TRIYOSYS by promec

PAN TILTS | TRIPODS | MASTS

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ABOUT US

ANY TIME. ANY PLACE. OBSERVING

TRIYOSYS is a ProMec Mechanical, R&D and Engineering company brand. Was established in Ankara Ostim Teknokent in 2014.
The company is a Turkish manufacturer and worldwide distributor of surveillance equipment like pan and tilt units, tripods, masts systems, wipers.
TRIYOSYS delivers equipment worldwide for professional applications, where the latest technology and high quality equipment are needed.

Based on our experience with installations in harsh environments, airports, military, coastal applications and other special demands, TRIYOSYS assist customers around the world to advice and develop solutions for specific customer projects. All projects in TRIYOSYS are handled as very confidential.

150+
EMPLOYEES

In our research and development center, works are carried out meticulously by our Mechanical, Electrical-Electronic, Design and Software Engineers in line with our existing products and customer demands. Our Research and Development Center is approved by Turkish government since 2019. Research and Development Center is established on an area of 1000 m2.

10 YEARS
EXPERIENCE

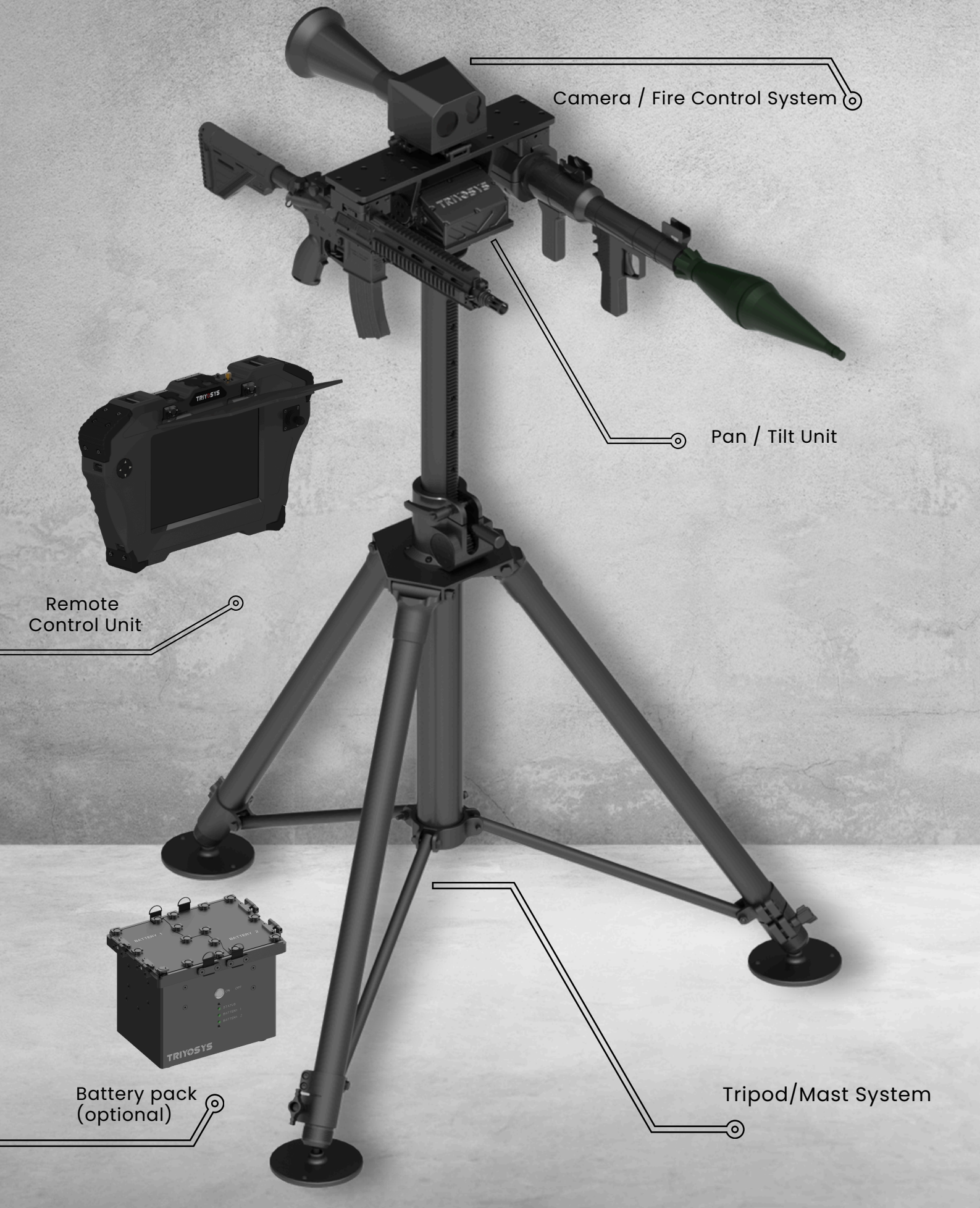
4500 M²
PRODUCTION LINE

In our Quality Control Center is checking all manufactured, coated and painted parts according to our internal proceses based on ISO 9001-2015.

ISO
CERTIFICATION

PRO-MAVZER

SHOOTING CONTROL UNIT



PAN TILT

TS-MPT H3220 SERIES

The MPT H3220 Series Pan & Tilt Unit is designed to perform precision positioning applications of various sensor units.

It is designed for payloads up to 60 Kg. MPT H3220 Pan & Tilt Units, designed according to military standards and having compact structure, are resistant to all kinds of harsh conditions.

FEATURES

- Robust and compact design.
- High torque and performance.
- Precise positioning.
- Zero backlash.
- High duty cycles.
- Suitable for fixed and mobile environments.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.

Payload Capacity
up to 60 kg

Rated Torque at Tilt Axis
90 Nm

Position Accuracy
0,02°

Position Repeatability
0,01°

Zero backlash

Product Code	TS-MPT-H3220-1	TS-MPT-H3220-2	TS-MPT-H3220-3	TS-MPT-H3220-4
Payload Capacity	45 kg	45 kg	45 kg	60 Kg
Rated Torque at Tilt Axis	70 Nm	70 Nm	70 Nm	90 Nm
Power Consumption				
Max. Power Consumption	100 W	140 W	175 W	250 W
Standby Power Consumption	2 W	2 W	15 W	2 W
Heater Power	40 W	40 W	40 W	40 W
Operating Voltage Range *	18-32 V	18-32 V	44-52 V	44-52 V
Pan				
Range of travel *	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)
Max. Speed	48 °/s	60°/s	120 °/s	120 °/s
Min. Speed	0.005°/s	0.005°/s	0.005°/s	0.005°/s
Tilt				
Range of travel *	180° (+90°/-90°)	180° (+90°/-90°)	180° (+90°/-90°)	180° (+90°/-90°)
Max. Speed	18 °/s	24°/s	24°/s	40 °/s
Min. Speed	0.005°/s	0.005°/s	0.005°/s	0.005°/s
Position Accuracy and Repeatability				
Position Accuracy	0.02°	0.02°	0.02°	0.05°
Position Repeatability	0.01°	0.01°	0.01°	0.05°
Backlash	None	None	None	None
Rotation Limits				
Software Limits	Available	Available	Available	Available
Mechanical Limits	Available at Tilt Axis	Available at Tilt Axis	Available at Tilt Axis	Available at Tilt Axis
Encoder Type and Position Feedback				
Encoder Type *	Magnetic Incremental Encoder	Magnetic Incremental Encoder	Magnetic Incremental Encoder	Magnetic Incremental Encoder
Position Feedback	0.0048°	0.0048°	0.0048°	0.0048°
Operating Temperature				
Working Temperature	-32°C to +55°C	-32°C to +55°C	-32°C to +55°C	-32°C to +55°C
Storage Temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C
Drive Systems				
Drive System (Pan)	Stepper Motor	Stepper Motor	BLDC Motor	BLDC Motor
Drive System (Tilt)	Stepper Motor	Stepper Motor	Stepper Motor	BLDC Motor
Brake	Magnetic Brake	None	Magnetic Brake at Tilt Axis None at Pan Axis	Magnetic Brake
Construction				
Exterior Finish	Powder Coat Black (Default), Special Finishes Available			
Weight ***	18 kg			
Dimensions ***	335.6x374.4x222 mm			
Payload Mounting Type	Top or Side Mount			

Ambient Conditions and EMI/EMC Compatibility	
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C
Moisture Resistance	MIL-STD0 810G, Method 507.6 Procedure II
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II
Vibration Compatibility	MIL-STD-810G,Method 514.7 Procedure I
Shock Compatibility	MIL-STD-810G, Method 516.6 Procedure IV
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I
Protection / IP rating	IP67
Control of Positioner Unit	
Command and Control	GUI-Joysitck-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - 2.4A	Optional
12 VDC - 2.4A	Optional
5 VDC - 2.4A	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Payload **	
Serial	RS232, RS422, RS485 (2 Channel Configurable)
TTL	1 Channel
IP	1 Channel Gigabit Ethernet
Communication Interfaces to Pantilt	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PN
Payload Connector	D38999/20WD35SN

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.

PAN TILT

TS-MPT H412 SERIES

The MPT H412 Series Pan & Tilt Unit is designed to perform precision positioning applications of various sensor units.

It is designed for payloads up to 21 Kg.

MPT H412 pan & tilt units, designed according to military standards and having compact structure, are resistant to all kinds of harsh conditions.

FEATURES

- Robust and compact design.
- High torque and performance.
- Precise positioning.
- Zero backlash.
- High duty cycles.
- Suitable for fixed and mobile environments.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.

Payload Capacity
up to 21 kg

Rated Torque at Tilt Axis
30 Nm

Position Accuracy
0,02°

Position Repeatability
0,01°

Zero backlash

Product Code	TS-MPT-H412-1	TS-MPT-H412-2	TS-MPT-H412-3
Payload Capacity	21 kg	21 kg	21 kg
Rated Torque at Tilt Axis	30 Nm	30 Nm	30 Nm
Power Consumption			
Max. Power Consumption	60 W	80 W	120W
Standby Power Consumption	2 W		
Heater Power	40 W		
Operating Voltage Range *	18-32 V		
Pan			
Range of travel *	n × 360° (Continuous Rotation)		
Max. Speed	24°/s	40°/s	90°/s
Min. Speed	0.005°/s		
Tilt			
Range of travel *	180° (+90°/-90°)		
Max. Speed	16.2°/s		
Min. Speed	0.005°/s		
Position Accuracy and Repeatability			
Position Accuracy	0.02°		
Position Repeatability	0.01°		
Backlash	None		
Rotation Limits			
Software Limits	Available		
Mechanical Limits	Available at Tilt Axis		
Encoder Type and Position Feedback			
Encoder Type *	Magnetic Incremental		
Position Feedback	0.0048°		
Operating Temperature			
Working Temperature	-32°C to +55°C		
Storage Temperature	-40°C to +60°C		
Drive Systems			
Drive System (Pan)	Stepper Motor		BLDC Motor
Drive System (Tilt)	Stepper Motor		Stepper Motor
Brake	Magnetic Brake	Magnetic Brake at Tilt Axis None at Pan Axis	Magnetic Brake at Tilt Axis None at Pan Axis
Construction			
Exterior Finish	Powder Coat Black (Default), Special Finishes Available		
Weight ***	8.2 kg		8.5 kg
Dimensions ***	292.6x295.3x148.6 mm		
Payload Mounting Type	Top or Side Mount		

Ambient Conditions and EMI/EMC Compatibility	
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I
Dust and Sand Resistance	MIL-STD-810G, Method, 510.6 Procedure I and Procedure II
Vibration Compatibility	MIL-STD-810G,Method 514.7 Procedure I
Shock Compatibility	MIL-STD-810G Method 516.6 Procedure IV
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I
Protection / IP rating	IP67
Control of Positioner Unit	
Command and Control	GUI-Joysitck-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - 2.4A	Optional
12 VDC - 2.4A	Optional
5 VDC - 2.4A	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Payload **	
Serial	RS232, RS422, RS485 (2 Channel Configurable)
TTL	1 Channel
IP	1 Channel Gigabit Ethernet
Communication Interfaces to Pantilt	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PN
Payload Connector	D38999/20WD35SN

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.

PAN TILT

TS-MPT W66 SERIES

The MPT W66 Series Pan & Tilt Unit is designed to perform positioning applications of various sensor units. It is designed for payloads up to 6 Kg.

MPT W66 pan & tilt units, designed according to military standards and having compact structure, are resistant to all kinds of harsh conditions.

FEATURES

- Robust and compact design.
- High torque and performance.
- Precise positioning.
- High duty cycles.
- Suitable for fixed and mobile environments.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.

