



INTRODUCTION

Technopole Industries LLC is the latest name within the manufacturing industry of steel pole which represents unparallel quality and professionalism. It is the manufacturing division of Kozmo Lighting LLC who has been operating since 1989 & is one of the leading suppliers of complete lighting solution to both governmental and non governmental entities throughout the Middle East, North Africa and Asia regions.

As one of the leading manufacturer in the country Technopole has become synonymous with quality through its comprehensive range of products for various applications. Its range of solution include street light pole, flood lighting pole, camera pole, monopole, among many others.

At Technopole we strongly live by our commitment to superior quality and excellent customer service and take pride in creating a concrete and strategic partnership with our customer. Our client can rest assured that we will provide the necessary end to end service through our innovation approach to design solution, ever expanding portfolio and efficient logistic support.

With the vast experience gained by the company management over the years we guarantee that you will be provided with all liable options for your projects along with top notch presale and after sale service to ensure your entire objective are met.

MANUFACTURING

Lighting poles are manufactured using up to date technology CNC & PLC controlled machine with minimum manual handling required using raw materials from first class steel mills.

We possess 14 meter long shear machine and 14 meter long press brake used for production of octagonal polygonal and conical poles. As standard procedure poles are delivered hot dip galvanized. In some cases and according to the customer's request poles can be delivered painted over zinc coat.

QUALITY CONTROL AND ASSURANCE

Quality is one of the most important factors taken into consideration from early beginning stage starting from preparing the order to customer and ending by delivery the project. Step by step checking is made in order to control the specification according to international standards and tolerances. We produce variable type's heights, shape of lighting poles and high mast.







POLES SUCH AS

- » Octagonal street lighting poles up to 18 meter height
- » Octagonal poles to any required length (Multi Segments)
- » Round conical street lighting poles up to 18 meters height
- » Powder coated poles in round and octagonal shape
- » Manually and electrically operated hinged poles or high mast
- » Decorative poles for streets, garden, car parks and private sector

DESIGN

Technopole industries have invested tremendously in sophisticated special designed programs to design the most economical poles. Each project is designed according to the BS EN 40 standard taking into consideration all related parameters such as wind speed and type of luminaire.

HOT DIP GALVANIZING AND PAINTING

Corrosion prevention is essential factor in the economical utilization of the steel. In most steel products hot dip galvanizing provides ideal corrosion protection for steel. No other productive coating matches galvanizing unique combination of low first cost ease of inspection for coating quality, durability low maintenance and resistance to impact and mechanical damage

ADVANTAGE OF GALVANIZING

Galvanizing provides abrasion resistant coating for an exceptionally longer period. No other protective coating can match this unique process.

Since galvanizing involves coating of zinc with base steel at a considerable low cost and relatively high negligible maintenance for longer duration it is considered to be the most effective coating today. The galvanized coating becomes part of the steel surface as it forms zinc-iron alloy layer and materallurgical bonds to the base steel.

The corrosion rate is extremely show compared to other conventional coatings. The mechanical properties commonly galvanized are not affected by galvanizing.

OCTAGONAL POLE

The tapered octagonal pole has a variety of uses from sporting ovals to Industrial developments, from as low as 3 Meter to as high as 20 Meter due to its wide range of uses, the tapered octagonal pole is also known as general purpose pole.

TECHNICAL SPECIFICATION

- » Shape: Octagonal (8 bends)
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1
- » Height Range: Up to 20 Meter
- » Thickness: From 3mm up to 8mm
- » External Diameter: (Min at top) 60mm

(Max at base) on Request

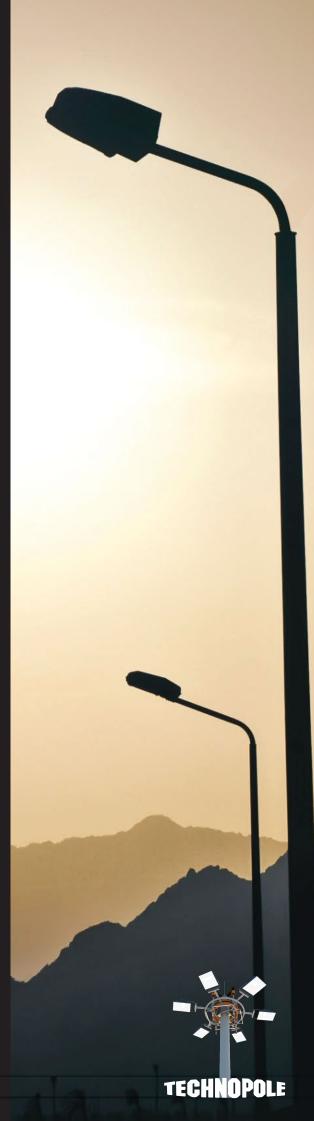
OPTION

- » Height: 3m to 20m
- » Variable Arm Length from: 0.125-3m
- » Variable Spigot size from: 60-120mm

TOLERANCE (According to EN40: Part 2)

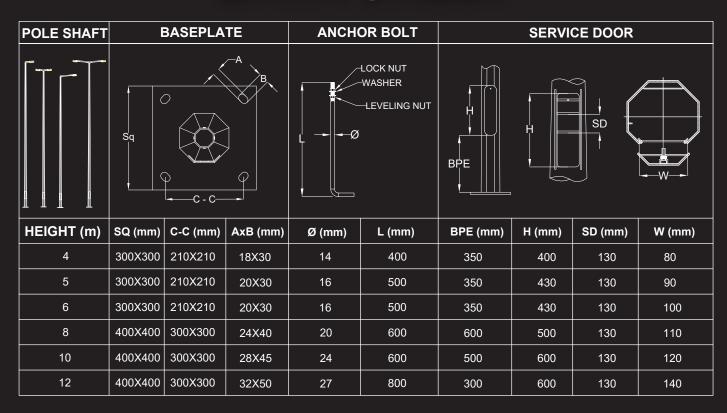
- » On Length: +25mm
- » On Thickness: +.3mm
- » On Circumference: +1%
- » On Diameter: +3% (From the Circumferences)
- » On Straightness: <.003L; L=H+E

The octagonal steel poles are manufactured with the process previously described.



