



"We always know  
who we're working for"

# PRECISION ELECTRONICS LIMITED

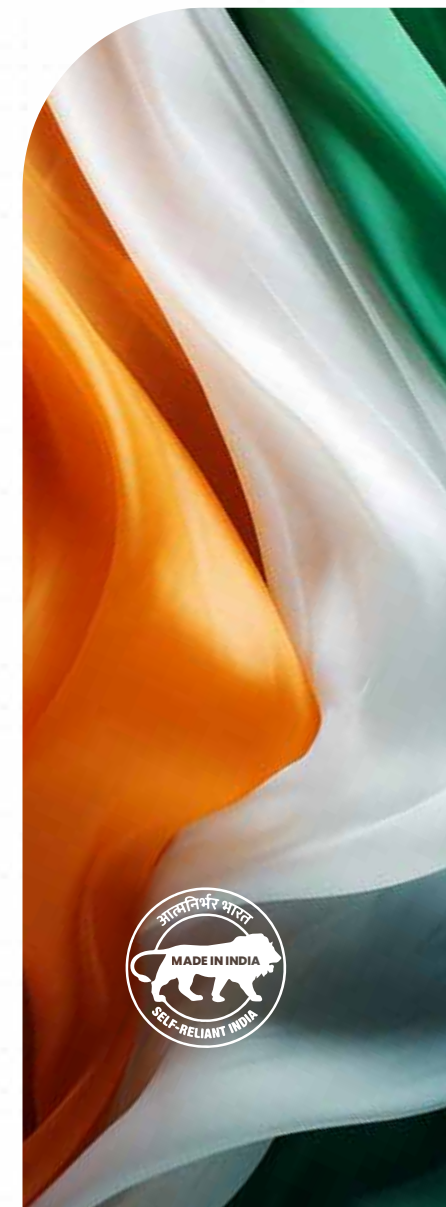
# Product Catalog



45  
YEARS OF  
LEGACY

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## WHO WE ARE

Precision Electronics Limited since its formation in 1979 has consistently delivered complex and highly reliable Products and Solutions. With a range spanning Tactical Infrastructure solutions including Telescopic Masts, Tripods & Pedestals; Power solutions for Telecom, Healthcare & Battery Electric Vehicles; and Box Build Manufacturing Services including Precision Machining, Sheet Metal, Electronic Assembly & System Assembly; PEL is honored to serve customers in Telecom, Hi-tech, Security, Government and Automotive.

**100K+**  
PRODUCTS  
DEPLOYED

**40**  
PRODUCTS  
DEVELOPED

**45+**  
YEARS OF  
LEGACY

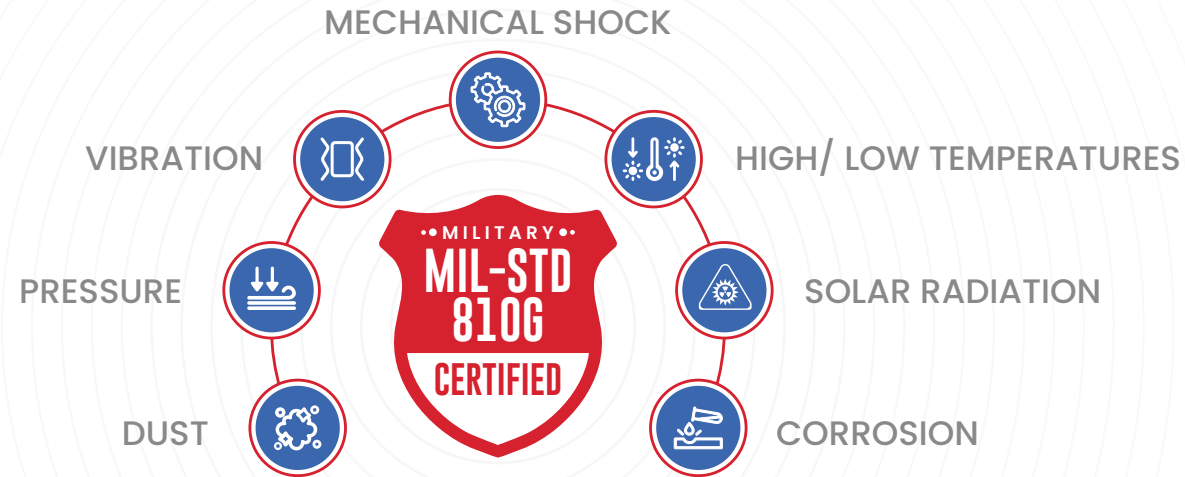
**100+**  
PROJECTS  
EXECUTED

## OUR CORE VALUES

At Precision Electronics Limited, we take great pride in offering high quality products and solutions with the highest degree of accuracy and quality standards to customers that demand it. We are committed to satisfy product RELIABILITY & AVAILABILITY and forge a partnership of TRUST with our customers.







## Quality Certifications and Industry Standards Compliance





# OUR CAPABILITIES



## PRODUCTION CAPABILITIES

The production process at Precision Electronics Limited is characterized by meticulous attention to detail, stringent quality control measures, and a focus on efficiency and reliability. This is possible due to in-house State-of-the-art facilities for:

- Mechanical fabrication (CNC Turning, Milling)
- Mechanical Assembly (Welding, Drilling, Fastening, Shaping)
- Electronic Production (SMT pick & place, thru-hole)
- Wiring Harness
- Turnkey Box Build/ System Assembly & Testing

## SECONDARY PROCESS CAPABILITIES

- Chromate conversion yellow / colorless as per MIL-DTL-5541F
- Electro-less Nickel (MIL-C-26074D)+ Electro-deposited Tin (MIL-T-10727C)
- Anodizing(MIL-A-8625): Hard and Regular
- Zinc Plating
- Black Oxide
- Passivation
- Powder coating
- PU Paint

## VALIDATION CAPABILITIES

We undertake MIL-STD testing and ESS testing in-house to ensure product reliability and quality.



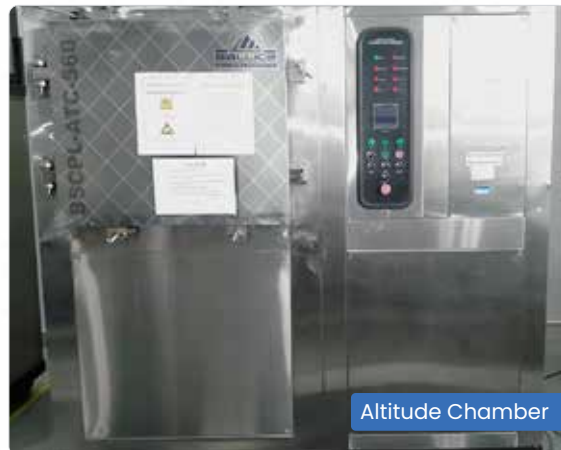
Dry Heat Chamber



Electro dynamic Vibration Machine



Salt Spray Chamber



Altitude Chamber



Hot and Cold Chamber



Thermal Shock Chamber



## OUR PRODUCTS

We are a leading OEM engaged in the Design, Development, and Manufacturing of various Telescopic Masts, Tripods, Pedestals, and a wide range of Power Electronics and Data Interconnectivity solutions for Security, Telecom and Oil & Gas customers.