Payload Capacity
up to 6 kg

Rated Torque at Tilt Axis
8 Nm

Position Accuracy
0,02°

Position Repeatability
0,02°

Product Code	TS-MPT-W66-1	TS-MPT-W66-2	TS-MPT-W66-3
Payload Capacity	6 kg	6 kg	2 kg
Rated Torque at Tilt Axis	8 Nm	8 Nm	4 Nm
Power Consumption			
Max. Power Consumption	40 W	40 W	40 W
Standby Power Consumption	2 W	2 W	2 W
Operating Voltage Range *	18-32 V	18-32 V	18-32 V
Pan			
Range of travel *	n × 360° (Continuous Rotation)		
Max. Speed	36°/s	60°/s	60°/s
Min. Speed	0.005°/s		
Tilt			
Range of travel *	135° (+90°/-45°)		
Max. Speed	24°/s	24°/s	48°/s
Min. Speed	0.005°/s		
Position Accuracy and Repeatability			
Position Accuracy	0.02°		
Position Repeatability	0.02°		
Backlash	0.1°		
Rotation Limits			
Software Limits	Available		
Mechanical Limits	Available at Tilt Axis		
Encoder Type and Position Feedback			
Encoder Type *	Magnetic Incremental		
Position Feedback	0.0048°		
Operating Temperature			
Working Temperature	-32°C to +55°C		
Storage Temperature	-40°C to +60°C		
Drive Systems			
Drive System Pan)	Stepper Motor		
Drive System (Tilt)	Stepper Motor		
Brake	Self Locking		
Construction			
Exterior Finish	Powder Coat Black (Default), Special Finishes Available		
Weight	3.6 Kg		
Dimensions	189.8x179.8x154.4 mm		
Payload Mounting Type	Top Mount		
Ambient Conditions and EMI/EMC Compatibility			
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)		
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I		
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I		
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C		
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II		
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I		
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II		
Vibration Compatibility	MIL-STD-810G,Method 514.7 Procedure I		
Shock Compatibility	MIL-STD-810G, Method 516.6 Procedure IV		
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I		
Protection / IP rating	IP67		

Control of Positioner Unit	
Command and Control	GUI-Joysitck-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - 2.4A	Optional
12 VDC - 2.4A	Optional
5 VDC - 2.4A	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Payload *	
Serial	RS232, RS422, RS485 (2 Channel Configurable)
TTL	1 Channel
IP	1 Channel Gigabit Ethernet
Communication Interfaces to Pantilt**	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PN
Payload Connector	D38999/20WD35SN

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.
Please note: Accessories such as cables and power supplies are not included in the package.

NEW

PAN TILT

TS-MPT I SERIES

The TS-MPT-I Series Pan & Tilt Unit is designed to perform precision positioning applications of various sensor units. It is designed for payloads up to 50 Kg.

TS-MPT-I Pan & Tilt units, designed according to military standarts and having compact structure, are resistant to all kinds of harsh conditions.

FEATURES

- Robust and compact design.
- High torque and performance.
- Precise positioning.
- High duty cycles.
- Suitable for fixed and mobile environments.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.

Payload Capacity
up to 50 kg

Rated Torque at Tilt Axis
64 Nm

Position Accuracy
0,02°

Position Repeatability
0,02°

Zero backlash

Product Code	TS-MPT-I-1	TS-MPT-I-2	TS-MPT-I-3
Payload Capacity	8 kg	30 kg	50 kg
Rated Torque at Tilt Axis	7 Nm	50 Nm	64 Nm
Power Consumption			
Max. Power Consumption	100 W	120 W	160 W
Standby Power Consumption	20 W	20 W	20 W
Operating Voltage Range *	20-32 V	20-32 V	20-32 V
Pan			
Range of travel *	n × 360° (Continuous Rotation)		
Max. Speed	180 °/s	60°/s	60°/s
Min. Speed	0.005°/s		
Tilt			
Range of travel *	180° (+90°/-90°)		
Max. Speed	60°/s	60°/s	60°/s
Min. Speed	0.005°/s		
Position Accuracy and Repeatability			
Position Accuracy	0.02°		
Position Repeatability	0.02°		
Backlash	None		
Rotation Limits			
Software Limits	Available		
Encoder Type and Position Feedback			
Encoder Type *	Absolute Encoder		
Position Feedback	0.005°		
Operating Temperature			
Working Temperature	-32°C to +55°C		
Storage Temperature	-40°C to +60°C		
Drive Systems			
Drive System Pan)	BLDC Motor		
Drive System (Tilt)	BLDC Motor		
Brake	Magnetic Brake		
Construction			
Exterior Finish	Powder Coat Black (Default), Special Finishes Available		
Weight	4.5 kg	5.5 kg	7.5 kg
Dimensions	272x154x130 mm	288x160x132 mm	305x166x134 mm
Payload Mounting Type	Top and Side Mount		
Ambient Conditions and EMI/EMC Compatibility			
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)		
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I		
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I		
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C		
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II		
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I		
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II		
Vibration Compatibility	MIL-STD-810G,Method 514.7 Procedure I		
Shock Compatibility	MIL-STD-810G, Method 516.6 Procedure IV		
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I		
Protection / IP rating	IP67		

Control of Positioner Unit	
Command and Control	GUI-Joysitck-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - 2.4A	Optional
12 VDC - 2.4A	Optional
5 VDC - 2.4A	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Payload *	
Serial	RS232, RS422, RS485 (2 Channel Configurable)
TTL	1 Channel
IP	1 Channel Gigabit Ethernet
Communication Interfaces to Pantilt**	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PN
Payload Connector	D38999/20WD35SN

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.
Please note: Accessories such as cables and power supplies are not included in the package.

NEW

PAN TILT

TS-MPT D SERIES

D Series Pan Tilt TS-MPT-D engineered for precision, durability, and versatility, this advanced system is designed to meet the rigorous demands of various industries.

- High Payload Capacity: 50 Nm for handling substantial equipment.
- Precision Movement: 0.02° accuracy and repeatability for high-precision tasks.
- Wide Range of Motion: Full 360° pan range and ±90° tilt range.

FEATURES

- Robust and compact design.
- High torque and performance.
- Precise positioning.
- High duty cycles.
- Suitable for fixed and mobile environments.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.
- Weather Resistance: Complies with IP67 standards, ensuring optimal performance in harsh environmental conditions.
- MIL-STD Compliant: Built to withstand electromagnetic interference, thermal shock, vibration, moisture, rain, dust, and sand.

Payload Capacity
up to 30 kg

Rated Torque at Tilt Axis
50 Nm

Position Accuracy
0,02°

Position Repeatability
0,02°

Zero backlash

Product Code	TS-MPT-D-1	TS-MPT-D-2
Payload Capacity	8 kg	30 kg
Rated Torque at Tilt Axis	7 Nm	50 Nm
Power Consumption		
Max. Power Consumption	100 W	120 W
Standby Power Consumption	20 W	20 W
Operating Voltage Range *	20-32 V	20-32 V
Pan		
Range of travel *	n × 360° (Continuous Rotation)	
Max. Speed	180 °/s	60°/s
Min. Speed	0.005°/s	0.005°/s
Tilt		
Range of travel *	120° (+90°/-30°)	
Max. Speed	60°/s	60°/s
Min. Speed	0.005°/s	0.005°/s
Position Accuracy and Repeatability		
Position Accuracy	0.02°	
Position Repeatability	0.02°	
Backlash	None	
Rotation Limits		
Software Limits	Available	Available
Encoder Type and Position Feedback		
Encoder Type *	Absolute Encoder	
Position Feedback	0.005°	0.005°
Operating Temperature		
Working Temperature	-32°C to +55°C	
Storage Temperature	-40°C to +60°C	
Drive Systems		
Drive System Pan)	BLDC Motor	
Drive System (Tilt)	BLDC Motor	
Brake	Magnetic Brake	
Construction		
Exterior Finish	Powder Coat Black (Default), Special Finishes Available	
Weight	4,3 kg	5.6 kg
Dimensions	180x232x182 mm	184x247x185 mm
Payload Mounting Type	Top and Side Mount	
Ambient Conditions and EMI/EMC Compatibility		
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)	
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I	
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I	
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C	
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II	
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I	
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II	
Vibration Compatibility	MIL-STD-810G,Method 514.7 Procedure I	
Shock Compatibility	MIL-STD-810G, Method 516.6 Procedure IV	
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I	
Protection / IP rating	IP67	

Control of Positioner Unit	
Command and Control	GUI-Joysitck-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - 2.4A	Optional
12 VDC - 2.4A	Optional
5 VDC - 2.4A	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Payload *	
Serial	RS232, RS422, RS485 (2 Channel Configurable)
TTL	1 Channel
IP	1 Channel Gigabit Ethernet
Communication Interfaces to Pantilt**	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PN
Payload Connector	D38999/20WD35SN

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.
Please note: Accessories such as cables and power supplies are not included in the package.

PAN TILT

TS-MPT-EO SERIES

The positioner unit can be used for almost all applications where needed high torque and high speed.

The torque and speed of selected variations can be changed according to the customer's requests. Two things suffice to best explain this series; compactness and power.

FEATURES

- It can be used in high frequency antennas applications with optional RF output.
- High duty cycle
- IP67 environment protection
- %100 CNC Machined from high strength 6000 series aluminium and stainless steel

Payload Capacity
up to 65 kg

Rated Torque at Tilt Axis
100 Nm

Position Accuracy
0,02°

Position Repeatability
0,02°

Zero backlash

TECHNICAL DATA / TS-MPT-EO SERIES

Product Code	TS-MPT-EO-1	TS-MPT-EO-2	TS-MPT-EO-3
Payload Capacity	45 kg	45 kg	65 kg
Rated Torque at Tilt Axis	70 Nm	50 Nm	100 Nm
Power Consumption			
Max. Power Consumption	120 W	140 W	200 W
Standby Power Consumption	10 W	20 W	28 W
Heater Power	40 W	60 W	60 W
Operating Voltage Range *	20-32 V	20-32 V	20-32 V
Pan			
Range of travel *	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)
Max. Speed	90 °/s	90 °/s	90 °/s
Min. Speed	0.005°/s	0.005°/s	0.005°/s
Tilt			
Range of travel *	180° (+90°/-90°)	180° (+90°/-90°)	180° (+90°/-90°)
Max. Speed	18 °/s	60°/s	60°/s
Min. Speed	0.005°/s	0.005°/s	0.005°/s
Position Accuracy and Repeatability			
Position Accuracy	0.02°	0.02°	0.02°
Position Repeatability	0.02°	0.02°	0.02°
Backlash	None	None	None
Rotation Limits			
Software Limits	Available	Available	Available
Mechanical Limits	Available at Tilt Axis	Available at Tilt Axis	Available at Tilt Axis
Encoder Type and Position Feedback			
Encoder Type *	Absolute Encoder	Absolute Encoder	Absolute Encoder
Position Feedback	0.005°	0.005°	0.005°
Operating Temperature			
Working Temperature	-32°C to +55°C	-32°C to +55°C	-32°C to +55°C
Storage Temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C
Drive Systems			
Drive System (Pan)	BLDC Motor	BLDC Motor	BLDC Motor
Drive System (Tilt)	Stepper Motor	BLDC Motor	BLDC Motor
Brake	Magnetic Brake	Magnetic Brake	Magnetic Brake
Construction			
Exterior Finish	Powder Coat Black (Default), Special Finishes Available		
Weight ***	12.8 kg	14.2 kg	15.8 kg
Dimensions ***	308.2x312.7x158 mm	308.2x312.7x158 mm	360x340x170 mm
Payload Mounting Type	Top or Side Mount		
Ambient Conditions and EMI/EMC Compatibility			
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)		
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I		
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I		
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C		
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II		
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I		
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II		
Vibration Compatibility	MIL-STD-810G, Method 514.7 Procedure I		
Shock Compatibility	MIL-STD-810G, Method 516.6 Procedure IV		
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I		
Protection / IP rating	IP67		

Control of Positioner Unit			
Command and Control	GUI-Joysitck-Software		
Protocol	TS-MPT Protocol and Pelco-D		
Power Outputs to Payload *			
24 VDC - 2.4A	Optional		
12 VDC - 2.4A	Optional		
5 VDC - 2.4A	Optional		
Instantly Monitoring			
Power On and Run Time Monitoring	Available		
Voltage Monitoring	Available		
Current Monitoring	Available		
Communication Interfaces to Payload *			
Serial	RS232, RS422, RS485 (2 Channel Configurable)		
TTL	1 Channel		
IP	1 Channel Gigabit Ethernet		
Communication Interfaces to Pantilt***			
Serial	RS232 or RS422/RS485		
IP	Optional		
Connectors *			
Main Connector	D38999/20WD35PN	D38999/20WD35PN	D38999/20WD35PN
Payload Connector	D38999/20WD35SN	D38999/20WD35SN x2	D38999/20WD35SN x2

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.

PAN TILT

TS-MPT-HS SERIES

The TS-MPT-HS Series Pan & Tilt Unit is designed to perform precision positioning applications of various sensor units. It is designed for payloads up to 45 Kg.

TS-MPT-HS pan & tilt units, designed according to military standards and having compact structure, are resistant to all kinds of harsh conditions.

FEATURES

- Robust and compact design.
- High torque and performance.
- Precise positioning.
- High duty cycles.
- Suitable for fixed and mobile environments. 100% CNC Machined from high strength 6000 series aluminium and stainless steel.