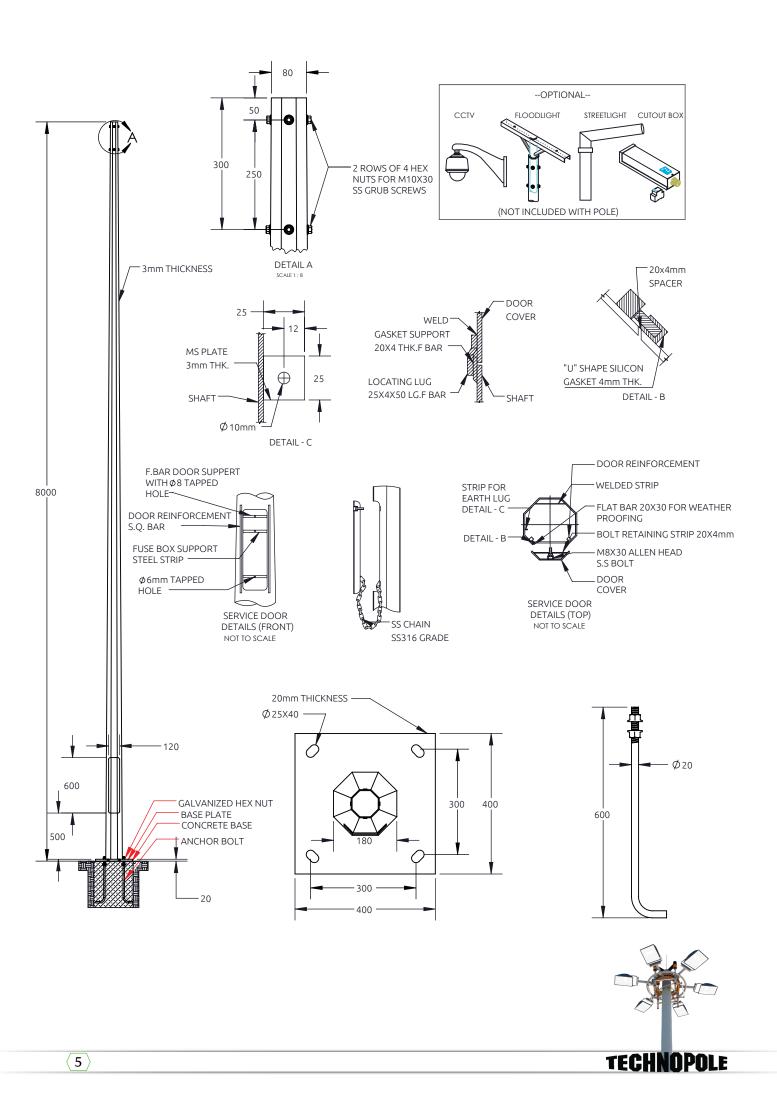


TECHNICAL DATA SHEET









TUBULAR POLE

The tubular pole has a variety of uses from sporting ovals to Industrial developments, up to 12 Meter due to its wide range of uses, the tubular pole is also known as general purpose pole.

TECHNICAL SPECIFICATION

- » Shape: Tube (Circular)
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1
- » Height Range: Up to 12 Meter
- » Thickness: From 3mm up to 8mm
- » External Diameter: (Min at top) 60mm

(Max at base) on Request

OPTION

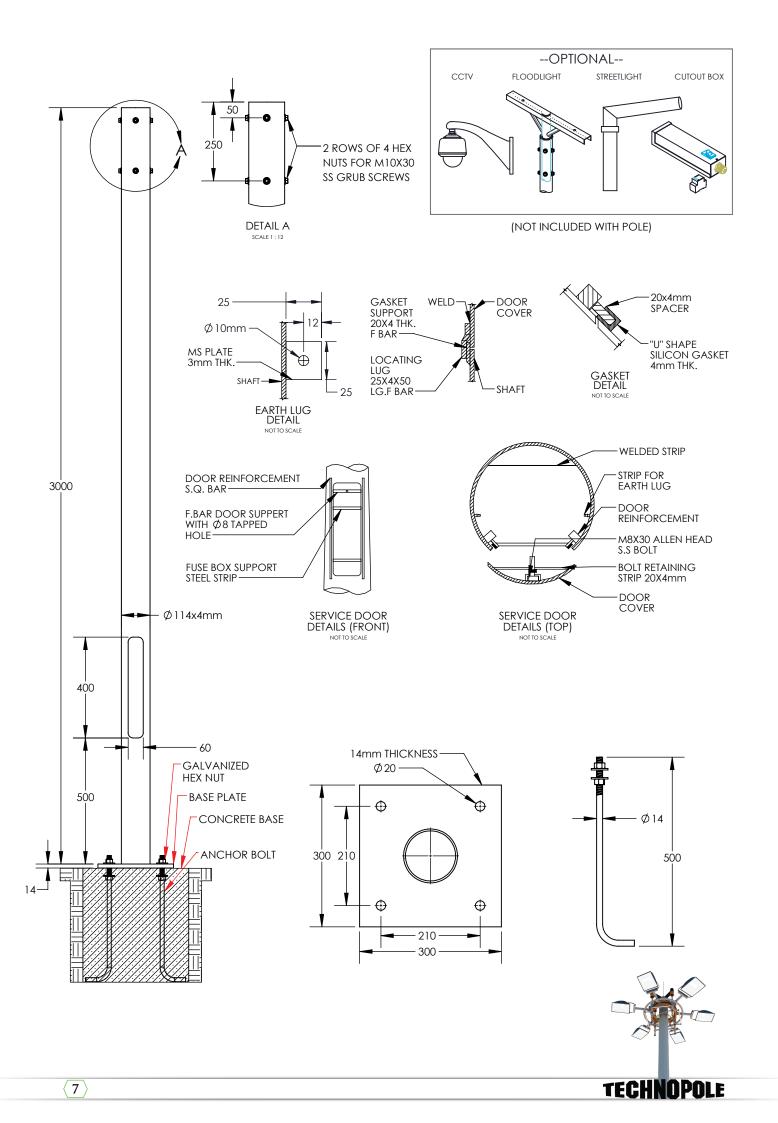
- » Height: Up to 12m
- » Variable Arm Length from: 0.125-3m
- » Variable Spigot size from: 60-120mm

TOLERANCE (According to EN40: Part 2)

- » On Length: +25mm
- » On Thickness: +.3mm
- » On Circumference: +1%
- » On Diameter: +3% (From the Circumferences)

The tubular steel poles are manufactured with the process previously described.





STEP POLE

The step pole has a variety of uses from sporting ovals to Industrial developments, up to 12 Meter due to its wide range of uses, the step pole is also known as general purpose pole.

TECHNICAL SPECIFICATION

- » Shape: Tube (Circular)
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1
- » Height Range: Up to 12 Meter
- » Thickness: From 3mm up to 8mm
- » External Diameter: (Min at top) 60mm

(Max at base) on Request

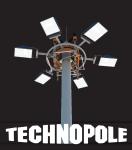
OPTION

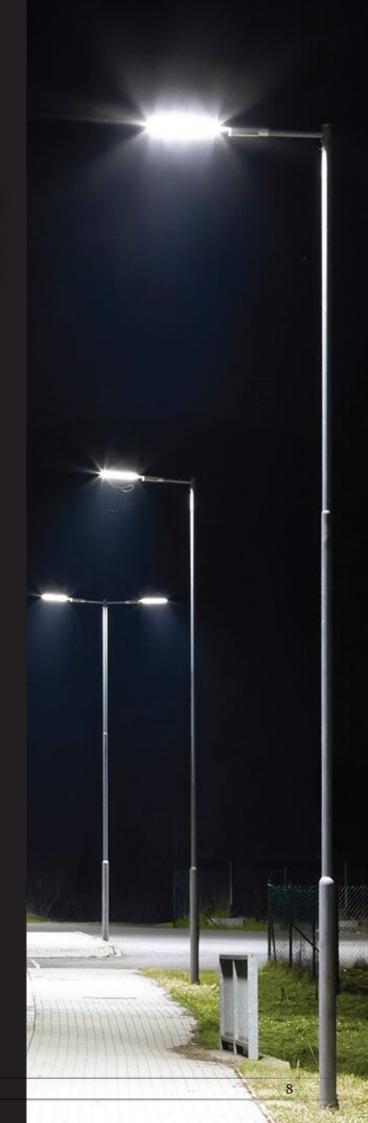
- » Height: Up to 12m
- » Variable Arm Length from: 0.125-3m
- » Variable Spigot size from: 60-120mm