Telescopic Masts



Tripods



Positioners



Multi Function ACTIVE Junction Box





## OUR CLIENTS & CUSTOMERS

### Defence and Security



### Civil Government

#### Telecom



#### Oil & GAS



### Export



### Indian Corporate



## OUR MASTS

PEL provides a wide range of Telescopic Masts to suit every use case related to Line-Of-Sight for payloads ranging from Radio COMs, Radars, Electro-optics, Anti-Drone solutions, Lighting, etc. PEL's Mast portfolio encompasses all technologies including Pneumatic, Winch, Push-Up, Electro-Mechanical & Section based; and support mounting options for ground, building roof-tops and vehicles/trailers. Mast tubes are made from high strength aluminum alloy, FRP or carbon composites. PEL Masts cater demands of man portability, vehicle portability, quick deployment flexibility, high stability, MIL-STDs and various others.

➤ **ANJU SERIES**  
Pushup Mast

➤ **SANJAY SERIES**  
Electromechanical Mast

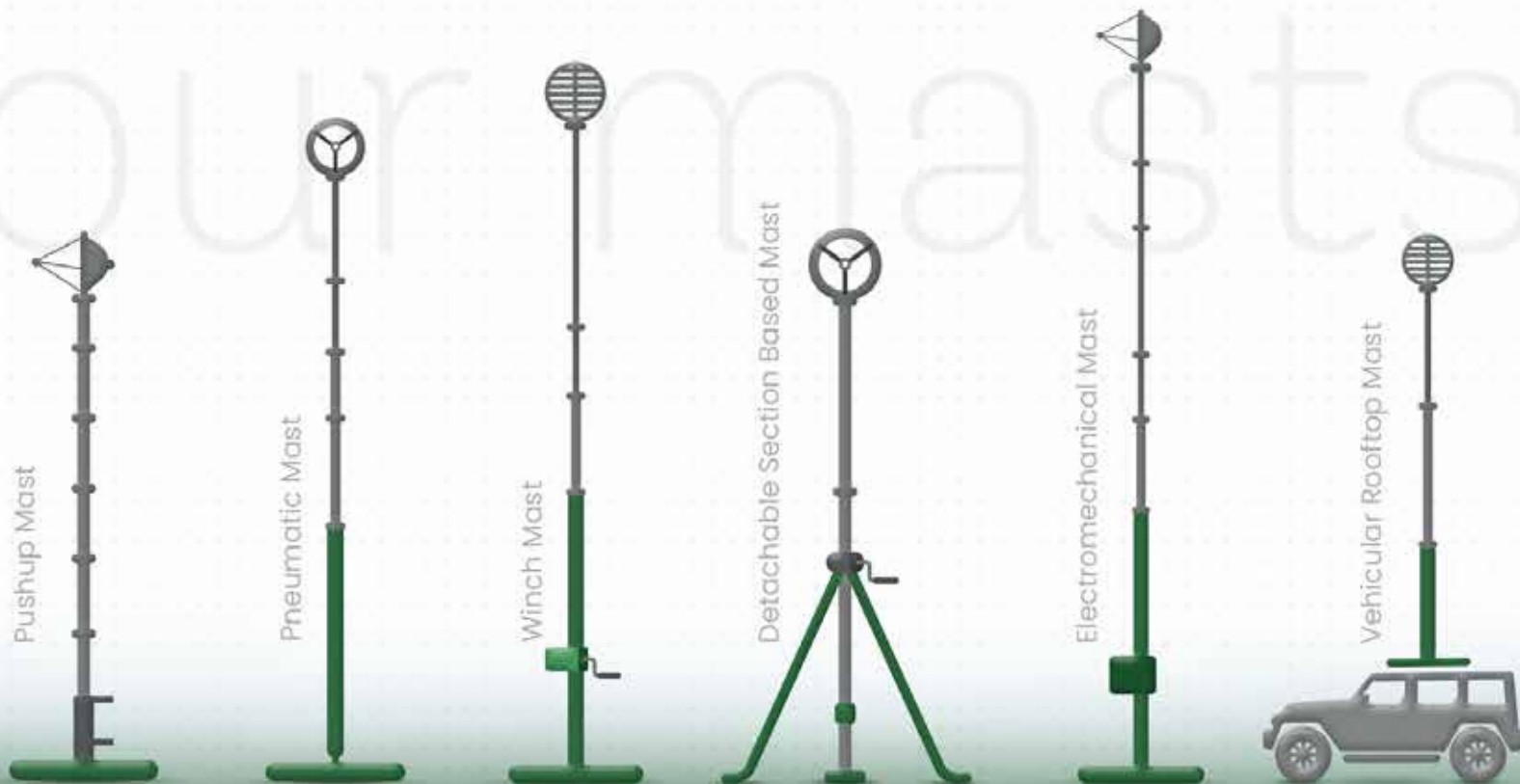
➤ **PIYUSH SERIES**  
Pneumatic Mast

➤ **PARTHA SERIES**  
Vehicular Rooftop Mast

➤ **YOGESH SERIES**  
Winch Mast

➤ **PIYUSH SERIES**  
Building Rooftop Tripod Mast

➤ **KAILASH SERIES**  
Detachable Section Based Mast



## PUSH-UP MASTS

### ANJU SERIES

PEL's Anju Series of Push up Mast is a portable mast that can be easily carried as manpack or loaded in the trunk of a small to mid-sized vehicle. It can be deployed using a light weight Tripod or as drive-on-frame system. Push up masts can be extended to a full height of 11 metres within a few minutes. It has quick lock/release collars to extend the mast manually by pushing up the sections and fixing them into position. Suitable for lightweight elevation requirements of smaller payloads such as cameras, lighting and radio antennae.

#### OUR USP'S



Designed for  
MIL STDs



Man Portable



Quick Deployment  
by 1 person



Maintenance  
Free

### Sailent Features

- Lightweight construction – tubes are made from high strength Aluminum Alloy
- Telescopic Mast sections manually "pushed up" with payload
- Quick locking mechanism to lock and release collars
- Heights up to 10 metres
- Top loads up to 10kg
- Can be stowed in trunk of small vehicle



Locking Pin



Tilting Adjustment



Locking Pin Pouch







**DRIVE ON FRAME**



**TRIPOD MOUNT**

### PUSH-UP MASTS (DRIVE ON FRAME/ TRIPOD MAST)

Model No.	Height (m)		Head Load (kg)	Wind Area (m²)	Wind Speed (Operational/ Survival) (kmph)	Sway	Approx Weight of Mast (Kg)	No. of Sections	Tube Dia	No. of Guy Ropes	Weight (Kg)	
	Retracted	Erected									Frame	Tripod
PU10P-4-1.2M-30	1.2	4	10	0.1	60/80	<1°	8	5	50.8 - 76.2	-	10	5
PU8P-6-1.4M-30	1.4	6	8	0.1	60/80	<2°	10	6	44.45 - 76.2	-	11	6
PU5P-6-1.4M-30	1.6	6	5	0.1	60/80	<2°	12	6	44.45 - 76.2	3 x 1	12	7
PU5P-8-1.8M-01	1.8	8	5	0.1	80/100	<2°	13	8	31.8 - 76.2	3 x 2	-	8
PU5P-11-1.9M-01	1.9	11	5	0.1	80/100	<2°	14	8	31.8 - 76.2	3 x 2	-	9




**Note:**

- a. Built-to-Specifications available
- b. Comes in two configurations - either Drive-on-Frame or Tripod
- c. Guy ropes optional and typically needed for >6m erected height








#### ANCILLARY

-  Pan-Tilt (5kg)
-  Rotator (5kg)








#### SPECIAL ACCESSORIES

-  Payload Adapter
-  Earthing Kit: Pipe & Cable
-  Lightning Arrestor

#### STANDARD ACCESSORIES

-  Base Plate
-  Nails
-  Pegs
-  Hammer
-  Guy Rope
-  Carrying Cases: Soft/Hard
-  User Manual

#### TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Velcro Cable Strap for Cable Tie
-  Levelor (Weighted Cable/ Spirit Level)
-  Guy Marker

## PNEUMATIC MASTS

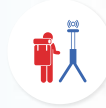
### PIYUSH SERIES

PEL's Piyush Series of Pneumatic Masts address the needs of Tactical Elevation for Radio Antenna, Electro-Optic, Anti-Drone and Illumination. These masts can be elevated by a Foot pump or Air compressor and support light, medium and heavy payloads. This series is capable of supporting up to 25 metres height and are easily mountable on vehicular shelters, trailers and ground.