Payload Capacity
up to 45 kg

Rated Torque at Tilt Axis
70 Nm

Position Accuracy
0,02°

Position Repeatability
0,02°

Zero backlash

TECHNICAL DATA / TS-MPT-HS

Product Code	TS-MPT-HS-1	TS-MPT-HS-2	TS-MPT-HS-3
Payload Capacity	45 kg	30 kg	30 kg
Rated Torque at Tilt Axis	70 Nm	50 Nm	50 Nm
Power Consumption			
Max. Power Consumption	100 W	140 W	140 W
Standby Power Consumption	15 W	20 W	20 W
Heater Power	40 W	60 W	60 W
Operating Voltage Range *	20-32 V	20-32 V	20-32 V
Pan			
Range of travel *	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)
Max. Speed	180 °/s	180°/s	180°/s
Min. Speed	0.005°/s	0.005°/s	0.005°/s
Tilt			
Range of travel *	180° (+90°/-90°)	180° (+90°/-90°)	180° (+90°/-90°)
Max. Speed	18 °/s	60°/s	60°/s
Min. Speed	0.005°/s	0.005°/s	0.005°/s
Position Accuracy and Repeatability			
Position Accuracy	0.02°	0.02°	0.02°
Position Repeatability	0.02°	0.02°	0.02°
Backlash	None at Tilt Axis	None at Tilt Axis 0.1° Pan Axis	None
Rotation Limits			
Software Limits	Available	Available	Available
Mechanical Limits	Available at Tilt Axis	Available at Tilt Axis	Available at Tilt Axis
Encoder Type and Position Feedback			
Encoder Type *	Absolute Encoder	Absolute Encoder	Absolute Encoder
Position Feedback	0.005°	0.005°	0.005°
Operating Temperature			
Working Temperature	-32°C to +55°C	-32°C to +55°C	-32°C to +55°C
Storage Temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C
Drive Systems			
Drive System (Pan)	BLDC Motor	BLDC Motor	BLDC Motor
Drive System (Tilt)	Stepper Motor	BLDC Motor	BLDC Motor
Brake	Magnetic Brake	Magnetic Brake	Magnetic Brake
Construction			
Exterior Finish	Powder Coat Black (Default), Special Finishes Available		
Weight ***	7 kg	9 kg	8.5 kg
Dimensions ***	315.5x258.5x139	323.5x258.5x148.5 mm	313.5x264.2x150.5 mm
Payload Mounting Type	Top or Side Mount		
Ambient Conditions and EMI/EMC Compatibility			
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)		
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I		
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I		
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C		
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II		
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I		
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II		
Vibration Compatibility	MIL-STD-810G,Method 514.7 Procedure I		
Shock Compatibility	MIL-STD-810G, Method 516.6 Procedure IV		
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I		
Protection / IP rating	IP67		

Control of Positioner Unit		
Command and Control	GUI-Joysitck-Software	
Protocol	TS-MPT Protocol and Pelco-D	
Power Outputs to Payload *		
24 VDC - 2.4A	Optional	
12 VDC - 2.4A	Optional	
5 VDC - 2.4A	Optional	
Instantly Monitoring		
Power On and Run Time Monitoring	Available	
Voltage Monitoring	Available	
Current Monitoring	Available	
Communication Interfaces to Payload *		
Serial	RS232, RS422, RS485 (2 Channel Configurable)	
TTL	1 Channel	
IP	1 Channel Gigabit Ethernet	
Communication Interfaces to Pantilt**		
Serial	RS232 or RS422/RS485	
IP	Optional	
Connectors *		
Main Connector	D38999/20WD35PN	D38999/20WD35PN
Payload Connector	D38999/20WD35SN	D38999/20WD35SN x2

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.

PAN TILT

TS-MPT-U SERIES

It is designed for use in land and sea vehicles thanks to its fast movement and precise positioning capability. The torque and speed of selected variations can be changed according to the customer's requests.

Two things suffice to best explain this series; compactness and power. Its applications include fixed and mobile border surveillance, coastal surveillance, port and shipping control, customs and coastguard, vehicle mounted surveillance and maritime applications.

FEATURES

- Robust and compact design
- Long service life
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.

Payload Capacity
up to 45 kg

Rated Torque at Tilt Axis
50 Nm

Position Accuracy
0,02°

Position Repeatability
0,02°

Zero backlash

Product Code	TS-MPT-U-1	TS-MPT-U-2
Payload Capacity	35 kg	45 kg
Rated Torque at Tilt Axis	30 Nm	50 Nm
Power Consumption		
Max. Power Consumption	80 W	120 W
Standby Power Consumption	10 W	25 W
Heater Power	40 W	60 W
Operating Voltage Range *	20-32 V	20-32 V
Pan		
Range of travel *	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)
Max. Speed	30 °/s	60 °/s
Min. Speed	0.005°/s	0.005°/s
Tilt		
Range of travel *	90° (+45°/-45°)	90° (+45°/-45°)
Max. Speed	24 °/s	60°/s
Min. Speed	0.005°/s	0.005°/s
Position Accuracy and Repeatability		
Position Accuracy	0.02°	0.02°
Position Repeatability	0.02°	0.02°
Backlash	None	None
Rotation Limits		
Software Limits	Available	Available
Mechanical Limits	Available at Tilt Axis	Available at Tilt Axis
Encoder Type and Position Feedback		
Encoder Type *	Absolute Encoder	Absolute Encoder
Position Feedback	0.005°	0.005°
Operating Temperature		
Working Temperature	-32°C to +55°C	-32°C to +55°C
Storage Temperature	-40°C to +60°C	-40°C to +60°C
Drive Systems		
Drive System (Pan)	Stepper Motor	BLDC Motor
Drive System (Tilt)	Stepper Motor	BLDC Motor
Brake	Magnetic Brake	Magnetic Brake
Construction		
Exterior Finish	Powder Coat Black (Default), Special Finishes Available	
Weight ***	20.6 kg	20.6 kg
Dimensions ***	487.5x540x170 mm	487.5x540x170 mm
Ambient Conditions and EMI/EMC Compatibility		
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)	
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I	
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I	
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C	
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II	
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I	
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II	
Vibration Compatibility	MIL-STD-810G,Method 514.7 Procedure I	
Shock Compatibility	MIL-STD-810G, Method 516.6 Procedure IV	
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I	
Protection / IP rating	IP67	

Control of Positioner Unit		
Command and Control	GUI-Joysitck-Software	
Protocol	TS-MPT Protocol and Pelco-D	
Power Outputs to Payload *		
24 VDC - 2.4A	Optional	
12 VDC - 2.4A	Optional	
5 VDC - 2.4A	Optional	
Instantly Monitoring		
Power On and Run Time Monitoring	Available	
Voltage Monitoring	Available	
Current Monitoring	Available	
Communication Interfaces to Payload *		
Serial	RS232, RS422, RS485 (2 Channel Configurable)	
TTL	1 Channel	
IP	1 Channel Gigabit Ethernet	
Communication Interfaces to Pantilt**		
Serial	RS232 or RS422/RS485	
IP	Optional	
Connectors *		
Main Connector	D38999/20WD35PN	D38999/20WD35PN
Payload Connector	D38999/20WD35SN	D38999/20WD35SN

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.

PAN TILT

TS-MPT-DUAL SERIES

TS-MPT-DUAL Pan-Tilt positioner series are most powerful and dynamic member of Triyosys Pan-Tilt positioners family.

In DUAL Pan-Tilt series, two different motors used in the positioner unit, two different products can be controlled at different angles. Dual series also have top fixed shaft that can be used for additional positioner or other static payload up to 130 kg

FEATURES

- Have variable transmission ratio and this feature make them perfect.
- Can be used for almost all applications where needed high torque.

Payload Capacity
up to 130 kg

Rated Torque at Tilt Axis
75 Nm

Position Accuracy
0,02°

Position Repeatability
0,02°

Zero backlash

Product Code	TS-MPT-DUAL-1	TS-MPT-DUAL-2
Payload Capacity at Stationary Top Plate	50 kg	
Payload Capacity at Tilt Axis	80 kg (40 kg each side)	
Rated Torque at Tilt Axis	75 Nm	
Power Consumption		
Max. Power Consumption	450 W	350 W
Standby Power Consumption	35 W	
Heater Power	40 W	
Operating Voltage Range	20-32 V	
Pan		
Range of travel *	n × 360° (Continuous Rotation)	
Max. Speed	48°/s	
Min. Speed	0.005°/s	
Tilt		
Range of travel *	180° (+90°/-90°)	
Max. Speed	48 °/s	
Min. Speed	0.005°/s	
Movement of Tilt Arms	Independent Side Arms	Interdependent Side Arms
Position Accuracy and Repeatability		
Position Accuracy	0.05°	
Position Repeatability	0.05°	
Backlash	None	
Rotation Limits		
Software Limits	Available	
Mechanical Limits	Available at Tilt Axis	
Encoder Type and Position Feedback		
Encoder Type *	Absolute Encoder	
Position Feedback	0.005°	
Operating Temperature		
Working Temperature	-32°C to +55°C	
Storage Temperature	-40°C to +60°C	
Drive Systems		
Drive System (Pan)	BLDC Motor	
Drive System (Tilt)	BLDC Motor	
Construction		
Exterior Finish	Powder Coat Black (Default), Special Finishes Available	
Weight ***	60 kg	
Dimensions ***	per request	
Ambient Conditions and EMI/EMC Compatibility		
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)	
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I	
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I	
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C	
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II	
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I	
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II	
Vibration Compatibility	MIL-STD-810G, Method 514.7 Procedure I	
Shock Compatibility	MIL-STD-810G Method 516.6 Procedure IV	
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I	
Protection / IP rating	IP67	

Control of Positioner Unit	
Command and Control	GUI-Joysitck-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - 2.4A	Optional
12 VDC - 2.4A	Optional
5 VDC - 2.4A	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Payload *	
Serial	RS232, RS422, RS485 (2 Channel Configurable)
TTL	1 Channel
IP	1 Channel Gigabit Ethernet
Communication Interfaces to Pantilt**	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PNx2
Stationary Top Plate	D38999/20WD35SN
Tilt Connector	D38999/20WD35SN x2

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.

PAN TILT

TS-MPT HD SERIES

The HD series are precision positioner units with high torque. The positioner units have variable transmission ratio and this feature make them perfect. Thanks to the this feature, the positioner units can be used for almost all applications where needed high torque and high power.

FEATURES

- It can be used in high frequency antennas applications with optional RF output.
- High duty cycle
- IP67 environment protection
- %100 CNC Machined from high strength 6000 series aluminium and stainless steel

Payload Capacity
up to 120 kg

Rated Torque at Tilt Axis
200 Nm

Position Accuracy
0,02°

Position Repeatability
0,08°

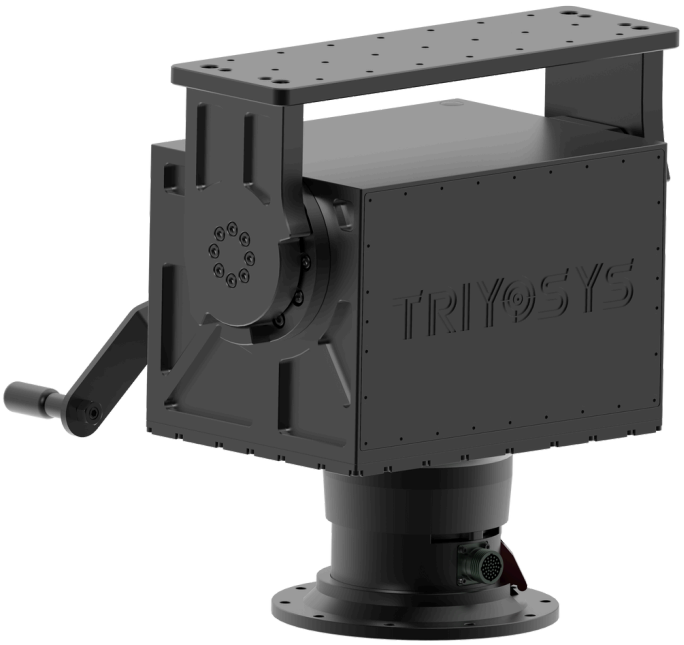
Zero backlash

Product Code	TS-MPT-HD-1
Payload Capacity	120 kg
Rated Torque at Tilt Axis	200 Nm
Power Consumption	
Max. Power Consumption	750 W
Standby Power Consumption	80 W
Heater Power	60 W
Operating Voltage Range	44-52 V
Pan	
Range of travel *	n × 360° (Continuous Rotation)
Max. Speed	36 °/s
Min. Speed	0.005°/s
Tilt	
Range of travel *	180° (+90°/-90°)
Max. Speed	24 °/s
Min. Speed	0.005°/s
Position Accuracy and Repeatability	
Position Accuracy	0.05°
Position Repeatability	0.05°
Backlash	None
Rotation Limits	
Software Limits	Available
Mechanical Limits	Available at Tilt Axis
Encoder Type and Position Feedback	
Encoder Type *	Absolute Encoder
Position Feedback	0.005°
Operating Temperature	
Working Temperature	-32°C to +55°C
Storage Temperature	-40°C to +60°C
Drive Systems	
Drive System (Pan)	BLDC Motor
Drive System (Tilt)	BLDC Motor
Brake	Magnetic Brake
Construction	
Exterior Finish	Powder Coat Black (Default), Special Finishes Available
Weight ***	45 kg
Dimensions ***	465x440x250 mm
Payload Mounting Type	Top and Side Mount
Ambient Conditions	
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I
Protection / IP rating	IP67

Control of Positioner Unit	
Command and Control	GUI-Joysitck-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - 2.4A	Optional
12 VDC - 2.4A	Optional
5 VDC - 2.4A	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Payload **	
Serial	RS232, RS422, RS485 (2 Channel Configurable)
TTL	1 Channel
IP	1 Channel Gigabit Ethernet
Communication Interfaces to Pantilt	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PN
Payload Connector	D38999/20WD35SN x2

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.