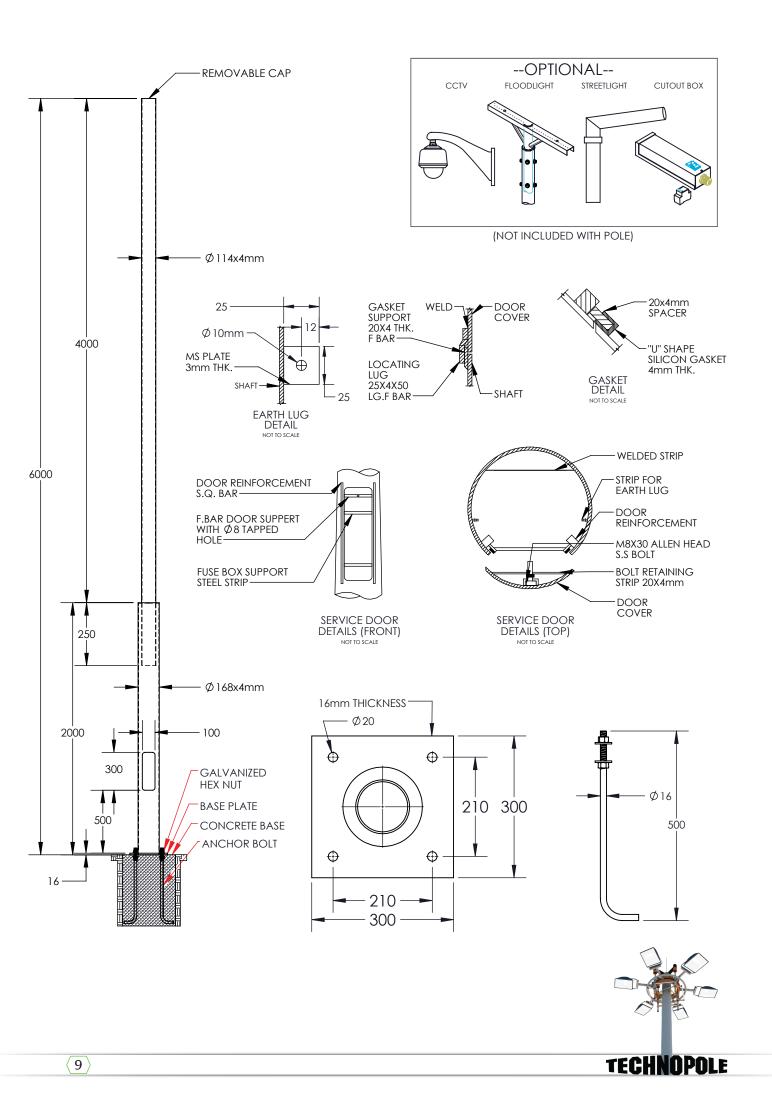
TOLERANCE (According to EN40: Part 2)

- » On Length: +25mm
- » On Thickness: +.3mm
- » On Circumference: +1%
- » On Diameter: +3% (From the Circumferences)

The tubular step poles are manufactured with the process previously described.







CONICAL POLE

Technopole Industries street lighting column are available in your choice of standard mounting height for either single or multiple fixture mounting or arm/bracket arrangement.

TECHNICAL SPECIFICATION

- » Shape: Conical (Round)
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1
- » Height Range: Up to 20 Meter
- » Thickness: From 3mm up to 8mm
- » External Diameter: (Min at top) 60mm

(Max at base) on Request

OPTION

- » Height: 3m to 20m
- » Variable Arm Length from: 0.125-3m
- » Variable Spigot size from: 60-120mm

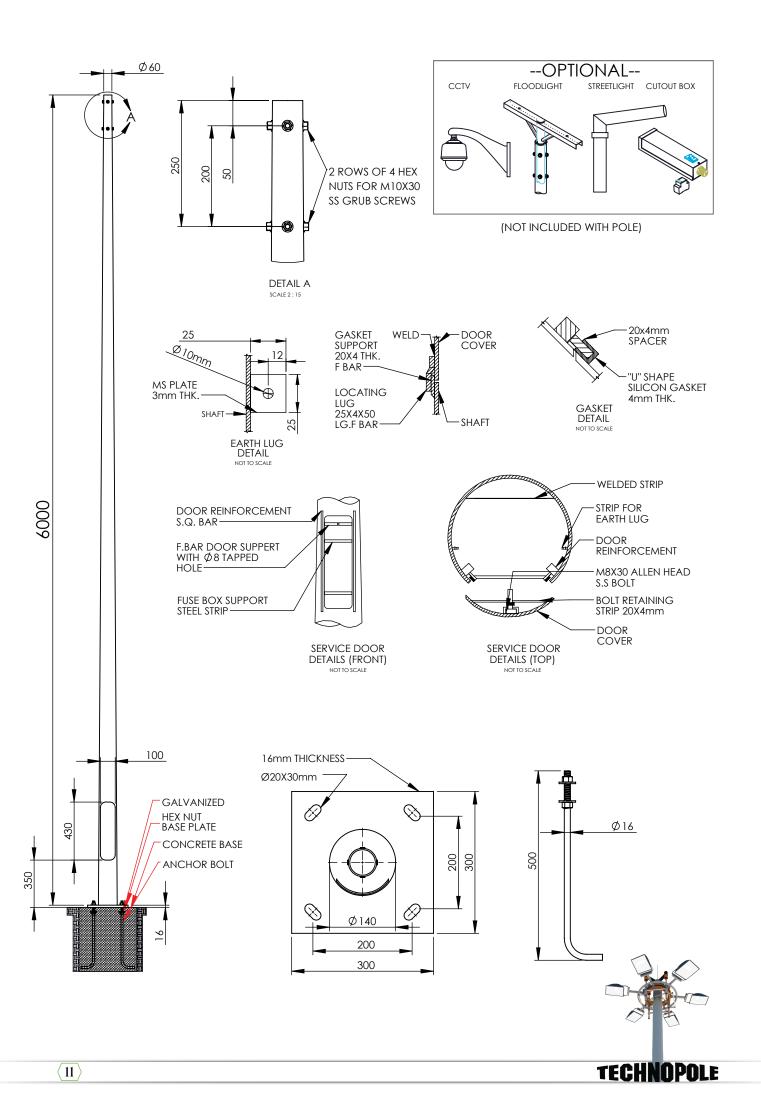
TOLERANCE (According to EN40: Part 2)

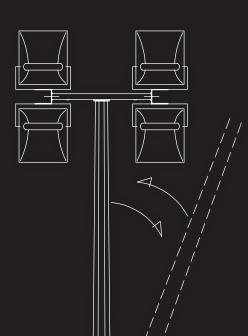
- » On Length: +25mm
- » On Thickness: +.3mm
- » On Circumference: +1%
- » On Diameter: +3% (From the Circumferences)
- » On Straightness: <.003L; L=H+E

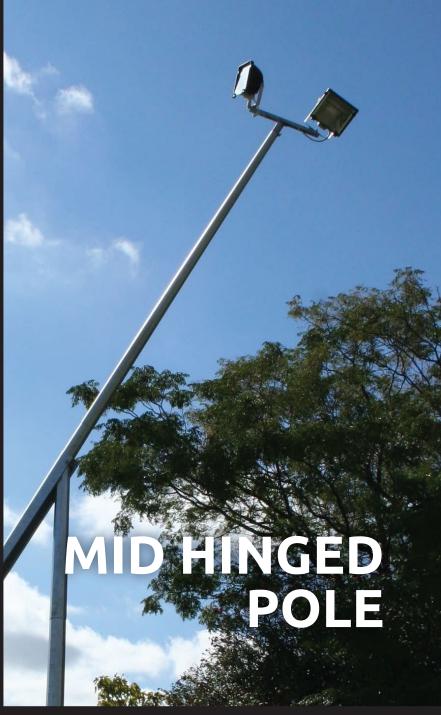
The conical steel poles are manufactured with the process previously described and with variable taper ratio.