#### OUR USP'S



Designed for MIL STDs



Possibility for light weight solution



Quick Deployment by 2 person



High stability and rigidity for Mission Critical Applications

### Sailent Features

- Lightweight construction – tubes in high strength Aluminum Alloy or Composite
- Telescopic mast sections extended by hand-pump, foot-pump OR compressor
- Full length key-ways ensure anti-rotation
- Heights up to 25 metres
- Top loads up to 250kg
- Several thousand in-service Masts with Security customers



Air Nozzle



Base plate with Tilting Cup



Locking Mechanism

### LIGHT DUTY PTM MASTS (GROUND / VEHICLE MOUNT)

Model No.	Height (m)		Head Load (kg)	Wind Area (m²)	Wind Speed (Operational/ Survival) (kmph)	Sway (°)	Weight of Mast (kg)	No. of Sections	Tube Dia	Ground Mount	Tripod Mount	
	Retracted	Erected								No. of Guy Ropes	No. of Guy Ropes	Tripod Weight (kg)
PP15P-5-1.7M-01	1.7	6	15	0.25	0.25	< 2°	22	6	50 - 100	3 x 2	3 x 1	14
PP15P-9-2.5M-01	2.5	9	15	0.25	0.25	< 2°	30	5	60 - 100	3 x 3	3 x 2	16
PP10P-12-2.8M-01	2.8	12	10	0.2	0.2	< 2°	37	6	50 - 100	3 x 3	3 x 2	18
PP15P-15-3.3M-01	3.3	15	15	0.25	0.25	< 2°	47	6	60 - 110	3 x 4	3 x 3	20

Model No.	Height (m)		Head Load (kg)	Wind Area (m²)	Wind Speed (Operational/ Survival) (kmph)	Sway (°)	Weight of Mast (kg)	No. of Sections	Tube Dia	No. of Guy Ropes
	Retracted	Erected								

### MEDIUM DUTY PTM MASTS (GROUND / VEHICLE MOUNT)

PP40P-12-2.8M-01	2.8	12	40	0.5	80/ 120	< 2°	49	6	80 - 130	3 x 3
PP30P-15-3.3M-01	3.3	15	30	0.4	80/ 120	< 2°	53	6	70 - 120	3 x 4
PP50P-18-3.6M-01	3.6	18	50	0.5	80/ 120	< 2°	82	7	90 - 155	3 x 4





### HEAVY DUTY PTM MASTS (GROUND / VEHICLE MOUNT)

PP250P-5-1.2M-01	1.6	5	250	1	80/ 120	< 1°	46	5	130 - 183	3 x 4
PP150P-10-2.2M-01	2.2	10	150	1	80/ 120	< 1°	90	7	130 - 214	3 x 4
PP15P-22-3.7M-01	4	25	20	0.2	80/ 120	< 2°	103	10	60 - 155	4 x 5









**Note:**

- a. Mast can be customized for wind load > 80 Km/Hr
- b. Accessories weight is applicable as per the height of the mast
- c. Mast sway < 1° can be provided against request











### ANCILLARY

-  Manual Rotator Tilter (MRT)
-  Pan-Tilt (25/ 50kg)
-  Rotator (50/ 100kg)
-  Multi Function Active Junction Box









### SPECIAL ACCESSORIES

-  Payload Adapter
-  Vehicle Mounting Brackets
-  Earthing Kit: Pipe & Cable
-  Lightning Arrestor
-  Pneumatic Controller Unit
-  Air Compressor (Optional)
-  Guy Rope Controller
-  Sand Kit

### STANDARD ACCESSORIES

-  Base Plate
-  Tilting Cup
-  Nails
-  Pegs
-  Hammer
-  Guy Rope
-  Foot Pump
-  Erection Stand
-  Carrying Cases: Soft/Hard
-  User Manual

### TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Velcro Cable Strap for Cable Tie
-  Levelor (Weighted Cable/ Spirit Level)
-  Box Spanner with T Handle
-  Teflon Tape
-  Steel Oil Can
-  Guy Marker



## WINCH MASTS

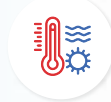
### YOGESH SERIES

PEL's Yogesh Series of Winch Masts cater to the requirements of Tactical Elevation for applications such as Radio Antenna, Electro-Optic, Anti-Drone and Illumination. These masts can be raised using either a hand crank or a winch power drive, and they are capable of supporting light, medium, and heavy payloads up to 21 metres. Additionally, they can be conveniently mounted on vehicular shelters, trailers and ground.

#### OUR USP'S



Designed for MIL STDs



Capable of extreme temperature operations



Quick Deployment by 2 person



High stability and rigidity for Mission Critical Applications

### Silent Features

- Lightweight construction – tubes in high strength Aluminum Alloy or Composite
- Telescopic mast sections extended simultaneously by high performance belts
- Full length key-ways ensure anti-rotation
- Heights up to 18 metres
- Top loads up to 100kg
- Hand cranked manual or electrically driven winch
- Several hundred in-service Masts with Security customers



Pully Drive



Winch



Locking Plate







WINCH MASTS (GROUND / VEHICLE MOUNT)											
HAND WINCH MASTS											
Model No.	Height (m)		Head Load (Kg)	Wind Area (m <sup>2</sup> )	Wind Speed (Operational/ Survival) (kmph)	Sway (°)	Weight of Mast (Kg)	No. of Sections	Tube Dia	No. of Guy Ropes	Winch Weight (Kg)
	Retracted	Erected									
PW100P-9-3M-01	3	9	100	1	80/ 120	< 1°	50	4	100 - 214	3 x 3	8
PW70P-10-2.5M-01	2.5	10	70	0.75	80/ 120	< 1°	65	6	100 - 155	3 x 4	8
PW50P-15-2.8M-01	3	15	50	0.5	80/ 120	< 1°	84	7	90 - 155	3 x 5	8
PW50P-18-3M-01	3	18	50	0.7	80/ 120	< 1°	132	9	100 - 198	3 x 3	8
PW40P-2-1.5M-20	1.5	2	40	0.7	80/ 120	< 1°	15	2	70 - 80	-	8
PW65P-5-2M-20	2	5	65	0.8	80/ 120	< 1°	66	4	120 - 155	-	8