PAN TILT

TS-MPT-BLG SERIES

The MPT-BLG Series Pan & Tilt Unit is designed to perform positioning applications of various sensor units. It is designed for payloads up to 100 Kg.

There is ±10° limit on the tilt axis
Tilt drive arm place on the brake shaft and used.
When the tilt axis is desired to be lowered by 90°, the tilt adjustment handle limit is rotated. Tilt mechanical limit is turned off. It bring down in the direction of the arrow shown on the interface.
While taking it back within techanical limits, the tilt adjustment handle return to its previous position with the upper interface. Tilt mechanical limit will be opened.
The brake can be used within 90° and mechanic limits.

FEATURES

- Robust and compact design.
- There is ±10° limit on the tilt axis
- Tilt drive arm place on the brake shaft and used.
- When the tilt axis is desired to be lowered by 90°, the tilt adjustment handle limit is rotated. Tilt mechanical limit is turned off. It bring down in the direction of the arrow shown on the interface.
- While taking it back within techanical limits, the tilt adjustment handle return to its previous position with the upper interface. Tilt mechanical limit will be opened.
- The brake can be used within 90° and mechanic limits.

Payload Capacity
up to 100 kg

Accuracy
0,05°

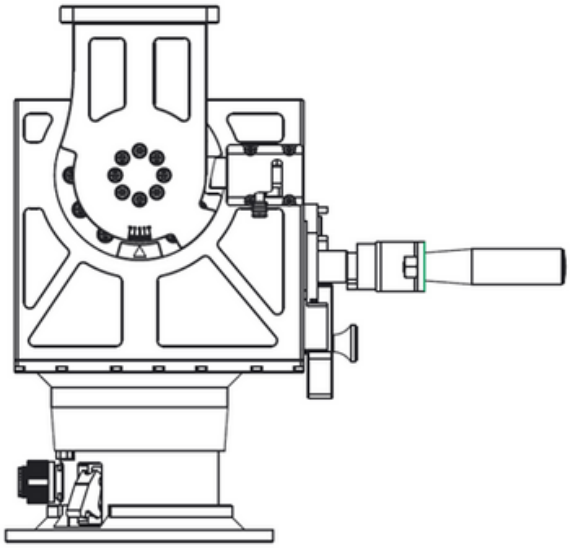
Repeatability
0,02°

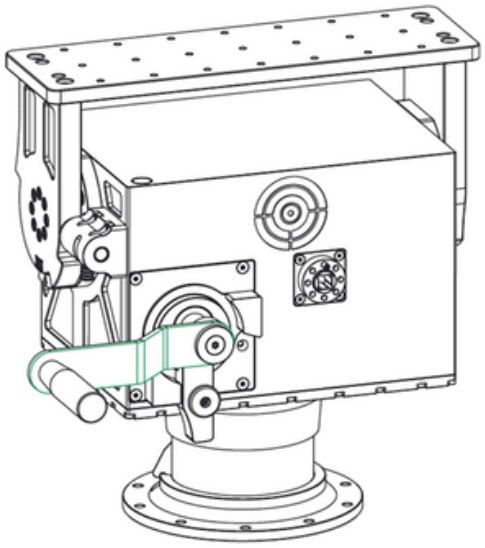
Product Code	TS-MPT-MD-BLG01
Payload Capacity	100 kg
Power Consumption	
Max. Power Consumption	100 W
Standby Power Consumption	2 W
Heater Power	40 W
Operating Voltage Range	18-32 V
Pan	
Range of travel *	n × 360° (Continuous Rotation)
Max. Speed	36 °/s
Min. Speed	0.005°/s
Tilt	
Range of travel *	20° (+10°/-10°)
Tilt Motion	Manual
Position Accuracy and Repeatability	
Position Accuracy	0.05°
Position Repeatability	0.02°
Backlash	0.1°
Rotation Limits	
Software Limits	Available
Mechanical Limits	Available
Encoder Type and Position Feedback	
Encoder Type *	Absolute Encoder
Position Feedback	0.005°
Operating Temperature	
Working Temperature	-32°C to +55°C
Storage Temperature	-40°C to +60°C
Drive Systems	
Drive System (Pan)	Stepper Motor
Drive System (Tilt)	Manual
Construction	
Exterior Finish	Powder Coat Black (Default), Special Finishes Available
Weight	45 kg
Dimensions	420x440x288.7 mm
Payload Mounting Type	Top Mount
Ambient Conditions	
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C
Moisture Resistance	MIL-STD 810G, Method 507.6 Procedure II
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I
Protection / IP rating	IP67

Control of Positioner Unit	
Command and Control	GUI-Joysitck-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - 2.4A	Optional
12 VDC - 2.4A	Optional
5 VDC - 2.4A	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Pantilt	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PN

* If you have other requirements or need further assistance, please reach out to us.
** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.
*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.





PAN TILT

TS-PT 01 SERIES

The PT Series Manual Fine Adjust Pan & Tilt Head is designed for applications where alignment and precise positioning are critical in the line of sight. It has damping and precise adjustment mechanism in both axes.

Axis damping provides great convenience to the user when following moving targets and during initial alignment. The fine adjustment mechanism provides superior alignment precision and braking motion for small targets at far sight.

FEATURES

- Rugged, light weight and compact design.
- Fine adjustment mechanism on two axes.
- Viscous damping.
- Independent braking mechanism.
- Quick release mechanism for payloads (Optional).
- Spirit level.
- Height scale.
- 5/8 ”11 UNC Connection female thread on tripod.
- IP67 Protection class.
- Suitable for indoor and outdoor use.
- It can be transported and installed quickly by a single person.
- Double coating resistant to harsh conditions.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.

Technical data	
Payload Capacity	Max. 6 Kg
Pan Axis Movement	n × 360° (Continuous Rotation)
Tilt Axis Movement	90° (+45°/-45°)
Pan Axis Fine Adjustment	min ±2.5°
Tilt Axis Fine Adjustment	min ±1.13°
Weight	1.16 Kg
Operating Temperature Range	-33°C to +55°C
Protection / IP rating	IP 67

PAN TILT

MANUAL PAN TILT TS-PT-02

TS-PT-02 is a backlash-free and manually controlled routing equipment that has the ability to move in axes suitable for uses where positioning and alignment is required.

FEATURES

- All parts are machined on CNC machines. (No mold was used.)
- 6000 series aluminium and stainless steel materials used in the design.
- Corrosion resistant coating and painting processes have been made.
- 2X M6 connecting interface is available.
- Able to move in 3 axes.
- There are gradual precision measurement values on the pitch axis.

Technical data	
Payload Capacity	15 kg
Weight	2,09 kg
Material	6000 series aluminum and stainless steel
Movement Ability in Roll Axis	±16° (Lockable)
Movement Ability in Pitch Axis	-45° / +90° (Lockable)
Movement Ability in Yaw Axis	n x 360° (Lockable)
Connecting Interface	2X M6 SCREW

PAN TILT

TS-PT-03 SERIES

TS-PT-03 is a backlash-free and manually controlled routing equipment that has the ability to move in axes suitable for uses where positioning and alignment is required.

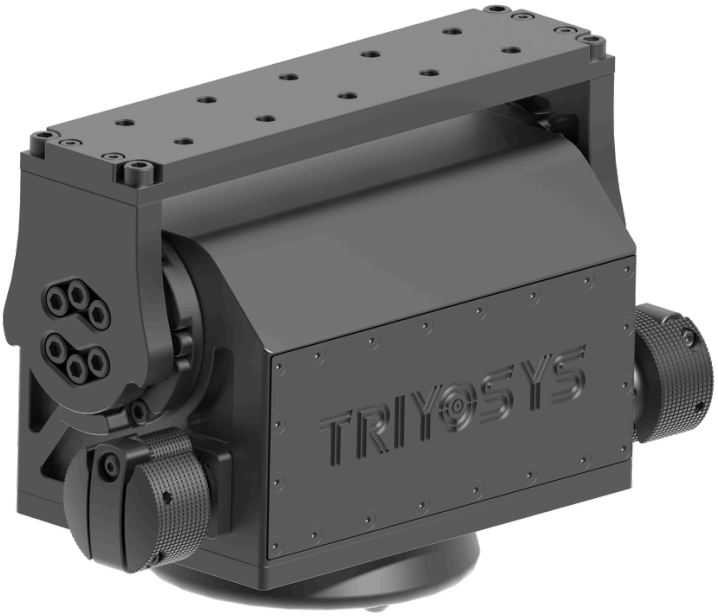
FEATURES

- All parts are machined on CNC machines. (No mold was used.)
- 6000 series aluminium and stainless steel materials used in the design.
- Corrosion resistant coating and painting processes have been made.
- Able to move in 2 axes.
- There are gradual precision measurement values on the pan and tilt axis.

Technical data	
Payload Capacity	10 kg
Weight	1,63 kg
Material	6000 series aluminium and stainless steel
Movement Ability in Pan Axis	n x 360° (Lockable)
Movement Ability in Tilt Axis	-60° / +60° (Lockable)

PAN TILT

TS-PT-05 SERIES



TS-PT-05 is a manual positioner unit capable of moving in pan and tilt axes to positions where precise positioning and alignment is required under heavy loads. Designed according to military standards, the TS-PT-05 positioner unit is resistant to all kinds of harsh conditions.

FEATURES

- Designed for heavy loads up to 50 kg.
- Made of 100% CNC, high strength 6000 series aluminium and stainless steel.
- Corrosion resistant coating and paint
- 5/8”-11 UNC mounting interface port.
- Quick adjustable manual brakes.
- IP-67 protection class.
- Use of portable pan and tilt arms.

Technical data	
Payload Capacity	50 kg
Weight	6 kg
Pan Axis Movement	n × 360° (Lockable)
Tilt Axis Movement	90° (+45° / -45°) (Lockable)
Tilt Axis Fine Adjustment	±1.5°
Operating Temperature Range	-32°C to 55°C
Protection / IP Rating	IP 67
Material	6000 series aluminium and stainless steel

PAN TILT

TS-PT-06 SERIES

TS-PT-06 is a manual positioner unit capable of moving in two axes to positions where precise positioning and alignment is required. It is a product that stands out with its ease of use and lightness.

FEATURES

- All parts are machined on CNC machines.
- 6000 series aluminium and stainless steel are used.
- Corrosion resistant coating and painting processes have been made.
- 2X M6 mounting interface is available.
- It has the ability to move in 2 axes.
- Gradual precision measurement values are available on the Tılt axis.

Technical data	
Payload Capacity	15 kg
Weight	2 kg
Pan Axis Movement	n × 360° (Lockable)
Tilt Axis Movement	90° (+110° / -45°) (Lockable)
Material	6000 series aluminium and stainless steel
Connecting Interface	2X M6 screws


TRIOSYS

TRIPOD

EXTRA HEAVY DUTY SERIES

HDT Series Extra Heavy Duty Tripods are designed for applications where stability and buckling strength are important under extra heavy loads up to 400 Kg.

EHDT Series tripods offer 2 different upper platform options as Flat and 3 Way Leveling (precise horizontal level adjustment). The 3 Way Leveling model allows precise horizontal leveling under extra heavy loads.

FEATURES

- Extra ordinary sturdy construction.
- Extra high torsional strength.
- Suitable for indoor and outdoor use.
- Double coating resistant to harsh conditions.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.
- Reliable support structure with two-stage twin legs.
- Comfortable double lock mechanism for two-stage legs that can be used with one hand.
- Flat and 3 Way Leveling models.
- Precise horizontal leveling adjustment under extra heavy loads with 3 Way Leveling model.
- Stainless steel spikes on each leg.
- Adjustable rubber coated feet for flat surfaces.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Head	Max. Horizontal Leveling
TS-EHDT-F	1085 mm	705 mm (1)	15.3 Kg	400 Kg (1)	⌀ 290 mm, 780 mm	Mitchell Flat	Flat	-
TS-EHDT-L	1220 mm	785 mm (1)	17.2 Kg	400 Kg (1)	⌀ 290 mm, 860 mm	Mitchell Flat	3 Way Leveling	±10 degree

(1) With fixed mid-level spreader

TRIPOD

HEAVY DUTY SERIES

HDT Series Heavy Duty Tripods are designed for heavy load applications up to 300 kg, where stability and torsional strength are important.

HDT Series Heavy Duty Tripods have 8 different model options according to height, head and leg material types. They acquire fixing features to different surfaces with their standard flat and fixing perforated feet .