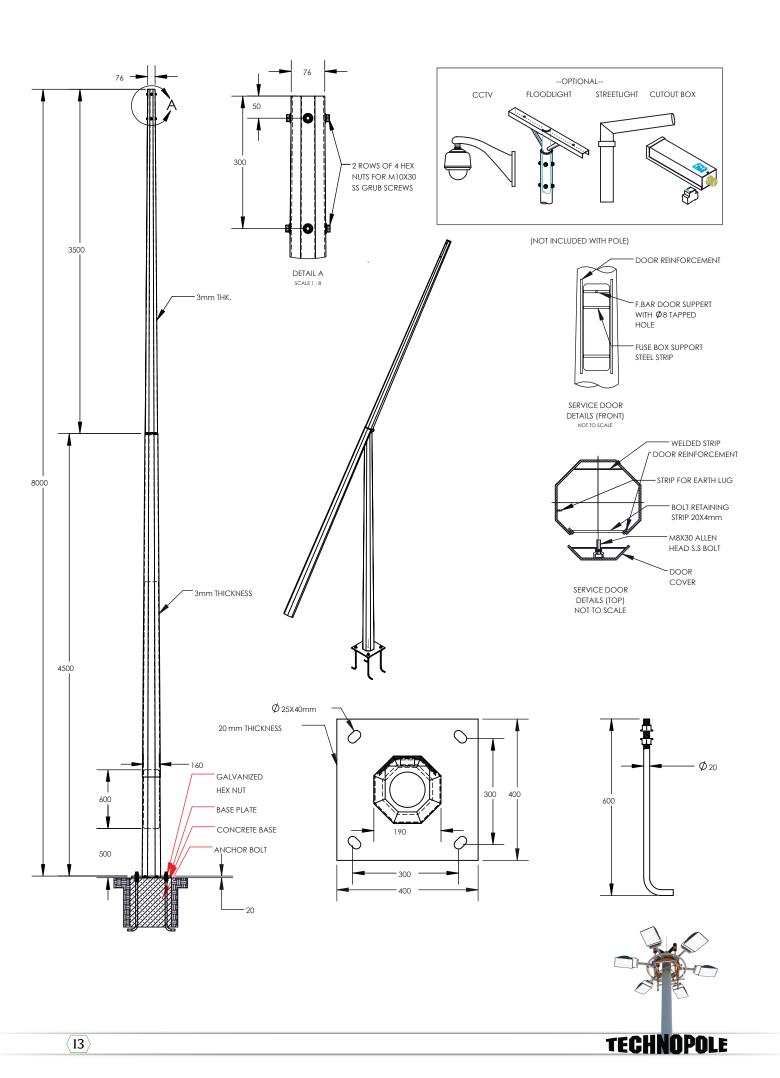


Mid hinged pole act on a simple see saw principle with the column lowering in its own foot print. The lowering and raising system is either by direct pull for lower capacity or by pulley if higher capacity is required. These pole are hinged above half the height and acts as a see-saw, allowing for the top of the pole to be lowered to the ground for easy access of lights or equipment.

TECHNICAL SPECIFICATION

- » Shape: Octagonal Continuously Tapered
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Height Range: Up to 30 Meter
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1

- » Height: 3m to 30m
- » Customized bracket for various application





SQUARE POLE

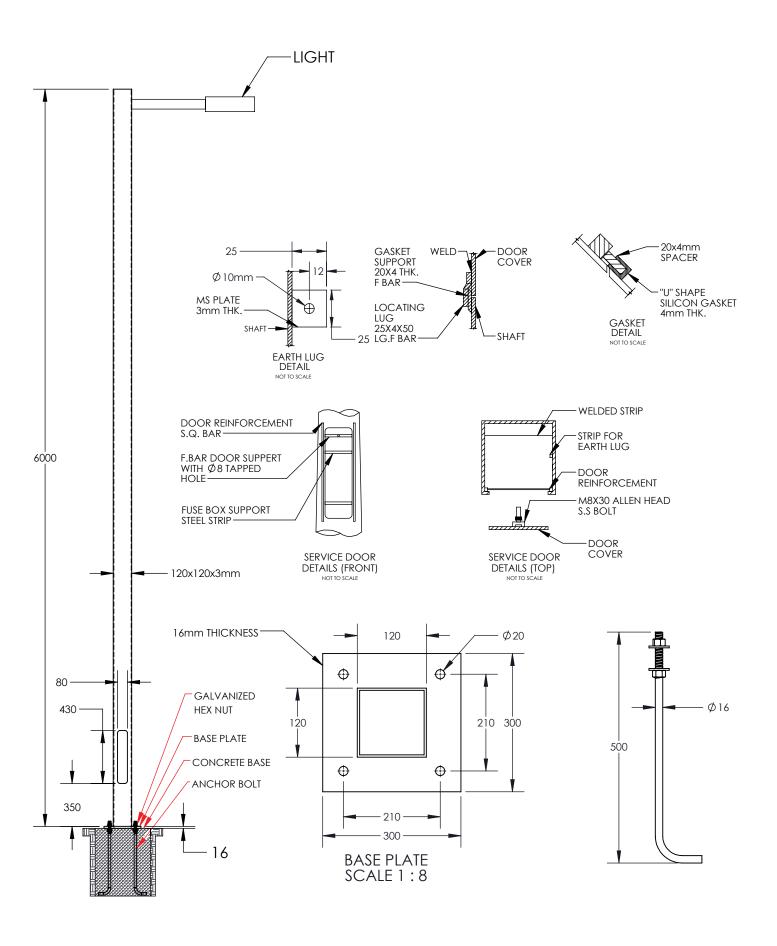
The square section lighting pole is ideally used for flood lighting and gives the perfect balance when used with a square shoe box fitting. The range extends from 2 meter to a maximum height of 12 meter.

TECHNICAL SPECIFICATION

- » Shape: Square
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Height Range: Upto 12m
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1

- » Height: 3m to 12m
- » Powder and Protective coating









CAMERA POLE

The Camera pole rang with mounting heights or up to 20 meters, are available with the least possible movement for highly accurate and clear vision required where maintenance access of camera's is restricted or limited a mid hinge camera pole is the ideal solution.



Allowing the pole and camera to be lowered to the ground level without the need of expensive equipment.

TECHNICAL SPECIFICATION

- » Shape: Tubular, Square and Octagonal
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Height Range: Upto 20m
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1

- » Height: 3m to 20m
- » Service ladder or mid hinged Available
- » Customized camera bracket as per camera design.





FLOOD LIGHT COLUMN

Our Flood light column is suitable for flood light installation in large area lighting requirement for both commercial and public application.