ELECTRICAL WINCH MASTS											
Model No.	Height (m)		Head Load (Kg)	Wind Area (m <sup>2</sup> )	Wind Speed (Operational/ Survival) (kmph)	Sway (°)	Weight of Mast (Kg)	No. of Sections	Tube Dia	No. of Guy Ropes	EM Unit Weight(Kg)
	Retracted	Erected									
PE70P-10-2.5M-01	2.5	10	70	0.75	80/ 120	< 1°	65	6	100 - 155	3 x 3	25
PE50P-15-2.8M-01	3	15	50	0.5	80/ 120	< 1°	84	7	90 - 155	3 x 4	25
PE50P-18-3M-01	3	18	50	0.7	80/ 120	< 1°	132	9	100 - 198	3 x 5	25
PE50P-21-3M-01	3	21	50	0.6	80/ 120	< 1°	165	10	100 - 214	3 x 5	25







**Note:**

- a. External winch Power Drive is available as an option
- b. Mast can be customized for wind load > 80 Km/Hr










**ANCILLARY**

-  Manual Rotator Tilter (MRT)
-  Pan-Tilt (25/ 50kg)
-  Rotator (25/ 50/ 100kg)
-  Multi Function Active Junction Box









**SPECIAL ACCESSORIES**

-  Payload Adapter
-  Vehicle Mounting Brackets
-  Earthing Kit: Pipe & Cable
-  Lightning Arrestor
-  Sand Kit
-  Hand Held Pendant

**STANDARD ACCESSORIES**

-  Base Plate
-  Tilting Cup
-  Nails
-  Pegs
-  Hammer
-  Guy Rope
-  Erection Stand
-  Carrying Cases: Soft/Hard
-  User Manual

**TOOL KIT**

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Steel Oil Can
-  Velcro Cable Strap for Cable Tie
-  Box Spanner with T Handle
-  Guy Marker

## DETACHABLE SECTION MAST

### KAILASH SERIES

PEL's Kailash Series of Detachable Section Mast is an ideal solution to cater Tactical Elevation requirements in conditions where Man-portability is also desired. The solution comprises a Tripod and Pipe sections of the same length and diameter which are "pushed up" from the Tripod via a hand winch mechanism. The mast is stabilized using guy ropes and a guy cable ensures that no more than 2 persons are needed for Mast deployment. This series is capable of supporting up to 18 metres height.

#### OUR USP'S



Designed for MIL STDs



Man Portable



Possibility for light weight solution



High stability and rigidity for Mission Critical Applications

#### Sailent Features

- Lightweight construction – tubes in high strength Aluminum Alloy or Composite
- Tripod base with sectional tubes of same height and diameter are pushed-up via hand-winch mechanism
- Built-in anti-rotation
- Heights up to 18 metres
- Top loads up to 50kg
- Hand cranked manual winch
- Guy Rope Controller ensures safe deployment and reduces man-power required
- Integrated spirit level on Tripod to enable flatness on uneven ground



Tripod



Mast Sections



Winch






### DETACHABLE SECTION BASED HAND WINCH OPERATED TRIPOD MASTS

Model No.	Height (m)		Head Load (kg)	Wind Area (m²)	Wind Speed (Operational/ Survival) (kmph)	Sway (°)	Approx. Weight of Sections & Tripod (kg)	No. of Sections	Tube Dia	No. of Guy Ropes
	Section	Erected								
PD20P-10-1.4M-21	1.4	10	20	0.25	80/120	<2°	37	7 + 1	60	3 x 3
PD40P-18-2.0M-21	2	18	40	0.5	80/120	<2°	120	13 + 1	120	3 x 4






**Note:**

a. Specifications are subject to change without notice








### ANCILLARY

-  Manual Rotator Tilter (MRT)
-  Pan-Tilt (25kg)
-  Multi Function Active Junction Box

### SPECIAL ACCESSORIES

-  Payload Adapter
-  Earthing Kit: Pipe & Cable
-  Lightning Arrestor
-  Sand Kit
-  Guy Rope Controller

### STANDARD ACCESSORIES

-  Base Plate
-  Nails
-  Pegs
-  Hammer
-  Guy Rope
-  Carrying Cases: Soft/Hard
-  User Manual

### TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Velcro Cable Strap for Cable Tie
-  Levelor (Weighted Cable/ Spirit Level)
-  Box Spanner with T Handle)
-  Guy Marker

# ELECTROMECHANICAL MAST

## SANJAY SERIES

PEL's Sanjay Series of Heavy Duty Electro-mechanical Telescopic masts are self supported, vehicle mounted masts. The masts are elevated/ retracted by a Lead Screw (Spindle) which in turn is powered by an electric motor Ideally suited to lift multiple payloads requiring tactical elevation from a vehicular platform.

### OUR USP'S



Designed for MIL STDs



Remote Control  
Elevation &  
Retraction



Suitable for  
On-the-Quick-Halt  
vehicular operations



High stability and  
rigidity for Mission  
Critical Applications

### Sailent Features

- Heavy duty construction – tubes in high strength Aluminum Alloy
- Telescopic mast sections extended by screw drive and high performance belts Suitable for deployment on vehicles, shelters or trailers
- Full length key-ways ensure anti-rotation
- Heights up to 12 metres
- Top loads up to 350kg
- Push-button motorized deployment in tactical time frames
- Excellent solution for On the Quick Halt applications
- Suitable for deployment on vehicles, shelters or trailers



Control Box



Mast Sections



Motor Assembly

### ELECTROMECHANICAL MAST (HYBRID SPINDLE)




Model No.	Height (m)		Head Load (kg)	Wind Area (m <sup>2</sup> )	Wind Speed (Operational/ Survival) (kmph)	Sway	Weight of Mast (kg)	No. of Sections	Tube Dia
	Retracted	Erected							
PH350P-6.5-1.6M-10	1.6	6.5	350	1	80/ 100	< 1°	160	7	130 – 214
PHI50P-8-2.1M-10	2.1	8	150	1	80/ 100	< 1°	160	7	120 – 198
PHI50P-10-2.3M-10	2.3	10	150	1	80/ 100	< 2°	180	7	120 – 198
PHI50P-10-2.3M-10	2.3	12	150	1	80/ 100	< 2°	200	8	120-214

**Note:**




- a.Mast can be customized for higher wind load > 80 Km/Hr
- b.Mast with Sway < 1° can be provided upon request
- c.Option for DC Motor is available

S.No.	PARAMETER	SPECIFICATIONS
1	Operating Voltage	230V/50Hz
2	Drive	Single or Three Phase AC Motor
3	Operation	Control Panel and Pendant
4	Operational(Temp)	-20°C to +60°C
5	Environmental	MIL STD 810 F/G



#### ANCILLARY

-  Pan-Tilt (50kg)
-  Rotator (50/ 100kg)
-  Multi Function Active Junction Box

#### SPECIAL ACCESSORIES

-  Payload Adapter
-  Vehicle Mounting Brackets
-  Earthing Kit: Pipe & Cable

#### STANDARD ACCESSORIES

-  Hand Held Pendant
-  User Manual

#### TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Steel Oil Can
-  Velcro Cable Strap for Cable Tie
-  Levelor (Weighted Cable/ Spirit Level)
-  Box Spanner with T Handle



## VEHICULAR ROOF TOP MAST

### PARTHA SERIES

PEL's Vehicular Roof Top Mast is specially designed for mid-sized and larger vehicles to support payloads such as Electro-Optics, Radio antennae, Illumination systems, and others. It easily mounts as a roof top carrier and does not require the end-user to make vehicle modifications for its use.