FEATURES

- Professional tripods designed for heavy loads up to 300 Kg.
- Extraordinary sturdy construction.
- Extra high torsional strength.
- Suitable for indoor and outdoor use.
- Man portable and easy deployment.
- Wide working height range.
- Coating resistant to harsh conditions.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.
- Adjustable flat feet with rubber pad and pinning holes.
- Easy column lock.
- Spirit level for easy leveling.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Height	Head	Legs
TS-HDT-SF-AL	990 mm	630 mm	15.9 Kg	300 Kg	ø335mm, 710mm	6xM5 thread at Ø102 mm, 6xM8 thread at Ø89 mm	Short	Fixed	Aluminium
TS-HDT-SF-CF	990 mm	630 mm	14.5 Kg	300 Kg	ø335mm, 710mm	6xM5 thread at Ø102 mm, 6xM8 thread at Ø89 mm	Short	Fixed	Carbon Fiber
TS-HDT-SA-AL	1400 mm	780 mm	20.2 Kg	250 Kg	ø335mm, 860mm	3½"-8 thread	Short	Adjustable	Aluminium
TS-HDT-SA-CF	1400 mm	780 mm	18.7 Kg	250 Kg	ø335mm, 860mm	3½"-8 thread	Short	Adjustable	Carbon Fiber
TS-HDT-TF-AL	1290 mm	925 mm	19.4 Kg	300 Kg	ø335mm, 1045mm	6xM5 thread at Ø102 mm, 6xM8 thread at Ø89 mm	Tall	Fixed	Aluminium
TS-HDT-TF-CF	1290 mm	925 mm	16.6 Kg	300 Kg	ø335mm, 1045mm	6xM5 thread at Ø102 mm, 6xM8 thread at Ø89 mm	Tall	Fixed	Carbon Fiber
TS-HDT-TA-AL	1850 mm	1060 mm	24.5 Kg	250 Kg	ø335mm, 1180mm	3½"-8 thread	Tall	Adjustable	Aluminium
TS-HDT-TA-CF	1850 mm	1060 mm	21.7 Kg	250 Kg	ø335mm, 1180mm	3½"-8 thread	Tall	Adjustable	Carbon Fiber

TRIPOD

HEAVY DUTY G SERIES

HDT G Series Heavy Duty Tripods are designed for heavy load applications up to 150 kg, where stability and torsional strength are important.

HDT G Series Heavy Duty Tripods have 2 different model options according to fixed and adjustable superstructure design. They acquire fixing features to different surfaces with their standard flat and fixing perforated feet .

FEATURES

- Professional tripods designed for heavy loads up to 150 Kg.
- Sturdy construction.
- High torsional strength.
- Suitable for indoor and outdoor use.
- Man portable and easy deployment.
- Wide working height range.
- Coating resistant to harsh conditions.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.
- Adjustable flat feet with rubber pad and pinning holes.
- Column lock.
- Spirit level for easy leveling.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Head
TS-HDT-G-F-AL	1290 mm	814 mm	8,2 kg	150 kg	⌀320 mm, 955 mm	6xM5 thread at ⌀102 mm	Fixed
TS-HDT-G-A-AL	1885 mm	933 mm	13,2 kg	100 kg	⌀320 mm, 1150 mm	⌀59.7 mm h11	Adjustable

TRIPOD

MEDIUM DUTY SERIES

MDT Series Medium Duty Tripods are ideal for the the application where portability and durability are important. They are strong three-foot platforms with high torsional strength. The rugged construction of the MDT Series tripods make them ideal for a wide range of general support applications.

MDT series tripods have 7 different models according to the center, leg materials and wide height ranges.

FEATURES

- Extraordinary rugged, compact and light construction.
- High torsional strength. Ideal for rotating loads.
- Man portable and easy deployment.
- Suitable for indoor and outdoor use.
- 10 layer carbon fiber winding pipes in models with carbon fiber legs.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.
- Independently adjustable leg angles and lengths.
- Superior strength and stability with 42mm diameter aluminum and 10x layer carbon fiber upper legs.
- Spirit level for easy leveling.
- Rubber coated stainless steel round feet.
- aluminium twist lock lock structure.
- Black hard anodized coating.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Center
TS-TR422-CC-AL	1085 mm	180 mm	3.5 Kg	80 Kg	⌀215 mm, 670 mm	5/8 ”11 UNC draw bolt	Center Column
TS-TR423-CC-AL	1500 mm	185 mm	4.4 Kg	80 Kg	⌀215 mm, 730mm	5/8 ”11 UNC draw bolt	Center Column
TS-TR424-CC-AL	2000 mm	190 mm	5.1 Kg	70 Kg	⌀215 mm, 780mm	5/8 ”11 UNC draw bolt	Center Column
TS-TR422-CC-CF	1085 mm	180 mm	3.1 Kg	80 Kg	⌀215 mm, 670 mm	5/8 ”11 UNC draw bolt	Center Column
TS-TR423-CC-CF	1500 mm	185 mm	3.8 Kg	80 Kg	⌀215 mm, 730mm	5/8 ”11 UNC draw bolt	Center Column
TS-TR424-CC-CF	2000 mm	190 mm	4.3 Kg	70 Kg	⌀215 mm, 780mm	5/8 ”11 UNC draw bolt	Center Column
TS-TR422-CL-AL	1200 mm	680 mm	4.3 Kg	100 Kg	⌀230 mm, 745mm	6xM6 thread at ⌀76 mm	Center Leg

TRIPOD

MEDIUM-G DUTY G SERIES

HDT G Series Heavy Duty Tripods are designed for heavy load applications up to 150 kg, where stability and torsional strength are important.

HDT G Series Heavy Duty Tripods have 2 different model options according to fixed and adjustable superstructure design. They acquire fixing features to different surfaces with their standard flat and fixing perforated feet .

FEATURES

- Professional tripods designed for heavy loads up to 150 kg.
- Sturdy construction.
- High torsional strength.
- Suitable for indoor and outdoor use.
- Man portable and easy deployment.
- Wide working height range.
- Coating resistant to harsh conditions.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.
- Adjustable flat feet with rubber pad and pinning holes.
- Column lock.
- Spirit level for easy leveling.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Head
TS-MDT-G-A-AL	1290 mm	814 mm	8,2 kg	150 kg	ø310 mm, 910 mm	6xM5 thread at ø102 mm	Fixed

TRIPOD

MEDIUM DUTY S SERIES

MDT-S Series Medium Duty Tripods are ideal for the the application where portability and durability are important. They are strong three-foot platforms with high torsional strength. The rugged construction of the MDT-S Series tripods make them ideal for a wide range of general support applications.

MDT-S series tripods with 4 different model options gain fixing features according to different surface types with suitable foot accessories.

FEATURES

- Extraordinary rugged, compact and light construction.
- High torsional strength. Ideal for rotating loads.
- Wide working height range.
- Man portable and easy depoloyment.
- Suitable for indoor and outdoor use.
- 5/8 ”11 UNC draw bolt.
- 100% CNC Machined from high strength 6000 series aluminum and stainless steel.
- Independently adjustable leg angles and lengths.
- Superior strength and stability with 42mm diameter aluminium upper legs.
- Rubber coated stainless steel round feet.
- Aluminium twist lock lock structure.
- Black hard anodized coating.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Center	Leg Section
TS-S-TR422-CC-AL	1050 mm	180 mm	3.1 Kg	80 Kg	⌀215 mm, 660 mm	5/8 ”11 UNC draw bolt	Center Column	2
TS-S-TR423-CC-AL	1500 mm	185 mm	3.9 Kg	80 Kg	⌀215 mm, 720 mm	5/8 ”11 UNC draw bolt	Center Column	3
TS-S-TR424-CC-AL	2000 mm	190 mm	4.5 Kg	70 Kg	⌀215 mm, 770 mm	5/8 ”11 UNC draw bolt	Center Column	4
TS-S-TR422-CL-AL	1200 mm	680 mm	4.1 Kg	100 Kg	⌀215 mm, 735 mm	3xM6 at ⌀60 mm	Center Leg	2

TRIPOD

LIGHT DUTY SERIES

LDT Series Light Duty Tripods designed to meet the requirements in applications where weight, portability and durability are important. They are balanced tripod platforms that allow easy and fast assembly of devices with a suitable interface. The robust construction of Light Duty Tripods made them ideal for a wide range of general purpose support applications.

LDT series tripods with 12 different model options according to center types, leg material and leg section numbers gain fixing features according to different surface types with suitable foot accessories.

FEATURES

- Lightweight, robust and compact design.
- It can be transported and installed quickly by a single person.
- 10 layer carbon fiber winding pipes with models that have carbon fiber legs.
- Independently adjustable leg angles and lengths.
- 3 different pre-set leg angles that can be adjusted by finger for fast installation.
- Superior strength and stability with 34mm diameter aluminium and 10x layer carbon fiber upper legs.
- Aluminium twist lock lock structure.
- Hard black anodized coating.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Center	Leg Material	Leg Section
TS-TR342-CC-AL	1080 mm	135 mm	2.8 Kg	50 Kg	⌀190 mm, 675 mm	5/8 ”11 UNC draw bolt	Center Column	Aluminium	2
TS-TR343-CC-AL	1500 mm	140 mm	3.4 Kg	50Kg	⌀190 mm, 720 mm	5/8 ”11 UNC draw bolt	Center Column	Aluminium	3
TS-TR344-CC-AL	2000 mm	145 mm	3.9 Kg	40 Kg	⌀190 mm, 775 mm	5/8 ”11 UNC draw bolt	Center Column	Aluminium	4
TS-TR342-CC-CF	1080 mm	135 mm	2.4 Kg	50 Kg	⌀190 mm, 675 mm	5/8 ”11 UNC draw bolt	Center Column	Carbon Fiber	2
TS-TR343-CC-CF	1500 mm	140 mm	2.9 Kg	50Kg	⌀190 mm, 720 mm	5/8 ”11 UNC draw bolt	Center Column	Carbon Fiber	3
TS-TR344-CC-CF	2000 mm	145 mm	3.3 Kg	40 Kg	⌀190 mm, 775 mm	5/8 ”11 UNC draw bolt	Center Column	Carbon Fiber	4
TS-TR342-AC-AL	1500 mm	600 mm	3 Kg	30 Kg	⌀190mm, 715 mm	3/8"-16 UNC thread	Adjustable Center Column	Aluminium	2
TS-TR343-AC-AL	2000 mm	605 mm	3.6 Kg	30 Kg	⌀190mm, 770 mm	3/8"-16 UNC thread	Adjustable Center Column	Aluminium	3
TS-TR344-AC-AL	2500 mm	610 mm	4.1 Kg	30 Kg	⌀190mm, 815 mm	3/8"-16 UNC thread	Adjustable Center Column	Aluminium	4
TS-TR342-AC-CF	1500 mm	600 mm	2.6 Kg	30 Kg	⌀190mm, 715 mm	3/8"-16 UNC thread	Adjustable Center Column	Carbon Fiber	2
TS-TR343-AC-CF	2000 mm	605 mm	3 Kg	30 Kg	⌀190mm, 770 mm	3/8"-16 UNC thread	Adjustable Center Column	Carbon Fiber	3
TS-TR344-AC-CF	2500 mm	610 mm	3.4 Kg	30 Kg	⌀190mm, 815 mm	3/8"-16 UNC thread	Adjustable Center Column	Carbon Fiber	4

TRIPOD

LIGHT DUTY S SERIES

LDT-S Series Light Duty Tripods designed to meet the requirements in applications where weight, portability and durability are important. They are balanced tripod platforms that allow easy and fast assembly of devices with a suitable interface. The robust construction of Light Duty Tripods (S) made them ideal for a wide range of general purpose support applications.

LDT-S series tripods, which have 3 different model options, acquire fixing features according to different surface types with suitable foot accessories.

FEATURES

- Lightweight, robust and compact design.
- Wide working height range.
- It can be transported and installed quickly by a single person.
- Suitable for indoor and outdoor use.
- 5/8 ”11 UNC draw bolt thread.
- Independently adjustable leg angles and lengths.
- 100% CNC Machined from high strength 6000 series aluminum and stainless steel.
- Superior strength and stability with 34 mm diameter aluminium upper legs.
- Rubber coated stainless steel round feet.
- Aluminium twist lock lock structure.
- Hard black anodized coating.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Leg Section
TS-S-TR342-CC-AL	1050 mm	190 mm	2.4 Kg	50 Kg	⌀190 mm, 655 mm	5/8 ”11 UNC draw bolt	2
TS-S-TR343-CC-AL	1500 mm	200 mm	3 Kg	50 Kg	⌀190 mm, 700 mm	5/8 ”11 UNC draw bolt	3
TS-S-TR344-CC-AL	2000 mm	205 mm	3.4 Kg	50 Kg	⌀190 mm, 760 mm	5/8 ”11 UNC draw bolt	4

TRIPOD

ULTRA LIGHT DUTY S SERIES

ULDT-S Series Ultra Light Duty Tripods are solid, ultra-light, high-performance and stable 3-foot support platforms for wide application areas. Balanced tripod platforms that allow easy and fast assembly of devices with a suitable tripod interface.

ULDT-S Series tripods have 3 different model options designed to be used by lying down, sitting and standing.

FEATURES

- Lightweight, robust and compact design.
- Wide working height range.
- It can be transported and installed quickly by a single person.
- Suitable for indoor and outdoor use.
- 5/8 ”11 UNC draw bolt thread.
- Independently adjustable leg angles and lengths.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.
- Superior strength and stability with 34mm diameter aluminium upper legs.
- Rubber coated stainless steel round feet.
- Aluminium twist lock lock structure.
- Hard black anodized coating.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Interface	Height	Leg Section
TS-S-TR302S-CC-AL	580 mm	140 mm	1.6 Kg	25 Kg	⌀185 mm, 380 mm	5/8 ”11 UNC draw bolt	Short	2
TS-S-TR302T-CC-AL	720 mm	175 mm	1.8 Kg	20 Kg	⌀185 mm, 460 mm	5/8 ”11 UNC draw bolt	Tall	2
TS-S-TR303-CC-AL	1500 mm	260 mm	2.6 Kg	15 Kg	⌀185 mm, 685 mm	5/8 ”11 UNC draw bolt	Tall	3

HEAVY MACHINE GUNS TRIPOD

M2 SERIES

M2 Tripods are designed for heavy load applications, where stability and torsional strength are important. It has a body that can be easily adjusted in diffucult terrain conditions. Made for heavy machine guns.