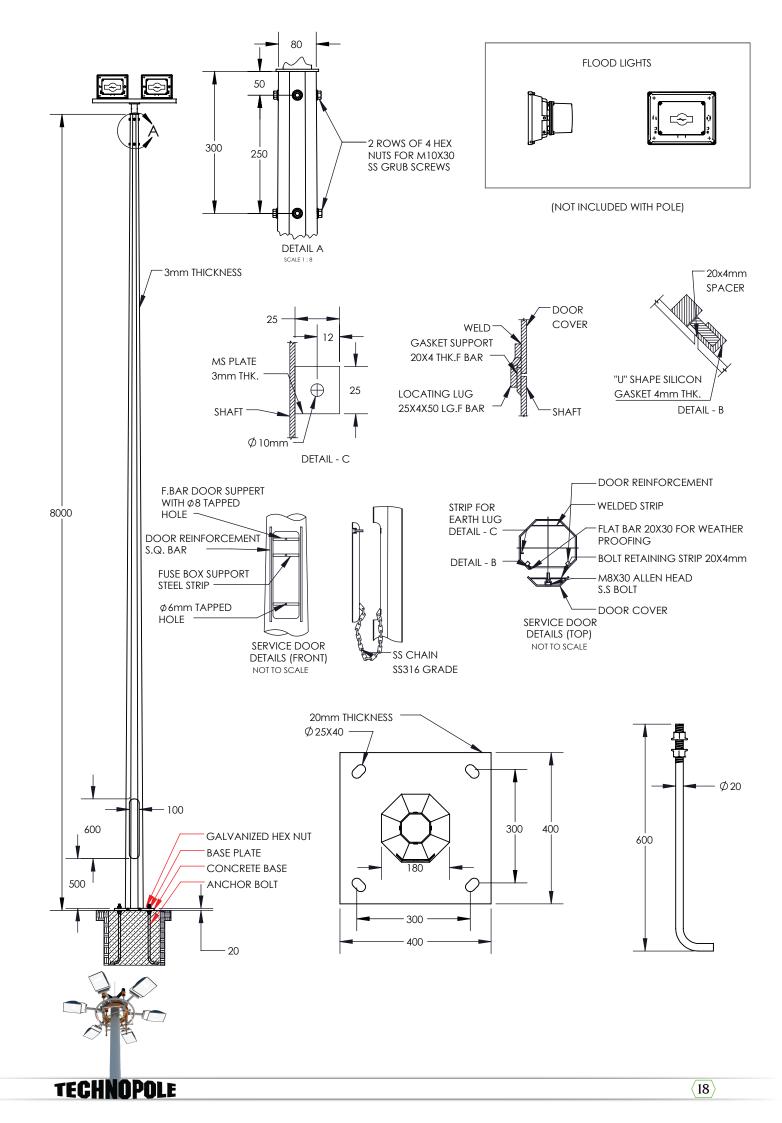
OPTION

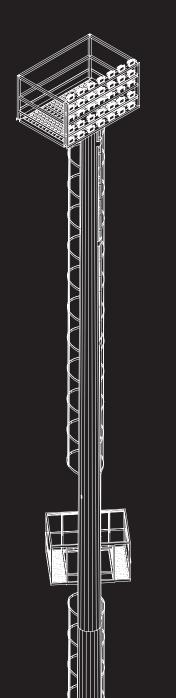
- » Height: 3m to 20m
- » Bracket suitable for any amount of flood light
- » Service Ladder Service Platform
- » Single Piece and Mid Hinged

TECHNICAL SPECIFICATION

- » Shape: Octagonal / Conical
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Height Range: Up to 20 Meter
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1









HIGH MAST

High mast lighting is the most efficient method of lighting large area with the minimum obstruction.

TECHNICAL SPECIFICATION

- » Shape: Polygonal shape continuously tapered pole with 20 bends
- » Pole Material: S355JR
- » Height Range: Upto 50 Meter
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1

- » Height: 16m to 50m
- » Custom made luminaire fixing bracket to suit customer requirement
- » Lowering and raising system
- » Service Ladder Service Platform





GENERAL

Technopole Industries offers a raising and lowering system that allows for ease of maintaining the lighting system at ground level. Ideal where lift trucks and/or climbing is prohibited. Light fixtures can be arranged symmetrically for lighting prison yards, roadways or parking lots. Not to be excluded is Sports Lighting.

The lowering device can also arrange light fixtures asymmetrically. This will allow for multiple sports fixtures to be aimed in one direction. Contact us for further details.

DESIGN

The selection of the correct pole design is predicated on the specific loading requirements of each application.

FINISH

All poles, mounting brackets and platforms are furnished with hot-dip galvanizing to BS EN 1461. Exterior finish coatings are available by request.

POLE SHAFT

The steel pole shall consist of the appropriate number of pole sections, either round or multi-sided, for heights up to 38 Meters. Each section shall be fabricated from high strength low alloy steel conforming to EN 10025, with minimum yield strength of 55,000psi. These shafts shall telescope over each other to match the overall desired pole height. The overlap telescoping joint shall have a length that is the larger of 0.6 Meters or 1-1/2 times the diameter of the inside of the female tube. The sections shall be pre-fitted and match marked at the factory.

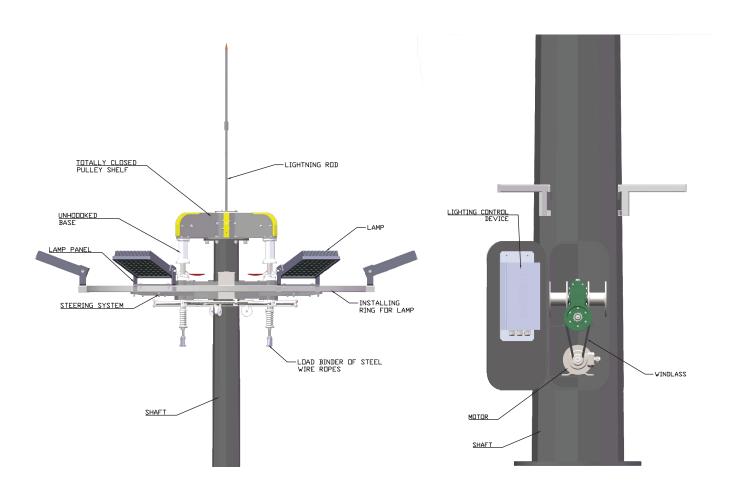
BASE PLATE

The base plate is fabricated from a structural quality hot rolled carbon steel plate that meets or exceeds ASTM A-36 with a minimum yield of strength of 36,000 psi. The base plate shall telescope the pole shaft and have a circumferential weld on the top and bottom.

ANCHOR BOLTS

Anchor bolts are fabricated from a commercial quality hot-rolled carbon steel bar that meets or exceeds minimum yield strength of 55,000 psi. Anchor bolts are sized according to each pole design and are furnished with 2 galvanized heavy hex nuts and 2 galvanized flat washers. Anchor bolts shall be galvanized.