#### OUR USP'S



Designed for MIL STDs



Suitable for  
On-the-Quick-Halt  
vehicular operations



Remote Operation  
from Cabin



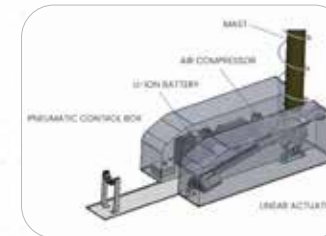
Quick deployment

### Silent Features

- Compact, roof-mount system on vehicle carrier
- Integrated air compressor and Li-Ion battery for mast lift/ retraction and power supply
- Built-in anti-rotation
- Wide range of payload capacity and height options from 3 metres to 5 metres above Roof Top
- Top loads up to 50kg
- Handheld Pendant for remote operation of mast and payload Pan / Tilt



Pneumatic Mast Section



Roof Top Mast System



Vehicle Roof  
Mount Design








### VEHICLE ROOF TOP MASTS

Model No.	Height (m)		Head Load (Kg)	Wind Area (m²)	Wind Speed (Operational/ Survival) (kmph)	Sway	Weight of Mast (kg)	No. of Sections	Tube Dia (mm)	Power Backup*	Power*	Dimensions (mm)	Mounting Frame Base (mm)
	Retracted	Erected											
PRT30P-3-1.2M	1.2	3	30	0.2	80/ 120	< 2°	55	4	70-100	5- 6 Hrs	12 /24 V 120W	1200 (L) x 700 (W) x 400 (H)	700 (W) x 1200 (L)
PRT50P-3-1.2M	1.2	3	50	0.3	80/ 120	< 2°	65	4	90-120	4-5 Hrs	12 /24 V 150W	1400 (L) x 800 (W) x 400 (H)	800 (W) x 1400 (L)




**Note:**

- a. Mast can be customized for higher Wind load > 80 Km/Hr
- b. Accessories weight is applicable as per the height of the mast.








### STANDARD ACCESSORIES

-  Hand Held Pendant
-  Pegs
-  Hammer
-  Guy Rope
-  User Manual

### SPECIAL ACCESSORIES

-  Payload Adapter
-  Earthing Kit: Pipe & Cable
-  Lightning Arrestor

### TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Steel Oil Can
-  Velcro Cable Strap for Cable Tie
-  Box Spanner with T Handle

## BUILDING ROOFTOP TRIPOD MAST

### PIYUSH SERIES

PEL's Building Rooftop Mast is a unique solution to deploy complex electronics such as base station RF front end and antenna of DMR/ TETRA/ LoRA/ LTE/ 5G cellular, Anti-Drone and other such systems required to provide communications in dense urban settings or secure critical infrastructure. These masts can be elevated by Air compressor and support medium and heavy payloads. Such masts are capable of supporting up to 10m height and up to 250kg payload. Their key advantage is that they can be lowered for any maintenance or repair of the payload and are much lighter and safer than equivalent fixed rooftop Towers and Masts.

#### OUR USP'S



Designed for MIL STDs



Possibility for light weight solution



Technician friendly and safe



High stability and rigidity for Mission Critical Applications

### Sailent Features

- Lightweight construction – tubes in high strength Aluminum Alloy or Composite
- Telescopic mast sections extended by compressor
- Full length key-ways ensure anti-rotation
- Heights up to 10 metres
- Top loads up to 250kg
- Specialized Tripod design for installation on building Rooftops
- Provides very safe approach of lowering payload for Maintenance purposes
- Can be fixed on Concreate plinth
- Provision of putting Dead Weight (Sand Bag) on its base for temporary Deployment.



Hole for Concrete Anchor Bolts



Foot



Base plate







### BUILDING ROOFTOP TRIPOD MAST

Model No.	Height (m)		Head Load (Kg)	Wind Area (m²)	Wind Speed (Operational/ Survival) (kmph)	Sway	Weight of Mast (Kg)	No. of Sections	Tube Dia (mm)	No. of Guy Ropes
	Retracted	Erected								
PP250P-5-1.2M-01	1.6	5	250	1	80/ 120	< 1°	46	5	130 - 183	3 x 4
PP150P-10-2.2M-01	2.2	10	150	1	80/ 120	< 1°	90	7	130 - 214	3 x 4







**Note:**

- a. Mast can be customized for wind load > 80 Km/Hr
- b. Accessories weight is applicable as per the height of the mast
- c. Mast sway < 1° can be provided against request








### ANCILLARY

-  Rotator (100kg)
-  Multi Function Active Junction Box











### SPECIAL ACCESSORIES

-  Payload Adapter
-  Earthing Kit: Pipe & Cable
-  Lightning Arrestor
-  Sand Kit
-  Guy Rope Controller
-  Air Compressor (Optional)

### STANDARD ACCESSORIES

-  Base Plate
-  Nails
-  Pegs
-  Hammer
-  Guy Rope
-  Carrying Cases: Soft/Hard
-  User Manual

### TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Velcro Cable Strap for Cable Tie
-  Levelor (Weighted Cable/ Spirit Level)
-  Box Spanner with T Handle
-  Teflon Tape
-  Steel Oil Can
-  Guy Marker

## OUR TRIPODS

PEL has a wide range of Tripods together with passive and active accessories that support Industrial and Defence customers. The Tripods are constructed with options of high strength Aluminum Alloy or FRP/ Carbon composites. When your application demands critical stability, performance in extreme conditions and a product to suit mostly any use case, look no further than the Pankh, Haldar, Sudesh and Balwan series of PEL Tripods.

### ➤ PANKH SERIES

Light Duty Tripod

### ➤ SUDESH SERIES

Tripod with Elevator

### ➤ HALDAR SERIES

Medium Duty Tripod

### ➤ BALWAN SERIES

Heavy Duty Tripod

Medium Duty Tripod



Light Duty Tripod



Tripod with Elevator

Heavy Duty Tripod



## LIGHT DUTY TRIPOD

### PANKH SERIES

PEL's Pankh Series of Light Duty Tripods provide ultimate portability—weighing in at under 5kg, it's effortlessly man-portable and conveniently packed in a soft or hard carry case.

#### OUR USP'S



Designed and  
Qualified for MIL  
STD



Mounting  
Flexibility for any  
Ground Surface



Excellent  
Portability



Quick  
Deployable

#### Silent Features

- Ultra-light, robust and compact design
- Simple installation and operation
- Hard Anodized coating
- High Torsional rigidity
- Maximum height up to 3 metres
- Maximum payload capacity up to 5 kg
- Material: High strength Aluminum alloy
- Small stowed size and packed in soft carrying case



Tripod Adjustment



Hole for Nail Grouting



Stowed






LIGHT DUTY TRIPODS							
Model No.	Height (m)		Head Load (kg)	Weight of Tripod (kg)	Max Spread dia (mm)	Accessories weight (kg)	Folding Dimensions (mm)
	Retracted	Erected					
PTU10P-1.5-1.1M	1100	1500	10	3.5	1010	2	925 (L) x 190 (W) x 75 (H)
PTU3P-3.0-1.2M	1200	3000	3	5.5	1250	2	925 (L) x 190 (W) x 95 (H)

**Note:** Customized for greater heights and peculiar payloads against request

STANDARD ACCESSORIES

-  Nails
-  Hammer
-  Carrying Cases: Soft/Hard
-  User Manual

TOOL KIT

-  Nail Puller

## MEDIUM DUTY TRIPOD

### HALDAR SERIES

PEL's Haldar Series of Medium Duty Tripods has been developed for customers with medium duty payloads up to 70 kg with an economical design, well suited for direct mounting of payloads on its top plate. These Tripods are easy to use, rugged design, man- portable, flexible to deploy and highly stable for payloads. PEL offers several options of foot plates to suit various ground surfaces.

