast systems. By this, an advantage is provided for regular maintenance of the cameras. In latched systems, as the construction which carries cameras are stabled to the top of the pole, there would be no increase in camera tilt.



Advertisement highmast



Raile guided highmast

Highmast System with rail guide

Railed high mast systems are produced by Enti, which are especially used in one-way lighting systems. In these systems, a special rail which is produced with extrusion from a special aluminum composition is used. The rail systems are more stable in lifting - lowering movement has above stated locking system and brake system which steps in automatically during the process.



HIGHMAST



Hgihmast with rail guide



Circular highmast

LIFTING SYSTEM with PIN



In high mast poles, electricity transmitting to the projectors can be done with pinned systems instead of electricity cables.

LIGHTNING ROD



On demand, lightning systems can be used instead of lightning rod in high mast poles.

MAINTENANCE & REPAIR

On demand, Enti can give maintenance and repair service for the high mast poles which are supplied by Enti or other companies.





ENTİ

www.enti.com.tr • pazarlama@enti.com.tr

**Enti Mühendislik Müşavirlik Proje İnşaat Çelik Elektrik
Elektronik İth. İhr. San. ve Tic. Ltd. Şti**

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Şube/Branch: 1202. Sokak No:84-86 Ostim /Ankara Turkey

Lazer / Laser : 1200 Sokak No:112 Ostim /Ankara Turkey

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