LOWERING AND RISING MECHANISM FOR HIGH MAST



TECHNICAL DETAILS

» Max Light Power: 18KW

» Safety Working load: 200-1000Kg

» Brake Distance: <2m (Note: Need fix braking system)</p>

» Average raising rate: 3.6m/m

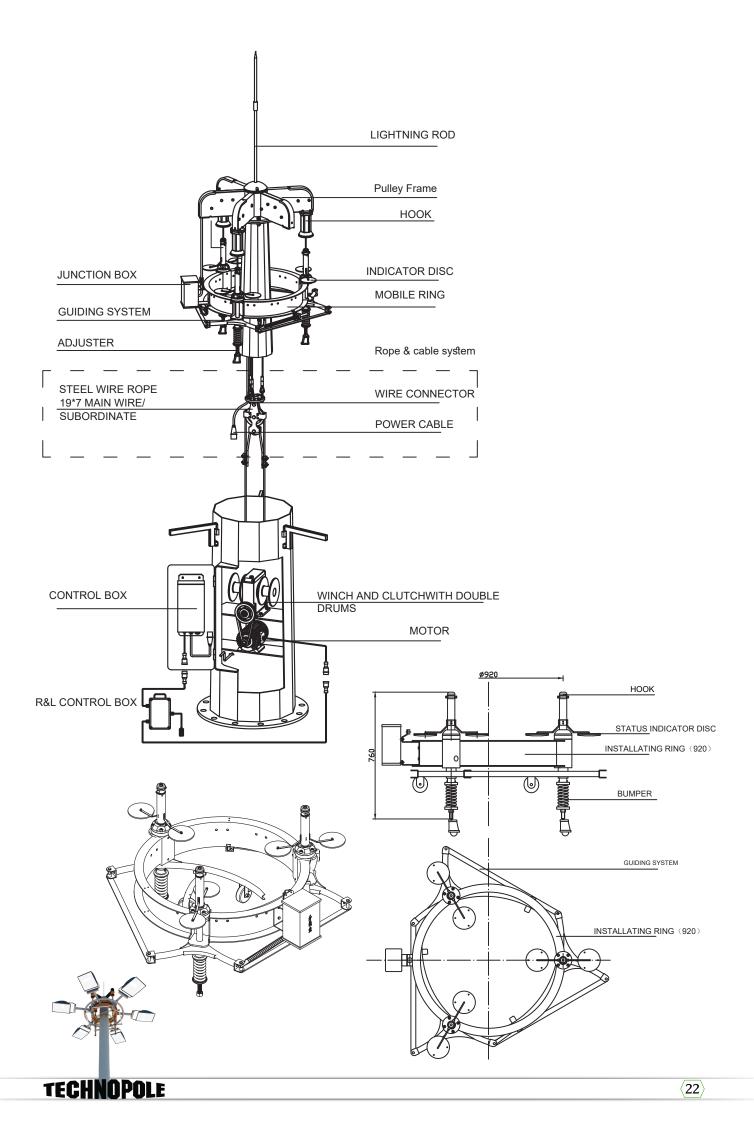
» Motor Power: 370W to 21KW

» Max. safety workig wind speed: 10m/s

» Wire rope safety factor:
8 time of safety working load

Data Sheet						
Data Sheet for lowering device.						
ТҮРЕ	Safe Working Load (Kg)	FOR POLE HEIGHT/METER	Door Size (mm)	Top Dia (mm)	Bottom Dia (mm)	Motor Power
TP-20A	200	<25	260x900	150-190	360-450	0.55KW
TP-30A	300	≤30	280x1000	150-190	380-450	0.74KW
TP-40A	400	≤30	320x1100	150-300	480-1070	1.1KW
TP-60A/B	600	≤30	350x1100	220-300	570-1070	1.1KW
TP-80A/B	800	≤50	420x1100	220-300	620-1070	1.5KW
TP-100A/B	1000	≤50	460x1100	220-300	650-1070	2.2KW







MONO POLE

The monopoles are used for telecommunication purpose and normally consist of a main pole shaft with a working platform at the top to cater for the installation and maintenance of micrrowave and dish antenna.

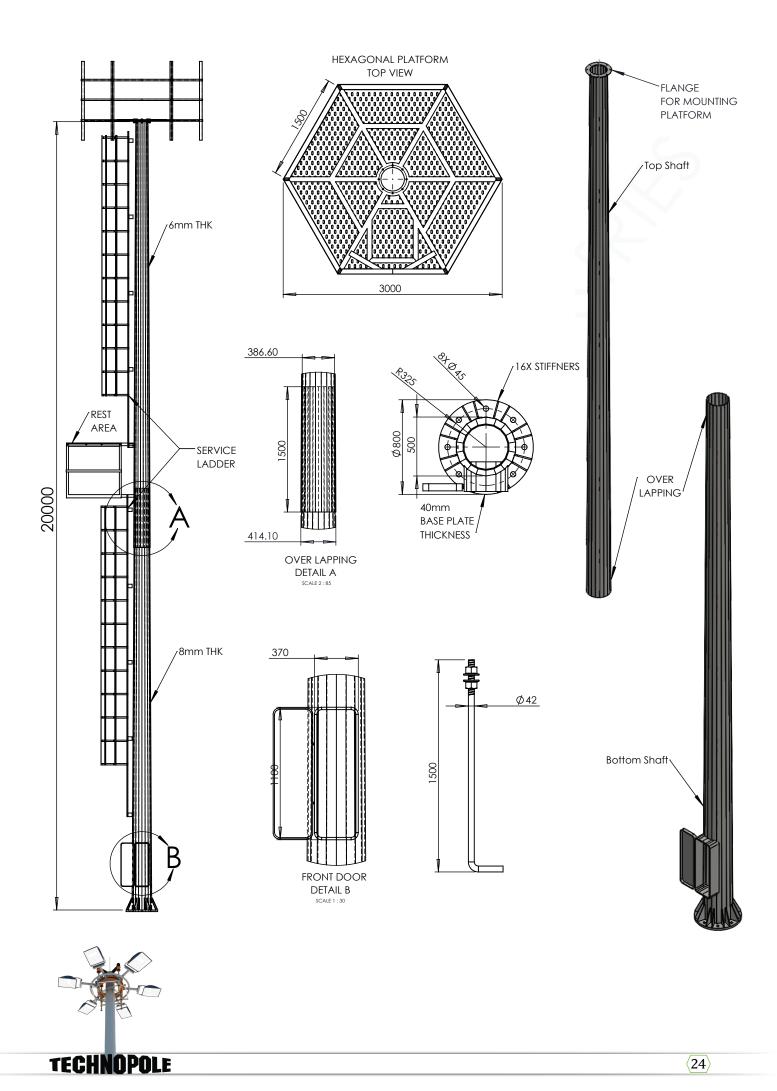
OPTION

- » Height: 18-35 Meter
- » Custom made bracket for microwave and antenna
- » Service Ladder

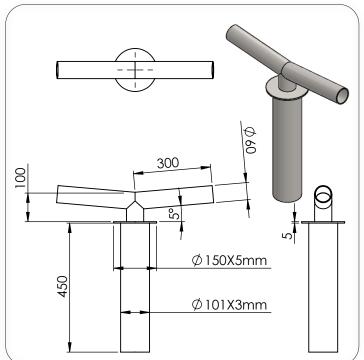
TECHNICAL SPECIFICATION

- » Mast Design: I.L.E. Technical Report 7. CP3
- » Standard: AASHTO & BS EN40
- » Pole Material: S275JR or S355JR, EN10025
- » Galvanizing: BS EN 1461
- » Welding: AWS D1.1