#### OUR USP'S



Designed for  
MIL STD



Mounting  
Flexibility for any  
Ground Surface



Excellent  
Portability



Highly stable for  
Payloads



Quick  
Deployable

#### Silent Features

- Light, rugged and ideally suited for professional payloads up to 100kg
- Easily Deployable in tough field conditions
- Hard Anodized coating
- High Torsional rigidity ideal for rotating payloads
- Max Height 1.5 Metres
- Maximum Payload up to 70 Kg
- Material: High strength Aluminum alloy
- Powder Coated and Hard anodized parts for extreme environments
- Foot plates for hard, semi-hard and soft ground surfaces



Levler



Stabilizer






Foot





MEDIUM DUTY TRIPODS							
Model No.	Height (m)		Head Load (kg)	Weight of Tripod (kg)	Max Spread dia (mm)	Accessories weight (kg)	Folding Dimensions (mm)
	Retracted	Erected					
PT70P-1.5-1.1M	1100	1500	70	14	1850	5	360 x 1350 (L)
PT55P-1.5-1.1M	1100	1500	55	12.5	1850	5	360 x 1350 (L)

**Note:** Customized for greater heights and peculiar payloads against request


ANCILLARY

-  Pan-Tilt (25kg)
-  Rotator (50kg)
-  Multi Function Active Junction Box

SPECIAL ACCESSORIES

-  Payload Adapter
-  Earthing Kit: Pipe & Cable

STANDARD ACCESSORIES

-  Nails
-  Hammer
-  Carrying Cases: Soft/Hard
-  User Manual

TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Velcro Cable Strap for Cable Tie
-  Nail Puller



## ELEVATOR TRIPOD

### SUDESH SERIES

PEL's Sudesh Series of Tripods have been developed for customers that seek compact stowed dimensions and better elevation (height) for medium duty payloads up to 100kg. These Tripods are easy to use, rugged design, man- portable, flexible to deploy and highly stable for payloads such as Radio COMs, Radars, Electro-optics, Anti-Drone, etc. The system comes with a manual Elevation mechanism for the payload height.

#### OUR USP'S



Designed for MIL STD



Mounting Flexibility for any Ground Surface



Excellent Portability



Highly stable for Payloads



Quick Deployable

#### Sailent Features

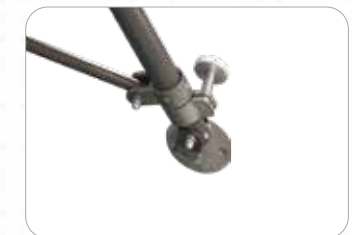
- Robust, portable and highly stable Tripod
- Easily Deployable in tough field conditions
- Hard Anodized coating
- High Torsional rigidity
- Maximum height up to 1.8 metres
- Maximum Payload up to 100 kg
- Material: High strength aluminum alloy
- Powder coated and Hard anodized parts for extreme conditions
- Footplates for hard, semi-hard and soft surfaces



Winch



Stabilizer






Foot





MEDIUM DUTY ELEVATOR TRIPODS							
Model No.	Height (m)		Head Load (kg)	Weight of Tripod (kg)	Max Spread dia (mm)	Accessories weight (kg)	Folding Dimensions (mm)
	Retracted	Erected					
PTE70P-1.8-0.8M	850	1800	70	18	2100	5	360 x 1080 (L)
PTE100P-1.8-0.8M	870	1800	100	19	2100	5	360 x 1100 (L)

**Note:** Customized for greater heights and peculiar payloads against request



ANCILLARY

-  Pan-Tilt (25/ 50kg)
-  Rotator (50/ 100kg)
-  Multi Function Active Junction Box

SPECIAL ACCESSORIES

-  Payload Adapter
-  Earthing Kit: Pipe & Cable

STANDARD ACCESSORIES

-  Nails
-  Hammer
-  Carrying Cases: Soft/Hard
-  User Manual

TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Velcro Cable Strap for Cable Tie
-  Nail Puller

## HEAVY DUTY TRIPOD

### BALWAN SERIES

PEL Balwan Series of Heavy Duty Tripods provide very high stability for payloads such as Radars, Electro-Optic Sensors and Anti-Drone systems. High strength Aluminum alloy based design ensures reliability and economy of weight. Packed in a convenient carrying case, it's quick deployable for on-the-go missions.

#### OUR USP'S



Designed for  
MIL STD



Mounting  
Flexibility for any  
Ground Surface



Excellent  
Portability



Highly stable for  
Payloads



Quick  
Deployable

#### Sailent Features

- Professional tripod for Heavy duty payloads
- Easily Deployable in tough field conditions
- Hard Anodized coating
- Strong Tubular Construction with high torsional rigidity
- Max Height 1.5 Metres
- Maximum Payload up to 400 Kg
- Material: High strength aluminum alloy
- Powder coated and Hard anodized parts for extreme conditions
- Footplates for hard, semi-hard and soft ground



Leveler



Stablizer



Foot










HEAVY DUTY TRIPODS							
Model No.	Height (m)		Head Load (kg)	Weight of Tripod (kg)	Max Spread dia (mm)	Accessories weight (kg)	Folding Dimensions (mm)
	Retracted	Erected					
PT100P-1.5-1.1M	1100	1500	100	16	2000	5	360 x 1350 (L)
PT100P-1.5-1.1M	1100	1500	200	19	2100	5	360 x 1350 (L)
PT400P-1.5-1.1M	1100	1500	400	26	2100	6	480 x 1400 (L)

**Note:** Customized for greater heights and peculiar payloads against request





ANCILLARY

-  Pan-Tilt (25/ 50kg)
-  Rotator (50/ 100kg)
-  Multi Function Active Junction Box

SPECIAL ACCESSORIES

-  Payload Adapter
-  Earthing Kit: Pipe & Cable

STANDARD ACCESSORIES

-  Nails
-  Hammer
-  Carrying Cases: Soft/Hard
-  User Manual

TOOL KIT

-  DE Spanner
-  Adjustable Spanner
-  Screw Driver
-  Allen Keys
-  Velcro Cable Strap for Cable Tie
-  Nail Puller

# POSITIONERS

PEL delivers Precise Positioning with its family of Single and Dual-Axis Positioners to accurately align, point or track Radio Antenna, Electro-Optic systems, Anti-Drone systems or Search Lighting systems. PEL Positioners can be guided manually; semi-auto or fully automatically by specialized control algorithms that depend on GNSS, RF Signal Strength and/or an external C2 system.

## ➤ EKLAVYA SERIES

Single Axis positioner

## ➤ ARJUN SERIES

Dual Axis positioner

## ➤ NAKUL SERIES

Manual Rotator/Tilter (MRT)





# SINGLE AXIS POSITIONER

## EKLAVYA SERIES

PEL's Eklavya Series of Single-axis positioners are specifically engineered to achieve precise azimuth positioning. They provide the option for continuous rotation (360 degrees) or +/- 180 degrees, catering to various payloads such as radio antennas, electro-optic systems, C-UAS systems, etc. The Rotator can be mounted on a portable Tripod, Telescopic Mast or on a fixed structure.