FEATURES

- Professional tripods designed for heavy loads.
- Sturdy construction.
- High torsional strength.
- Suitable for indoor and outdoor use.
- Wide working height range.
- Coating resistant to harsh conditions.

Product Number	Max. Height	Min. Height	Weight	Load Capacity	Stowed Dimensions	Mounting Interface
TS-M2T-01	330 mm	230 mm	16 kg	80 Kg	Ø490mm,1190mm	Ø40 H11

3 WAY LEVELING (MANUAL)

M2 SERIES

With its light weight and compact structure, our mechanical product allows the leveling of products and systems within an angle range of ± 10 degrees.

FEATURES

- All parts are manufactured by CNC machining methods (not cast).
- 7000 series aluminium and stainless steel are used.
- Hard anodized coating for corrosion resistance.
- Thanks to the sensitive spirit level on it, the desired ±10 degree angle .
- allows easy leveling across the range.
- Each arm rotated one turn produces an angle accuracy of 1.34 degrees.
- MIL-STD-810G 514.6 ANNEX C FIGURE 514.6C-3. TABLE 514.6C-VI.
- Category - 4 - Composite wheeled vehicle vibration exposure.
- MIL-STD-810G 516.6-II(20g 11 ms) .
- Carrying Capacity: 40 kg .
- Weight: 9 kg.

Product Number	Weight	Load Capacity	Stowed Dimensions	Mounting Interface
TS-M2T-01	9 kg	40 Kg	Ø490mm,1190mm	Ø40 H11

TELESCOPIC MAST

PORTABLE MANUAL

It is an elevating system that can be manually extended to full open height in one minute or less.

Thanks to the quick lock/release mechanism, height adjustment can be made at each node. Thanks to its portable structure, it is ideal for situations that need to be deployed very quickly.

FEATURES

- Strong lock mechanism
- Different length variants according to need
- High corrosion resistance
- Support brakets for optional usage
- Short setup time

Model	TS-LDM-T-M-MN□03-AL	TS-LDM-T-M-MN-05- AL	TS-LDM-T-M-MN□07-AL	TS-LDM-T-M-MN-09- AL
Max. Height	3 m	5 m	7 m	9 m
Min. Height	1,3 m	1,6 m	1,8 m	2 m
Weigh	8.3 kg	12,5 kg	16,5 kg	20 kg
Load Capacity	10 kg	10 kg	10 kg	10 kg
Number of Section	2	3	4	5
Collar Type	Friction Locking	Friction Locking	Friction Locking	Friction Locking

MAST SYSTEM

PORTABLE MANUAL

They are the systems in which height adjustment is made by adding a node with a roller mechanism.

Thanks to the static balan-ce of the tripod legs, it offers safe use in the field environment. With its light and compact design, all equipment of the lifting system can be easily transported and deployed quickly.

FEATURES

- Height adjustment between 2-15 meters.
- Easy installation between 2-30 minutes.
- Ability to work statically at all height capacities with the rope mechanism.
- Corrosion resistant black anodized coating.

Model	System Height	MAx Payload	Average Deployment	Min number of ropes
TS-HDM-E-M-MN-02-AL	2 m	50 kg	2-15 min	0-1
TS-HDM-E-M-MN-03-AL	3 m	47 kg	2-15 min	0-1
TS-HDM-E-M-MN-04-AL	4 m	40 kg	2-15 min	0-1
TS-HDM-E-M-MN-05-AL	5 m	36 kg	2-15 min	0-1
TS-HDM-E-M-MN-06-AL	6 m	32 kg	2-15 min	1-2
TS-HDM-E-M-MN-07-AL	7 m	30 kg	15-18 min	1-2
TS-HDM-E-M-MN-08-AL	8 m	28 kg	15-18 min	1-2
TS-HDM-E-M-MN-09-AL	9 m	25 kg	15-18 min	2-3
TS-HDM-E-M-MN-10-AL	10 m	22 kg	15-18 min	2-3
TS-HDM-E-M-MN-11-AL	11 m	18 kg	20-25 min	2-3
TS-HDM-E-M-MN-12-AL	12 m	15 kg	20-25 min	3-4
TS-HDM-E-M-MN-13-AL	13 m	12 kg	20-25 min	3-4
TS-HDM-E-M-MN-14-AL	14 m	10 kg	25-30 min	3-4
TS-HDM-E-M-MN-15-AL	15 m	9 kg	25-30 min	4-5

WIPERS

WIPERS SETS

Wiper has been developed for lens cleaning solutions of various cameras and optical systems. It is waterproof and suitable for marine applications. It has been designed and tested to work in harsh conditions.

A flexible cleaning angle is offered with the electronic system. Movement range, direction and position of the wipers can be programmed. With cylindrical design, it can be easily mounted.

FEATURES

- Rugged, lightweight and compact design.
- Programmable movement range.
- Programmable position.
- Independent structure.
- Strong structure for harsh conditions.
- Speed adjustment.
- Compatible with different optic systems.
- Low cost solution for lens cleaning.
- IP 67 protection class.
- Configuration and control panel.
- Possibility to read the total number of revolution
- Possibility to read instant temperature information.
- Low voltage and high current protection.
- Possibility to read the total number of laps.
- High temperature protection.
- Possibility of starting and ending angle adjustment.

Product Number BLDC	Product Number BLDC Motor Blade	Product Number BLDC Motor Blade
TS-AS-01-01	TS-AS-BLDC-0001	TS-AS-120-83-24
TS-AS-01-02	TS-AS-BLDC-0001	TS-AS-87-80-18
TS-AS-01-03	TS-AS-BLDC-0001	TS-AS-63-80-18
TS-AS-01-04	TS-AS-BLDC-0001	TS-AS-75-80-18
TS-AS-01-05	TS-AS-BLDC-0001	TS-AS-63-99.5-80
TS-AS-02-01	TS-AS-BLDC-0002	TS-AS-120-83-24
TS-AS-02-02	TS-AS-BLDC-0002	TS-AS-87-80-18
TS-AS-02-03	TS-AS-BLDC-0002	TS-AS-63-80-18
TS-AS-02-04	TS-AS-BLDC-0002	TS-AS-75-80-18
TS-AS-02-05	TS-AS-BLDC-0002	TS-AS-63-99.5-80
TS-AS-03-01	TS-AS-BLDC-0003	TS-AS-120-83-24
TS-AS-03-02	TS-AS-BLDC-0003	TS-AS-87-80-18
TS-AS-03-03	TS-AS-BLDC-0003	TS-AS-63-80-18
TS-AS-03-04	TS-AS-BLDC-0003	TS-AS-75-80-18
TS-AS-03-05	TS-AS-BLDC-0003	TS-AS-63-99.5-80

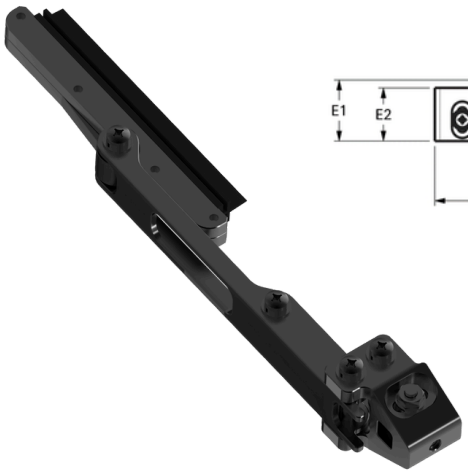
WIPERS

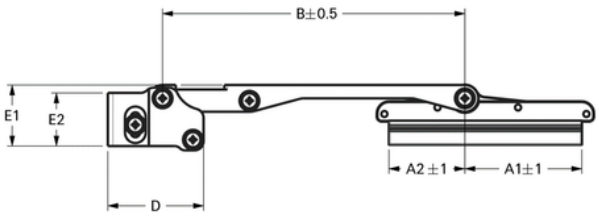
WIPERS MOTORS

Wiper motors can be purchased separately or as a set with blades.

Wiper motor types vary according to motor shaft dimensions.

Product Number	TS-AS-BLDC-0001	TS-AS-BLDC-0002	TS-AS-BLDC-0003
Weight	0.5 Kg	0.5 Kg	0.5 Kg
Speed (24VDC)	300°/s (± 50°/s)	300°/s (± 50°/s)	300°/s (± 50°/s)
Max. Rated Torque	0.35 Nm	0.35 Nm	0.35 Nm
Max. Wipe Angle	±175°	±175°	±175°
Input Voltage	18-32 V	18-32 V	18-32 V
Input Current	150 mA Average / 1.7 A Max.	150 mA Average / 1.7 A Max.	150 mA Average / 1.7 A Max.
Lifetime	10 Million Tours	10 Million Tours	10 Million Tours
Operating temperature	-32°C / +55°C	-32°C / +55°C	-32°C / +55°C
Storage Temperature	-40°C / +85°C	-40°C / +85°C	-40°C / +85°C
Protection / IP rating	IP 67	IP 67	IP 67
C1	18 mm	24 mm	30 mm
C2	10 mm	16 mm	32 mm
Connector	D38999/24KA35PN	D38999/24KA35PN	D38999/24KA35PN





WIPERS

WIPERS BLADES

Wiper motors can be purchased separately or as a set with blades.

Wiper motor types vary according to motor shaft dimensions.

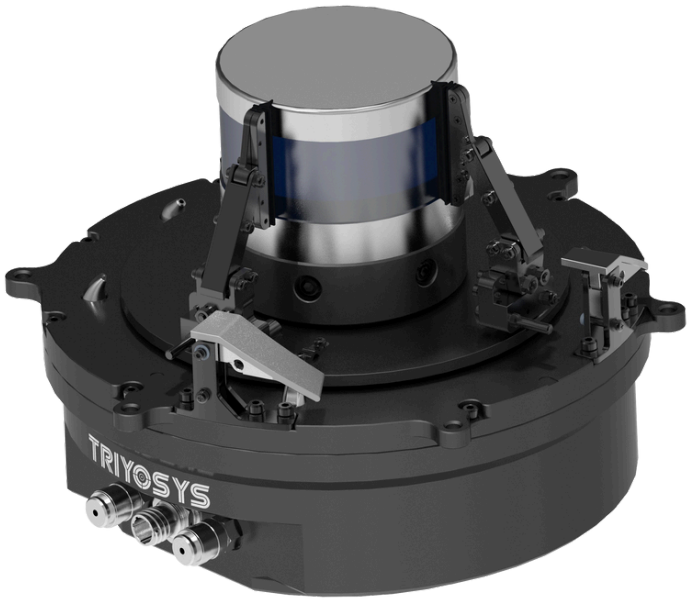
Product Number	TS-AS-120-83-24	TS-AS-87-80-18	TS-AS-63-80-18	TS-AS-75-80-18	TS-AS-63-99.5-80
A1	60 mm	41 mm	38.5 mm	37.5 mm	38.5 mm
A2	60 mm	46 mm	25 mm	37.5 mm	25 mm
B	83 mm	80 mm	80 mm	80 mm	99.5 mm
D	24.5 mm	24.5 mm	24.5 mm	24.5 mm	31.5 mm
E1	19 mm	19 mm	19 mm	19 mm	20 mm
E2	14 mm	14 mm	14 mm	14 mm	14 mm

PUCK WIPER

ULTRA PUCK WIPER TS-WP-01

Ultra puck wiper system is designed for Velodyne lidar ultra puck sensor. Wiper station can clean this sensor, which will work in harsh conditions, in a very short time with two water nozzles.

The sensor can be cleaned 360 degrees with 2 wipers without entering the view of sensor in 360° range. In addition, an air shield is created for the sensor with four air nozzles.



PUCK WIPER

PUCK WIPER TS-WP-02

Puck wiper system is designed for Velodyne lidar puck sensor. Wiper station can clean this sensor, which will work in harsh conditions, in a very short time with water nozzle.

The sensor can be cleaned 360 degrees with 2 wipers. In addition, an air shield is created for the sensor with four air nozzles. It can be placed in narrow spaces with the minimal design of the wiper station

Technical specification	TS-WP-01	TS-WP-02
Wiper Number	2	2
Weight	7 kg	6,5 kg
Material	6000 Series Aluminium and Stainless Steel	6000 Series Aluminium and Stainless Steel
Air Nozzle	4	2
Water Nozzle	2	1
Height	241 mm	206 mm
Diameter	260 mm	260 mm
Working time	3 sec	3 sec

BALL HEAD

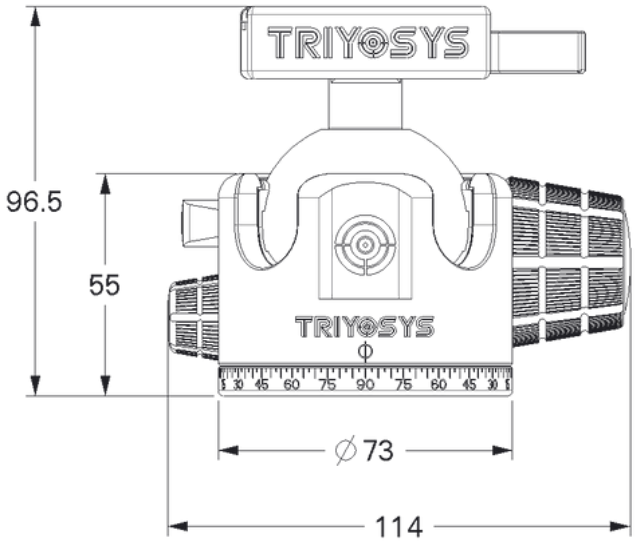
TS-BH-01

The ball head consists of a ball placed in a case. this case allows free movement in all three axis of rotation. the ball head could turn 360 degrees continues on pan axis. also, it has added a notch to turn 180 degrees on the tilt axis.