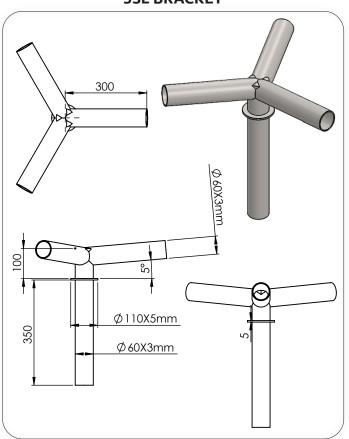
BRACKET DRAWING



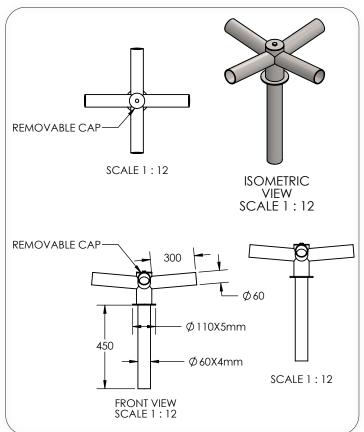
2SL BRACKET

3SL BRACKET

Ø 101X3mm

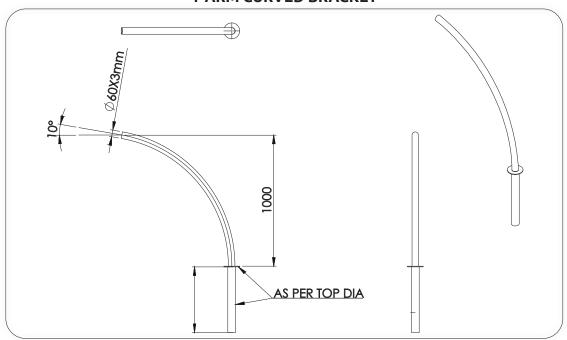


FOUR ARM BRACKET

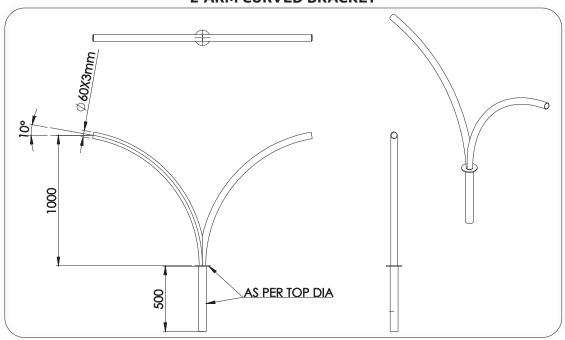


BRACKETS ARE CUSTOMIZED AS PER THE REQUIREMNT OF THE CLIENT.

1-ARM CURVED BRACKET



2-ARM CURVED BRACKET

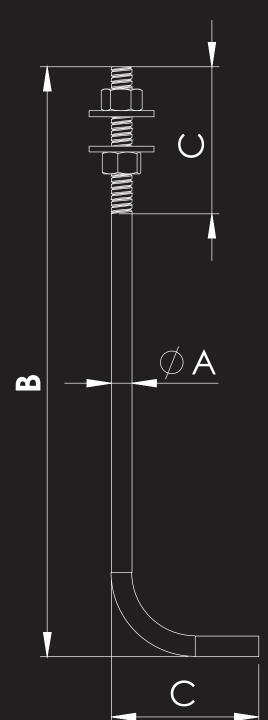


BRACKETS ARE ALSO AVAILABLE IN TRIPLE AND QUADRUPLE AND CUSTOMIZED AS PER THE REQUIREMENTS OF THE CLIENT

Bracket Type	a	H2	DØ	W	R	Weight
Steel	Degree	m	mm	m	m	(KG)
	5°,10°,15°	0.75	48; 60	0.5	-	7.5
Al				1.0		9.2
				1.5		10.7
				2.0		12.6
	5°,10°,15°	1.50	48; 60	1.0	0.6	11
A2				1.5		13.8
				2.0		16.1
	5°,10°,15°	2.00	48;60	1.5	1.3	15.5
A3				2.0		17.8
				2.5		20.1



TECHNOPOLE





No	Size	Dimensions			Time
No.		Length	Width/Radius	Thread Length	Type
1	M14	400	100	100	
2	M16	500	100	100	
3	M20	600	100	100	L-Type
4	M24	600	100	100	
5	M27	800	100	100	
6	M32	900	160	100	J-Type
7	M32	600	100	100	I-Type
8	M32	980	160	200	J-Type
9	M32	980	180	150	I-Type
10	M33	1200	150	200	L-Type
11	M36	1880	200	150	I-Type
12	M37	1270	220	180	I-Type
13	M38	1270	220	180	I-Type
14	M39	1200	250	200	J-Type
15	M39	1500	250	200	J-Type
16	M42	1500	250	600	
17	M48	3000	1150	600	
18	M48	3500	1150	600	L-Type
19	M52	3000	1150	650	
20	M52	3500	1150	650	

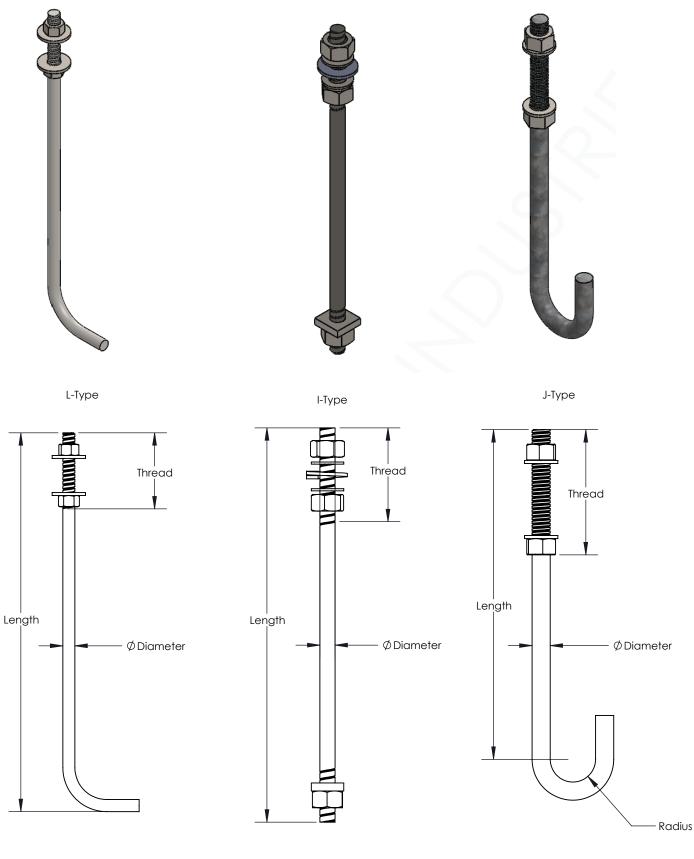
L-Type is for RTA Standard I-Type is for ADM Standard J-Type is for rare cases

Anchor for Poles			
L-Type (General)	I-Type (ADM Standard)		
M14 below 3M	M32X980 for 8M		
3M to 6M M16	M32X980 for 10M		
6M to 8M M20	M32X980 for 12M		
9M to 10M M24	M37X1270 for 14M		
11M, 12M, 14M M27	M37X1270 for 14M		
15M and above M39			

ANCHOR BOLTS

Anchor Bolts are generally manufactured from round bars from 14mm to 52mm in Diameter. It could be supplied in J, I, L types and are Cold Galvanized.