OUR USP'S



Built-in Controller provides smooth and precise motion at all speeds



Rugged, compact and low weight construction



Continuous rotation via slip ring



High accuracy, high speed (up to 180 deg/sec)

SINGLE AXIS POSITIONER (PEDESTALS)									
Model No.	Payload (kg)	Unit Wt (kg)	Dimensions (mm)	Power Consumption	Rotational Range	Positional Accuracy	Rotational speed (RPM)	Control Data Interface	Wind Area (m²)
PSAP-5	5	~ 5	180 x 144 x 220 (LXWXH)	24V DC 30 W Nominal	Continuous 360° Sector scan ± 180°	0.1°	1 to 20 RPM	RS422 (Ethernet Optional)	0.2
PSAP-30	35	~ 14	377 x 310 x 300 (LXWXH)	18-36V DC 80W Nominal	Continuous 360° Sector scan ± 180°	0.1°	1 to 20 RPM	RS422 (Ethernet Optional)	0.3
PSAP-50	60	~ 14	245 Dia x 235 Height	18-36V DC 200 W Nominal	Continuous 360° Sector scan ± 180°	0.1° (0.05° Optional)	1 to 30 RPM	RS422 and Ethernet	0.8
PSAP-100	125	~ 22	360 Dia x 265 Height	18-36V DC 350 W Nominal	Continuous 360° Sector scan ± 180°	0.1° (0.05° Optional)	1 to 30 RPM	RS422 and Ethernet	0.8

### STANDARD ACCESSORIES



Hard carrying case



Set of Cables

### SPECIAL ACCESSORIES



Payload



Bracket/Adaptor



## DUAL AXIS POSITIONER

### ARJUN SERIES

PEL's Arjun Series of Dual-Axis positioners provides accurate alignment for Radio Antenna, electro-optic systems, C-UAS systems, etc. A precision machined aluminum alloy enclosure contains a rotating base with an elevation arm and built-in controller. It can be guided manually, semi-automatically or fully automatically. The Pan-Tilt system can be mounted on a portable Tripod, Telescopic Mast or on a fixed structure.

#### OUR USP'S



Rugged, compact and high reliability construction



Built-in Controller provides smooth and precise motion at all speeds



Auto tracking via Special Control algorithms



High degree of customizations available

#### DUAL AXIS POSITIONER (PEDESTALS)

Model No.	Payload (Kg)	Unit Wt (Kg)	Dimensions (mm)	Power Consumption	Rotational Range	Tilt Range	Positional Accuracy	Speed (RPM)	Control Data Interface	Wind Area (m <sup>2</sup> )
PDAP-5	5	~ 6	245 x 220 x 144 (W x H x D)	24V DC 30 W Nominal	"Sector scan ± 180° Continuous 360° (optional)"	(-90) to (+35)	0.1"	Azimuth: 1 to 20 Elevation 1 to 10	RS422 (Ethernet-Optional)	0.2
PDAP-25	25	~ 16	335 x 266 x 370 (W x H x D)	18-36V DC 80W Nominal	Sector scan ± 180°	±20°	0.1"	Azimuth: 1 to 20 Elevation 1 to 10	RS422 (Ethernet-Optional)	0.4
PDAP-50	50	~ 26	435 x 312 x 390 (W x H x D)	24V DC 200 W Nominal	"Sector scan ± 180° Continuous 360° (optional)"	±20°	0.1"	Azimuth: 1 to 30 Elevation 1 to 15	RS422 (Ethernet-Optional)	0.5

#### STANDARD ACCESSORIES



Hard carrying case



Set of Cables

#### SPECIAL ACCESSORIES

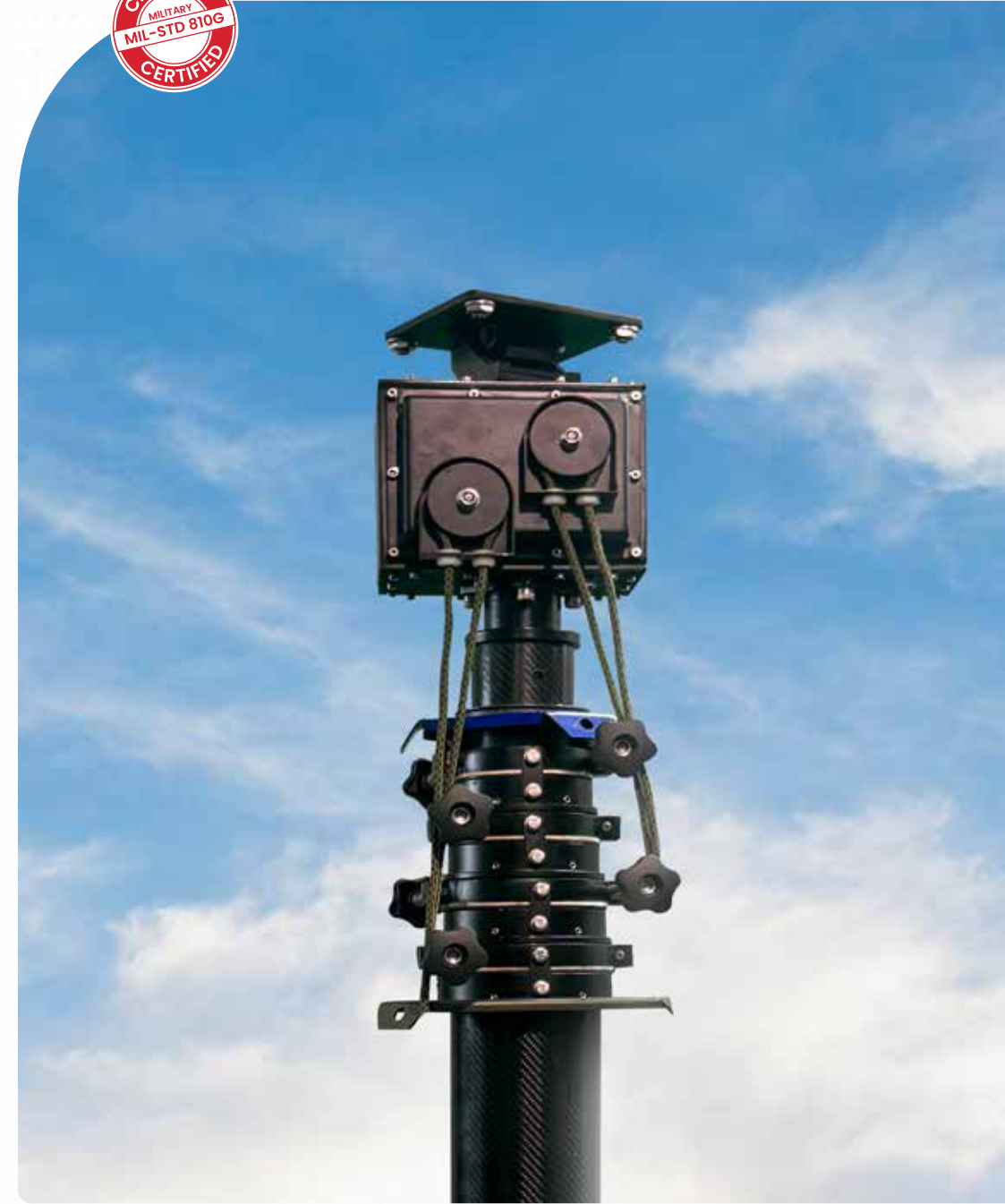


Payload



Bracket/Adaptor





# MANUAL ROTATOR/TILTER (MRT)

## NAKUL SERIES

PEL's Nakul Series of Manual Rotator Tilter (MRT) is a manual Pedestal which is typically mounted on PEL's Telescopic Masts (up to 25 metres height) and provides accurate manoeuvring & alignment of Radio Antenna from the ground via a rope and pulley mechanism. It incorporates an automatic locking feature designed to prevent any movement of the payload once the ropes are not being pulled in either direction.