When the ball head is placed to the desired position, the clamps is tighten and the current position is maintained in tilt and pan. All you need to do to bring it again to the free move position is to open the clamps.

FEATURES

- 2 different adjustment levers, rigid and precise, for positioning within an angle range of 90 degrees on the tilt axis.
- Water gauge for easy positioning.
- There is laser marking at 2.5 degree intervals for easy and precise positioning on the pan axis. And it has a brake lever to fix in the desired position.
- Deep Groove ball bearing is used for smooth feel in clamping arms.
- %100 CNC machined high strength 6000 series aluminium and stainless steel are used.



Technical specification	
Load Capacity	24 kg
Weight	0,9 kg
Height	96.5 mm
Max Tilt Angle	90º
Ball Diameter	55 mm
Base Diameter	72.7 mm
Materials	6000 Series Aluminium and Stainless Steel
Tripod Mount	3/8”-16

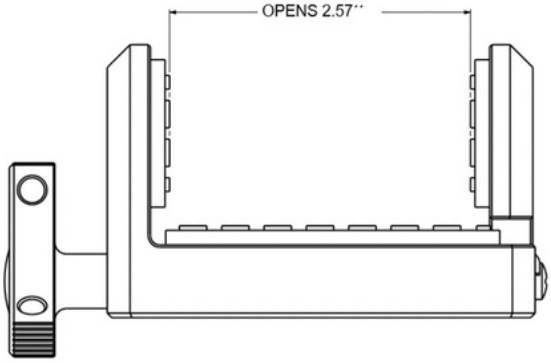
RIFLE MOUNT

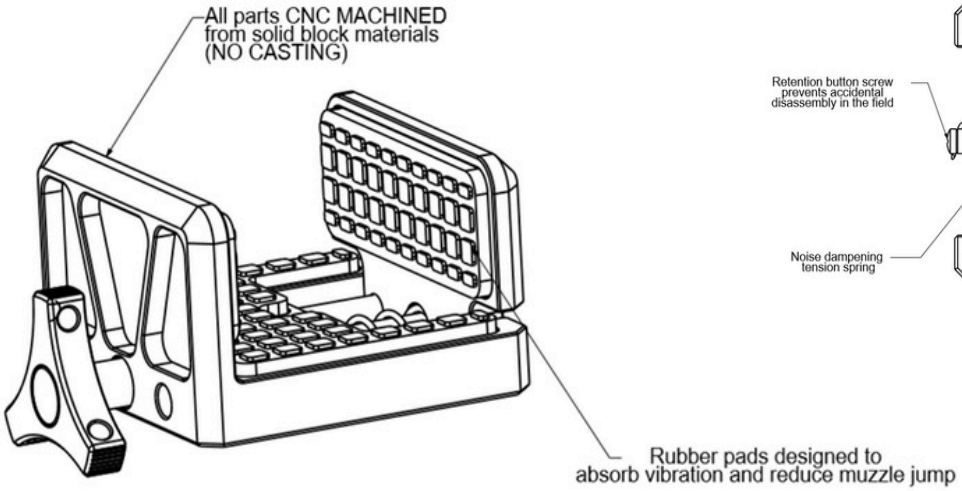
TS-RM-01

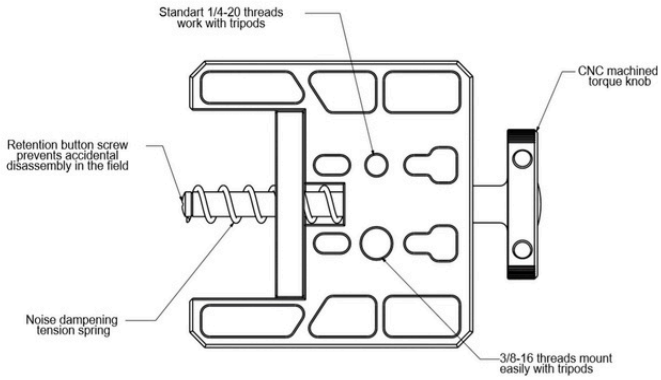
TS-RM-01 rifle mount is designed to make accurate and precision shot, which will make standard tripod to the stable shooting in any field conditions.

FEATURES

- All parts are CNC MACHINED from solid block materials (NO CASTING).
- Made from high strength 6000 series aircraft grade aluminium and stainless steel.
- Hard anodized finish, for superior resistance to corrosion.
- ¼ -20 mounting threads and 3/8-16 back up threads.
- Rubber pads to avoid vibration.
- Weight: 450 g (16 oz).







Technical specification	TS-RM-01
Weight	450g / 16oz
Tripod Mounts	¼ -20 mounting threads and 3/8-16 back up threads
Material	6000 Series Aluminium and Stainless steel
Open Width	65.3mm / 2.57”
Close Width	39.1mm / 1.54”

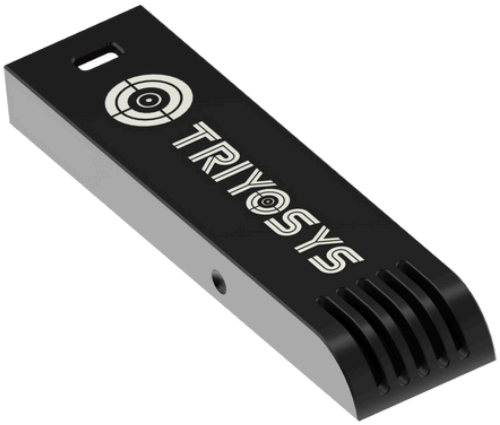
TEMPERATURE AND HUMIDITY SENSOR

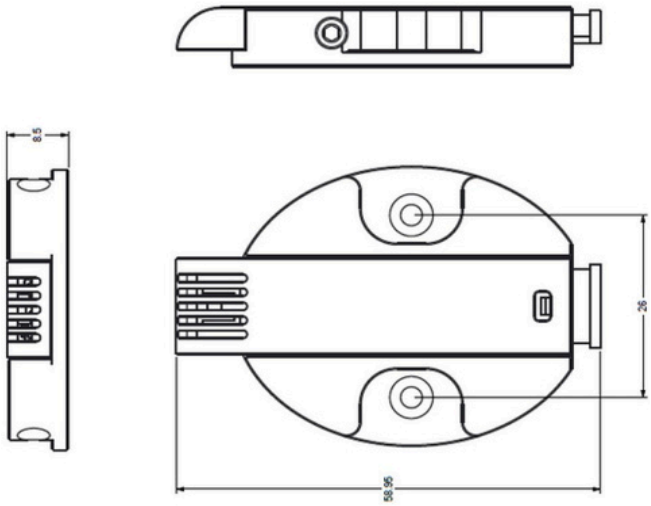
TS-S-TH-02

It is a temperature and relative humidity sensor with high measurement accuracy, which can fit into small and narrow spaces with its compact design. It has low power consumption, it can send measurement data digitally over only 2 wires.
It can make stable measurements at different humidity and temperature values. Thanks to the mounting apparatus, it can be easily mounted in electronic device boxes and other environments. With its plug-in feature, it can be run quickly without the need for any driver and program.

FEATURES

- With its small and compact design, it can fit into small and narrow spaces.
- It has high measurement accuracy.
- Thanks to the mounting apparatus, it can be easily integrated into different surfaces.
- It can be operated without the need for any program with its plug-in feature.

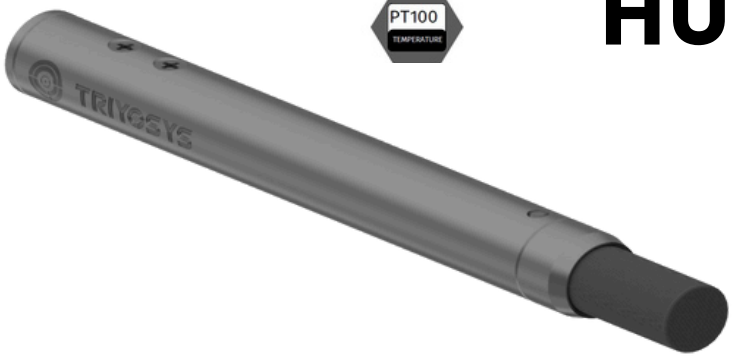




Technical specification	TS-S-TH-02
Measuring Range Temperature	-40....+85 °C
Measuring Range Relative Humidity	0...95 %r.h.
Accuracy Air Temperature	± 0.3 °C
Accuracy Relative Humidity	± 3 % r. h
Humidity value dependent on temperature	±0.00035 x Relative Humidity x (T-20 °C)
Supply Voltage	2.5 - 5.5 VDC
Output	Two-wire (SCL-SDA)
Frequency	500Hz - 5kHz
Protection Rating	IP20
Cable	2m

AIR TEMPERATURE AND RELATIVE HUMIDITY SENSOR

TS-S-TH



It is a sensitive sensor that can work in harsh weather and ambient conditions to measure relative humidity and air temperature. It has low power consumption and high measurement accuracy.
Thanks to the sinter filter on it, it can make reliable measurements in any environment. It has analog, digital and both analog and digital outputs. It can be easily mounted on different structures such as ships and buildings. It can work in harsh weather conditions with its accessories.

TECHNICAL DATA:

- Measuring Range Air Temperature: -40....+70 °C.
- Measuring Range Relative Humidity: 0...100 %r.h.
- Accuracy Air Temperature: ± 0.1 °C, 1/3 DIN IEC 751 Class B.
- Accuracy Relative Humidity: ± 2 % r. h. at: 5...95 % r. h. • +10...+40 °C (at > 0.5 m/s) • plus: 0.1 % r. h./ °C at: +10 °C • > +40 °C.
- Range of Application: 0...100 % r. h. • -40...+70 °C
- Supply Voltage and Power Consumption: 6...30 VDC ---- 10mA.
- Measuring Elements: Humidity: Capacitive, Temperature: Pt100 1/3 DIN (DIN EN 60571) • IEC 751 Class B (± 0.1 °C).
- Housing: Stainless steel • IP 65 • Protection class of filter IP 40 • Sinter filter for outdoor use
- Dimensions and Weight: 0.2 kg.
- Cable: 3 m.

Functions	TS-S-TH-01 With analog output		TS-S-TH-01-DI With digital output		TS-S-TH-01-DA With both analog output and digital output	
	Pin Description	Pin Number	Pin Description	Pin Number	Pin Description	Pin Number
Supply pins	Vin (+)	1	Vin (+)	1	Vin (+)	1
	GND (-)	2	GND (-)	2	GND (-)	2
Analog Output Pins	0 - 1VDC (+)	3	-	-	0 - 1VDC (+)	3
	0 - 1VDC (GND)	4	-	-	0 - 1VDC (GND)	4
Digital Output Pins	-	-	TX (+)	3	TX (+)	5
	-	-	TX (-)	4	TX (-)	6
PT100 Output Pins	Force (+)	5	RX (+)	5	RX (+)	7
	Force (-)	6	RX (-)	6	RX (-)	8
	RTDIN (+)	7	RS-GND	7	RS-GND	9
	RTDIN(-)	8	Force (+)	8	Force (+)	10
	-	-	Force (-)	9	Force (-)	11
	-	-	RTDIN (+)	10	RTDIN (+)	12
	-	-	RTDIN(-)	11	RTDIN(-)	13

WIND SPEED SENSOR

TS-S-WS-01

The wind-speed sensor can be easily used in all kinds of industrial applications with its high sensitivity , simple assembly and robust structure.

FEATURES

- High precision and compact design.
- Fast and direct assembly.
- Operation in a wide temperature range.
- Wide wind speed measurement range.
- Magnetic start value and non-contact measuring principle.

Technical specification	TS-S-WS-01
Measuring range	0 to 50 m/s
Precision	< ± %2
Analog Output	4 to 20 mA
Accuracy Relative Humidity	± 3 % r. h
Heating	Available (18 W)
Power Source	20 to 28 VDc
Dimensions	95 X 230 mm
Weight	250 g
Operating Temperature	-30 to +70C°

WIND DIRECTION SENSOR

TS-S-WD-01

The wind-speed sensor can be easily used in all kinds of industrial applications with its high sensitivity , simple assembly and robust structure.