CUTOUT BOX

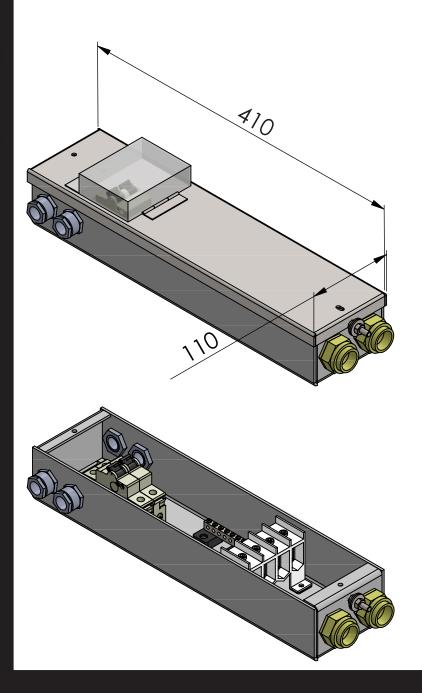
This connection box is intended to be installed in lighting columns at the connection between looped-through feeder cables and the luminaire components protected by fused special equipment as MCBs, timers, residual current devices or the like can be integrated on DIN rails.

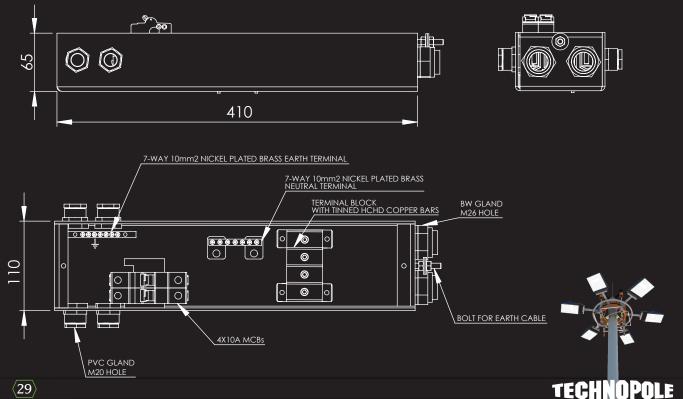
TECHNICAL SPECIFICATION

- » Acc. IEC60439-1
- » Impact resistant thermoplastic
- » All metal parts corrosion protected
- » Transparent fuse cover
- » Ingress protection: IP43
- » Class of protection:2
- » Range taking self adapting cable sealing
- » Dia.16-35mm feeder cable
- » 8-14 mm luminaire cable

(2 sealing for 2 luminaire cables, 3x1.5mm2----5x2.5mm2 or 2x4 wire dia1.5-3mm)

» Standard: IEC60439, VDE0660-505





GALVANIZING PROCESS

Galvanized steel has gone through a chemical process to keep it from corroding. The steel gets coated in layers of zinc because rust won't attack this protective metal. For countless outdoor, marine, or industrial applications, galvanized steel is an essential fabrication component.

The principal method of making steel resist corrosion is by alloying it with another metal, zinc. When steel is submerged in melted zinc, the chemical reaction permanently bonds the zinc to the steel through galvanizing. Therefore, the zinc isn't exactly a sealer, like paint, because it doesn't just coat the steel; it actually permanently becomes a part of it.

The zinc goes through a reaction with the iron molecules within the steel to form galvanizedsteel. The most external layer is all zinc, but successive layers are a mixture of zinc and iron, with an interior of pure steel. These multiple layers are responsible for the amazing property of the metal to withstand corrosion-inducing circumstances, such as saltwater or moisture.

Zinc also protects the steel by acting as a "sacrificial layer." If, for some reason, rust does take hold on the surface of galvanized steel, the zinc will get corroded first. This allows the zinc that is spread over the breach or scratch to prevent rust from reaching the steel.





Surface preparations for galvanizing typically consists of three steps: caustic cleaning, acid pickling and fluxing.

CAUSTIC CLEANING: a hot alkali solution often used to remove organic contamination such as dirt, paint markings, grease and oils from the metal surface, epoxies, vinyls, asphalt or welding slag must be removed before galvanizing by grit blasting, sand blasting or other mechanical means.

PICKLING - scale and rust normally are removed from the steel surface by pickling in dilute solution of hot sulphuric acid or ambient temperature hydrochloric acid.

Surface preparation also can be accomplished using abrasive cleaning as an alternative to or in conjunction with chemical cleaning. Abrasive cleaning is a process whereby sand, metallic shot or grit is propelled against the steel material by air blasts or rapid rotating wheel.

FLUXING - fluxing is the final surface preparation step in galvanizing process. Fluxing removes oxides and prevents further oxides from forming on the surface of the metal prior to galvanizing. The method for applying the flux depends upon whether the galvanizer uses the wet or dry galvanizing process.

GALVANIZING: in this step the material is completely immersed in a bath consisting of minimum 98% pure molten zinc, the bath chemistry is specified by the American Society of Testing Material (ASTM) in specification B 6, the bath temperature is maintained at about 559 C. Because the galvanizing process involves total material immersion, it is a complete process; all surfaces are coated. Galvanizing provides both outside and inside protection for hollow structures.

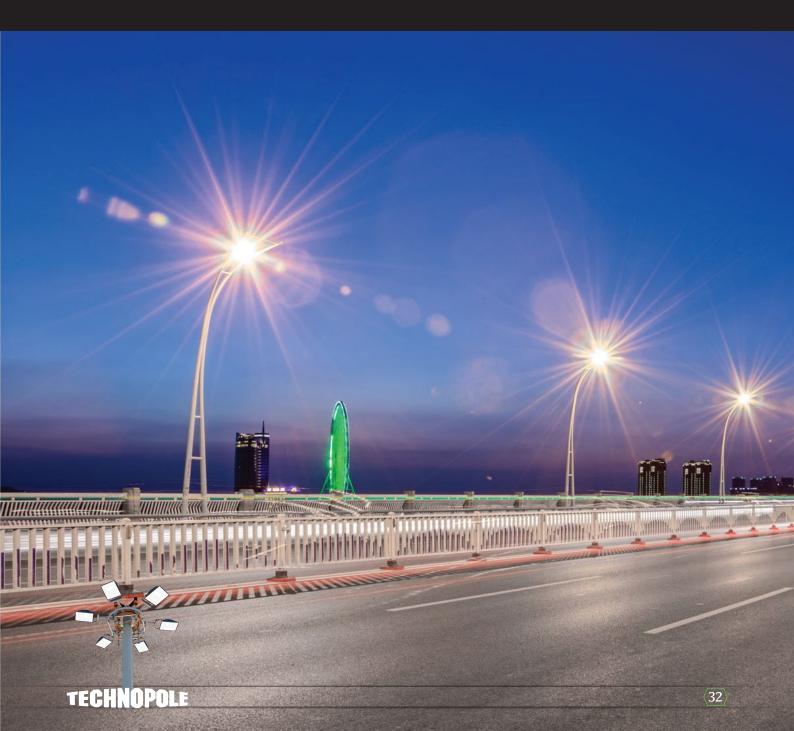


WARRANTY

Technopole Industries warrants our products to be free from defects in material and workmanship under normal use and operation for the period of one year from the date of shipment. Any materials or parts, which are defective and returned to Technopole Industries will be replaced or repaired without charge, F.O.B. factory.

However, this warranty shall be null and void unless we are notified of such defects within this one-year period from the date of shipment. Such notification shall be directed to Technopole Industries, attention of the Customer Service Manager. Provided further, no goods shall be returned to us without prior written consent or authorization. This warranty does not cover damage caused by improper installation, overloading, accident, or neglect.

This warranty does not cover alterations, modifications, or additions unless the change is acknowledged, in writing, by Technopole Industries In addition, the warranty excludes fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the pole.







- N 49 & M148
 Al Ghail,Ras Al Khaimah
 United Arab Emirates