OUR USP'S



Rugged, compact and high reliability construction



No special tools required for Mast installation



Self locking feature prevents backlash



Operates manually in Azimuth and Elevation via ropes

MANUAL ROTATOR / TILTER (MRT)										
Model No.	Payload (Kg)	Unit Wt (Kg)	Dimintions (mm)	Power Consumption	Rotational Range	Tilt Range	Positional Accuracy	Speed (RPM)	Control Data Interface	Wind Area (m²)
MRT-25	25	15	200x 260 x 202 (W x H x D)	NA	Sector scan ± 180°	±15°	0.2°	NA	NA	0.3

STANDARD ACCESSORIES



Hard carrying case



Set of Cables

SPECIAL ACCESSORIES



Payload



Bracket/Adapter

# MAJOR ACCESSORIES

## MAST/ TRIPOD/ POSITIONER

### Standard Accessories



Base Plate



Tilting Cup



Nails



Earthing Kit: Pipe & Cable



Lightning Arrestor



Drive On Frame



Hammer



Guy Rope



Foot Pump



Hand Held Pendant



Cable (RF, FO, Electrical, Power) Assemblies



Pneumatic Controller Unit



Pegs



Erection Stand



User Manual



Guy Rope Controller



Sand Kit

### Tool Kit



DE Spanner



Adjustable Spanner



Plier (On Special Request)



Box Spanner with T Handle)



Teflon Tape



Screw Driver



Steel Oil Can



Velcro Cable Strap for Cable Tie



Levelor (Weighted Cable/ Spirit Level)



Allen Keys



Guy Marker



Nail Puller



Carrying Cases: Soft/Hard



Canvas



FRP



Roto Mould



Plastic Injection Moulding

Air Compressors



.8 Hp, Capacity 20Ltr



1 Hp, Capacity 6Ltr ( Oil Free)



1 Hp, Capacity 30Ltr



1 Hp, Capacity 2Ltr ( With Oil) Rugged

Vehicle Mounting Brackets



Trailer Mounting Bracket



Vehicle Roof Mount Design



Vehicle Mounting Bracket

Payload Adapter



Dual Mount



Interface Adapter



Tripods Adapter



Tripods Adapter



Dual Payload



Payload Adapter



Circular Heavy Duty Bracket



Side Mounting Payload

## MULTI FUNCTION ACTIVE JUNCTION BOX

The Multi-Function Active Junction Box plays a crucial role as an essential accessory for RF, Electro-Optic, Servo-based, and Networking components. These Junction box can be installed on Towers, Telescopic Masts, Tripods, and other elevated mechanisms. Functioning as an active junction box, the PAJB facilitates effective interconnectivity for power and data interfaces.

### OUR USP'S



MIL-STD design and construction



Combination of power supply, protocol conversion and navigation



Integrated tightly to PEL tripods and masts with very economical footprint



Customizable based on payload needs

### Sailent Features

- Customizable low foot print Junction boxes to suit every payload atop PEL Masts and Tripods
- Power Conversion and Distribution
- Provision for Battery Charging
- GNSS based direction and elevation sensing
- Various Protocol/Interface Conversion
- Media conversion RF to optical and vice versa
- Battery Power as secondary Backup



S.No.	Parameters	Specifications
1	DC Power Supply for Equipment	Input: 90 – 285V AC Output: 24V – 72V
2	Electrical Power	Up to 2 KW
3	Battery Bank	24V/ 48V/ 72V
4	Protocol Conversion	"RS232 ↔ RS422 RS232 ↔ V.35 RS232/RS422/V.35 ↔ IP"
5	Media Conversion	Electrical ↔ Optical RF ↔ Optical
6	Ethernet Switch Optical –Electrical interface	4 – 8 Ports (Electrical) 1 – 2 Ports (SFP based Optical) PoE (Optional)
7	Network Synchronization/ Home Location	Via GNSS receiver
8	Protection against Surges	Level 2
9	Protection against lighting	Level 2
10	EMI/EMC	CISPR 22/ EN5022/ MIL-STD-461
11	Environmental	Industrial (IP67)/ MIL-STD-810

## POWER SOLUTIONS

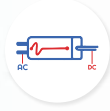
Precision Electronics Limited has a long experience in delivering a wide range of power solutions for Telecom, Aerospace, Healthcare and Industrial sectors against various applications.

- Tactical AC-DC Power supplies
- Power Supplies with Battery Charger
- Power conditioning Rack (PCR)
- Power Distribution Panel (PDP)
- Customized Power Modules for Medical equipment
- Test Jigs for repair and troubleshooting

### OUR USP'S



MIL-STD design and construction



AC-DC, DC-DC



Battery Charging, Power Distribution



Communications I/f's: CAN, GPIO, Serial, Ethernet

### Sailent Features

- Customizable switch mode power supplies (AC-DC, DC-DC) for 300-2000W
- PFC based Battery Charger up to 3000W with built-in controller
- Power Distribution Units up to 30kVA
- Offered in high industrial (UL STD) OR MIL-STD construction
- Input Power Conditioning
- Highest operating safety
- Maximum energy efficiency



48 V SMPS (DC Power Supply)



24 V SMPS (DC Power Supply)



Battery Charger





Cable Assembly AC power



Cable Assembly DC power

S.No.	Description	SMPS-24 V (Dual O/P)	SMPS-48 V	Battery Charger
1	Input Voltage	160 to 264 V AC 50 Hz	160 to 264 V AC 50 Hz	90 to 264 V AC 50 Hz
2	Input Current	4 Amps on Full Load	4 Amps on Full Load	10 Amps on Full Load
3	Efficiency	92%	92%	94%
4	Output-1 Voltage	24 V DC Nominal (Max 30 VDC)	48 V DC Nominal (Max 54 VDC)	Nominal 51 V DC Max 58 V DC
5	Output -2 Voltage	48 V DC	N/A	N/A
6	Output Current	20 Amps @ 24 V 10 Amps @ 48 V	20 Amps	40 Amps
7	Line Regulation	2%	2%	CC and CV Mode
8	Total Power Rating	1000W	1000W	2000W
9	Cooling Methodology	Conduction Cooling	Conduction Cooling	Conduction Cooling
10	Input Protections	Over current and over voltage	Over current and over voltage	Input over current and over voltage
11	Output Protections	Over Load and over voltage	Over Load and over voltage	Batt under and over voltage Protection
12	Power Connectors	MIL C 5015 / D38999	MIL C 5015 / D38999	Type 1
13	Standards (EMI/EMC )	MIL Std 461	MIL Std 461	AIS-138 (Part 2)
14	Standards (Environmental)	MIL Std 810/ JSS55555	MIL Std 810/ JSS55555	AIS-138 (Part 2)
15	Dimensions	400 X 380 X 150 mm (L X W H)	360 X 370 X 170 mm (L X W H)	225 X 204 X 100 mm (L X W H)
16	Weight	7.0 Kg	8.0 Kg	5.0 Kg
17	Operating Temperature	(-20°C and +55°C )	(-20°C and +55°C )	(-10°C and +55°C )
18	Storage Temperature	(-30°C and +70°C )	(-30°C and +70°C )	(-20°C and +70°C )

**Note:** Specifications are subject to change without notice



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