FEATURES

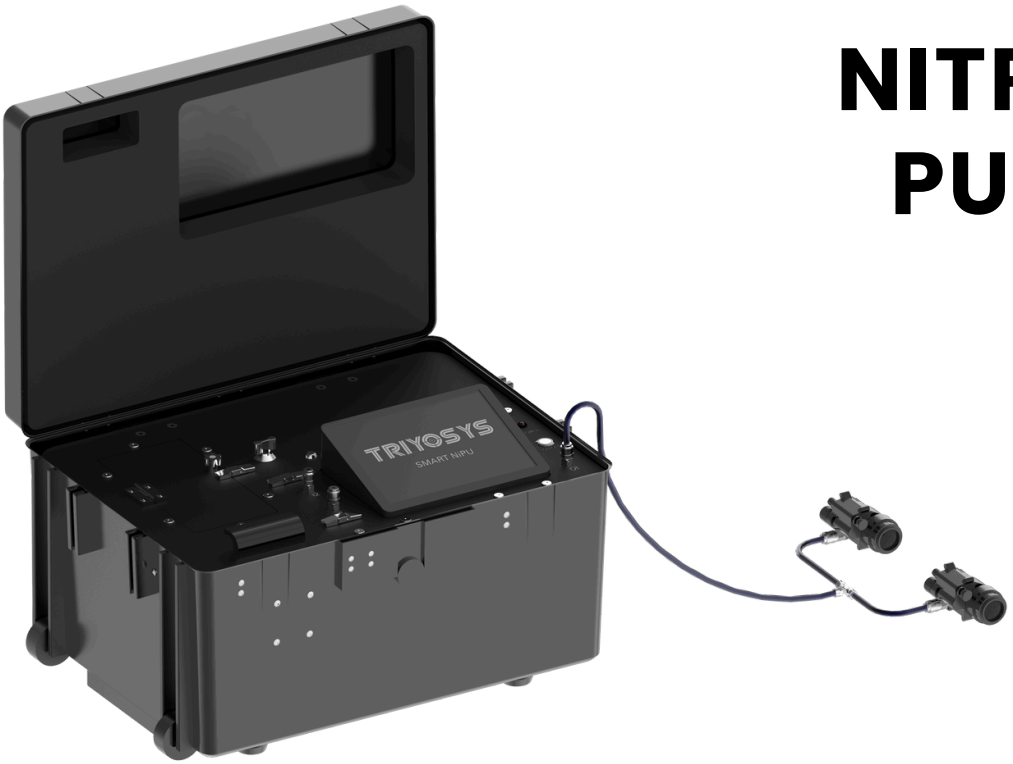
- High precision and compact design.
- Fast and direct assembly.
- Operation in a wide temperature range.
- Magnetic start value and non-contact measuring principle.
- 0 to 360 degree measuring range.
- Blade type wind vane.

Technical specification	TS-S-WS-01
Measuring range	0 to 360°
Precision	±2°
Analog Output	4 to 20 mA
Accuracy Relative Humidity	± 3 % r. h
Heating	Available (18 W)
Power Source	20 to 28 VDc
Dimensions	232 X 327 mm
Weight	350 g
Operating Temperature	-30 to +70C°

SMART NİPU NITROGEN PURGING UNIT

In the realm of high-precision electronic and optical equipment, especially high voltage laser systems, maintaining an optimal environment is crucial. The introduction of SMART NiPU marks a significant advancement in this field. This cutting-edge technology is specifically designed to enhance the effectiveness and efficiency of dry nitrogen purging, a critical process for the upkeep and performance of sensitive equipment.

1. Optical İnstruments
2. Laser Systems
3. Underwater Equipment
4. Termal Imaging
5. Surveillance Instruments
6. Work Stations



NITROGEN PURGING UNIT

SMART NIPU

The Smart NiPU is an automated nitrogen gas purging and leakage test system for electronic, optical, high voltage, laser systems and other equipment that require gas drying inside. It is designed to perform humidity removal and leak testing in the most efficient way.

Complately Automated Use;
One of the most important features that makes the Smart NiPU perfect is that completely automated and smart system. The user can easily change the pressure values as mBar, kPa or PSI. At the same time, the temperature unit can be set as °C or °F. It is the most automated and smartest system of its class in the purging process and leakage test, it is sufficient to connect the equipment and enter the dew point and pressure value for use. The system will continue the purging process until the desired dew point value is reached. Dew point value is instantly displayed on the screen in the form of a time-dependent graphic. In the leak test, the tolerance value can be specify by the user. Pressure changes can be displayed instantly or retrospectively

Dew Point Feature;
Humidity in the gas and gas quality is expressed as dew point. Smart NiPU measures the dew point in an equipment. The measured dew point value can be displayed instantaneously in graphical form. The purging process is carried out by taking the dew point value as a reference

Adjustable Purging
Process; Purging process can be done at any desired value between 0 and 1000 mBar. The pressure resolution for the purging process is 1 mBar. Thanks to this feature, the purging process is carried out in the most efficient way for different equipments

Vacuum Feature;
Another feature that put forward Smart NiPU from similar ones is its ability to vacuum. Thanks to its vacuum feature, unwanted humid air is completely thrown out of the system. Thus, the purging time is reduced.

Ultra Economical Gas Usage;
Thanks to the precision pressure regulator, excess pressure is not released during the purging process. Thus, unnecessary gas consumption is prevented.

NITROGEN PURGING UNIT

The Smart NiPU is an automated nitrogen gas purging and leakage test system for electronic, optical, high voltage, laser systems and other equipment that require gas drying inside.

It is designed to perform humidity removal and leak testing in the most efficient way.

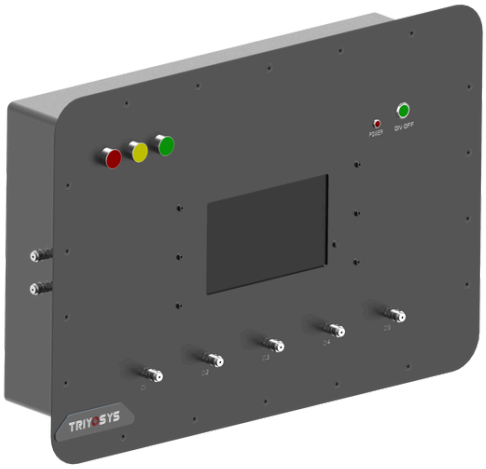
Technical data	TS-AG-O-01	TS-AG-O-02
Useable Gases	Air, Nitrogen, SF6, Helium, Argon	Air, Nitrogen, SF6, Helium, Argon
Adjustable Pressure Ranges	0-1000 mBar	0-2000 mBar
Adjustable Pressure Resolution	1 mBar	1 mBar
Display Pressure Resolution	0.1 mBar	0.1 mBar
Adjustable Vacuum Pressure Ranges*	700 mBar	700 mBar
Dew Point Range	-80°C / +20°C	-80°C / +20°C
Dew Point Accuracy	±2°C	±2°C
Dew Point Precision	0.1°C	0.1°C
Power consumption	20 W	20 W
Input Voltage	220 V	220 V
Dimensions	668x476x369 mm (26.3x18.7x14.5 inch)	668x476x369 mm (26.3x18.7x14.5 inch)
Weight	35 kg	35 kg
Operating temperature	-10°C / +50°C	-10°C / +50°C
Storage Temperature	-40°C / +60°C	-40°C / +60°C

- for fully sealed conditions

Input q-ty	PORTABLE TYPE/ with tube	PORTABLE TYPE/ without tube	PANNEL TYPE
1	TS-AG-0-01	TS-AG-0-C-01	TS-AG-0-P-01
3	TS-AG-0-03	TS-AG-0-C-03	TS-AG-0-P-03
5	TS-AG-0-05	TS-AG-0-C-05	TS-AG-0-P-05

NITROGEN PURGING PANEL

SMART NiPU, intelligent nitrogen gas filling and purification system is used for electronic, optical, high-voltage laser systems.
It is the most effective and efficent latest technogy product aimed at drying with.



FEATURES

- Easy to Use Single Link Cleaning.
- Dew Point and Pressure Reading.
- Portable and Robust.
- Smooth and Stable Programmable System.
- Automatic Evacuation Operation.

Technical data	TS-AG-0-01
Useable Gases	Air, Nitrojen, SF6, Helium
Max. Pressure Setting	0-1000 mBar
Pressiure Resolution	1 mBar
Display Pressure Resolution	0.2 mBar
Min. Vacuum Pressure Setting	-700 mBar
Dew Point Range	-20°C / +80°C
Dew Point Resolution	0.1°C
Dew Point Accuracy	±2°C
Power	100-230 Volt 50 Hz - 60 Hz
Input Voltage	220 V
Weight	20 kg
Operating temperature	-10°C / +50°C
Storage Temperature	-40°C / +60°C
Flow	20 l/min

OPERATOR CONTROL UNIT

The Operator Control Unit offers features for control Pan-Tilt units and displaying data from the useful load to be used in these unit.

OCU has wirelless communication infrastructure, long battery life, easy-to-use design with a large screen. While easy to use with ergonomic design in harsh military condition, suitable to work in all weather conditions with its IP67 impermeability.

FEATURES

- Large screen size.
- Wireless communication infrastructure.
- Ethernet & USB interfaces.
- Impact absorber corners.
- Biaxial joystick & quinary button control.
- High durability battery life.
- %100 CNC Machinery, high strength (AL 6000 Series, PA6 & Stainless steel).
- Secreen protection & Sunshade design.
- Easy desktop usage with back supports.
- Neck strap.
- Uninterrupted usage with Hotswap.

Technıcal data	TS-KK-05
Screen Size	Air, Nitrojen, SF6, Helium
Screen Brightness	700 cd/m2
Screen Resolution	1920x1200
Use with Gloves	Mevcut
CPU	Intel i5 7300U
RAM	8GB
SSD	128GB
OS	Windows 10
Wireless Communication inst.	Wifi + Bluetooth
Input/Output Connectors	USB, Ethernet ve Power Input
Battery Life	5,5 hours
Mechanic Dimensions	258mm x 430mm x 76mm
Weight	3.6 kg
Protection / IP Rating	IP67
Working Temperature	-20°C / +52°C
Storeage Temperature	-40°C / +55°C

BATTERY PACK

Battery Pack has 2 BB-2590 that can provide power support. The battery needs to be changed is shown to user with led display. Designed to withstand harsh weather conditions. Easy portable and quick change battery design provide easy usage.

FEATURES

- 1 Power outlet.
- 1 Charging terminal.
- High strength aluminium and stainless steel.
- Led display for each two battery.
- Quick change cover design.
- Easy portable.
- Hot-swap.
- Control button for power outlet.
- Two chargable BB-2590 battery.

Technical data	TS-AK-01
Weight	6 kg
Mechanic Dimensions	216mm x 288mm x 193mm
Battery Quantity	2
Protection / IP Rating	IP67
Input/Output Connectors	S20K0C-P04MFG0-500S
Maksimum Decharge Current	10A
Nominal Voltage	28.8V
Nominal Capacity	21Ah
Decharge Working Temperature	-20°C / +52°C
Charge Working Temperature	0°C / +55°C
Storage Temperature	-40°C / +55°C

BATTERY CHARGER

Battery charger case was designed to charge BB2590 battery. It can charge two BB2590 battery at the same time. Batter charger case has IP67 protection level to work in difficult conditions.

FEATURES

- Quick Setup.
- Easy transport.
- IP-67 protection.
- Work in difficult conditions.

Technical data	TS-BK-02
Charge Topology	CC / CW Li-ion
Input Voltage	200-240 V / 50-60 Hz
Maximum Input Current	1.8 A
Output Voltage	33.6 V
Maximum Output Current	4 A
Weight	1.8 kg
Mechanic Dimensions	235mm x 156mm x 89mm

BATTERY CHARGER

Technical data	TS-BK-02
Charge Topology	CC / CW Li-ion
Input Voltage	200-240 V / 50-60 Hz
Maximum Input Current	1.8 A
Output Voltage	33.6 V
Maximum Output Current	4 A
Weight	1.8 kg
Mechanic Dimensions	235mm x 156mm x 89mm

SHOOTING CONTROL UNIT

Pro-Mavzer is a shooting control system that eliminates the target by using small calliber (5.56) guns or man protable rocket launchers. Gun or rocket launcher can be mounted easily and quickly to the system by picatinny interface.

Pro-Mavzer system has target detection, target tracking, area scanning, ballistic calculation, weapon library capabilities. Weapon station can be controled with Operator Control Unit (OCU) both by wired or wireless. To apply balistics, the distance information can be entered manually or automatically by laser range finder. It provides a variety of use with different weapon models in its memory and there is no need any modification on weapon, just picatinny interface is enough to install.

Four operation modes of Pro-Mavzer provides the most comfortable use: Ordination mode, track mode, scanning, target detection mode. With ordination mode, it can be automatically directed to the area touched on the screen and ready to shoot. With the target tracking mode, it can track the selected target. With scanning mode, system can scan the area between two points selected by user. With target detection mode, system shows posible targets to the user.

FEATURES

- Corrosion resistant coating and paint.
- 4 different mode.
- Made of 100% CNC, high strength 6000 series aluminium and stainless steel.
- IP-67 Protection class.
- With cable and wireless control.
- Easy mount, portable and light weigth.

Technical data	TS-PM-01
Pan axis Movement	n × 360°
Tilt Axis Movement	90° (+45° / -45°)
Weight	7 kg (without RPG, weapon, and tripod)
Material	6000 series aluminum and stainless steel
Operating Temperature Range	-32°C to 55°C
Protection / IP Rating	IP 67

SHOOTING CONTROL UNIT

In the world of tactical operations, the Pro-Mavzer stands out as a game-changer, offering unmatched precision and lethality. What sets this system apart is its exceptional accuracy, considered the best in its class by weight. This innovative system offers a modular and lightweight solution, ensuring that operators can achieve one-shot, one-hit accuracy.

A key feature of the Pro-Mavzer is its user-centric design. Operators can control the system remotely, ensuring safety and strategic advantage. This aspect is crucial in modern tactical scenarios where distance can be a critical factor for operator safety.

1. Target Detection
2. Day/Night Operation
3. Lock & Track
4. Light-weight
5. Wired or Wireless
6. Easy gun or rocket launcher mounte

TRIYOSYS

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