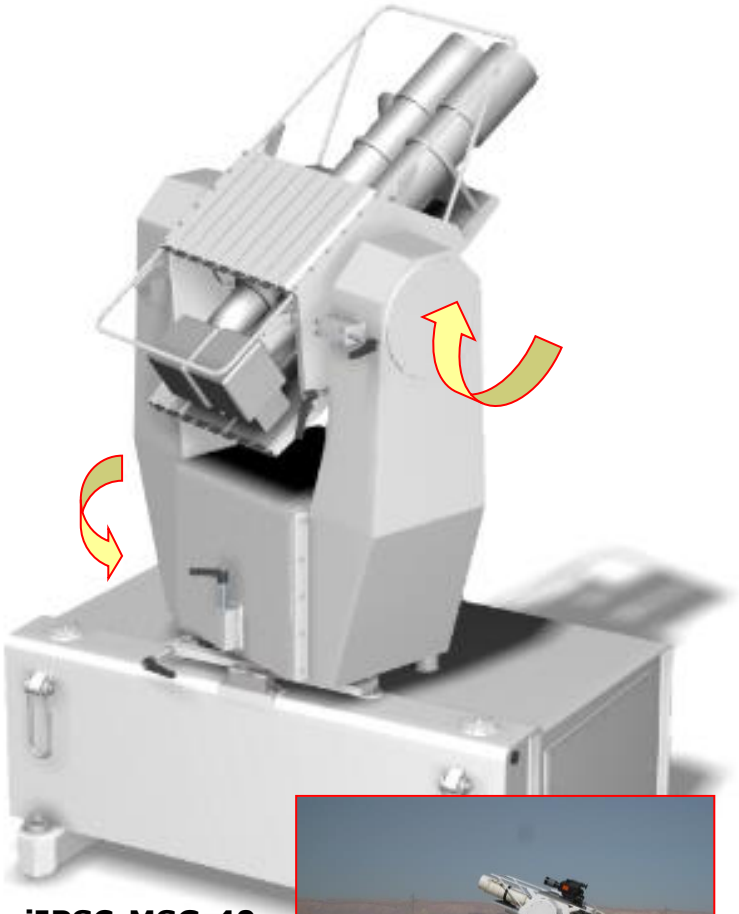
Two Axes Gimballed Platform
Series iIPSC-MSG-40

Features

- Two-axes central payload platform: azimuth and elevation axes for LOS (line-of-sight) control
- Adaptable to different and multiple sensors due to customized mounting tray (option); balanced payload up to 40 kg
- Direct torque drives for highest resolution, negligible hysteresis and superior dynamics
- Made for mobile and static installation: a high performance INS/GPS system of type iNAT-RQH can be applied to stabilize the payload on naval vessels or trucks and for geo-refererencing
- Available Control Features: iSCU Stabilization and Control Unit incl. iOET² Video Target Tracker, Image Fusion, iJP Joystick Panel, INS/GPS control and blind pointing
- Designed to operate in harsh environment and under naval and desert conditions



iIPSC-MSG-40

Description

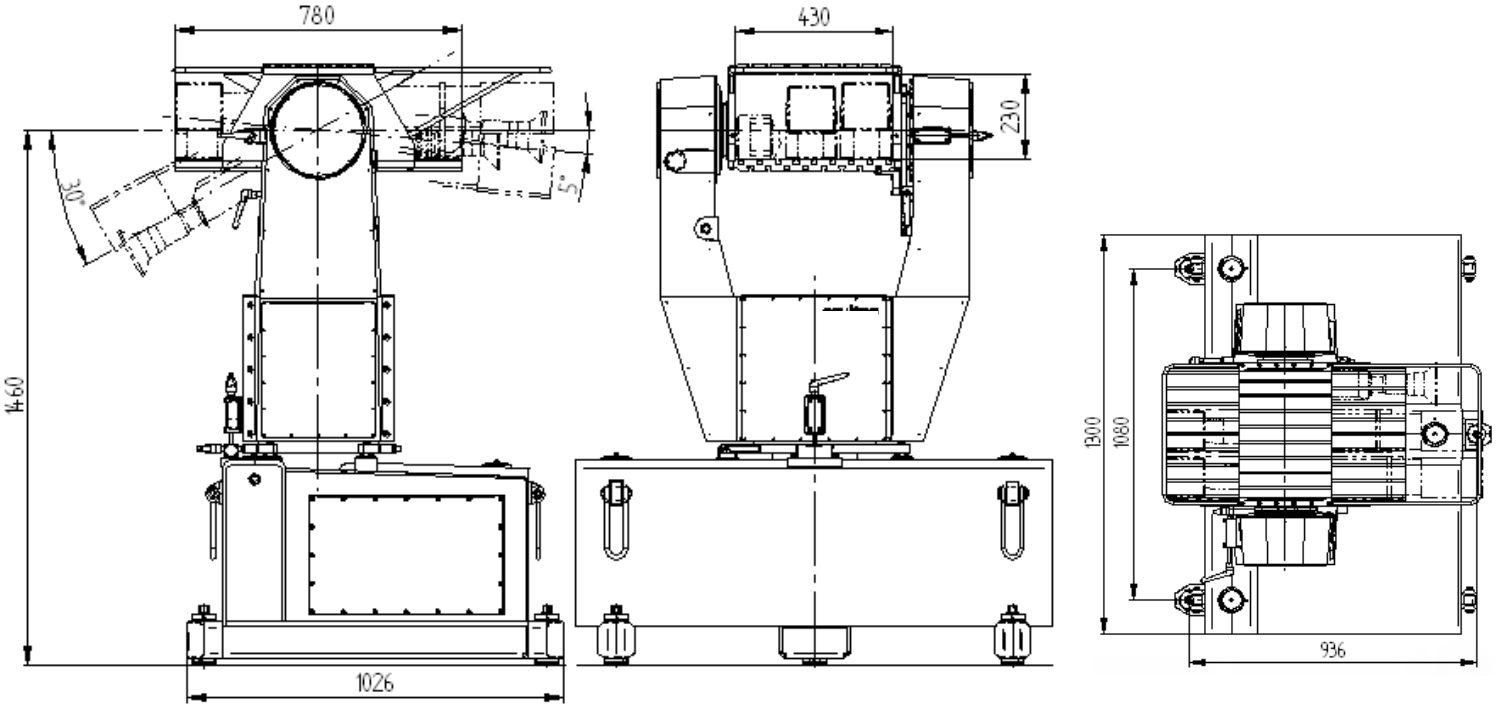
Direct drive brushless servo motors combined with direct drive high resolution encoders are ensuring the precise and smooth tracking of the iIPSC-MSG-40.
All axes are sealed. The selected materials are corrosion resistant and surface treated to withstand harsh land based or shipboard environmental conditions. The basic instrument can be adapted to specific applications by the addition of optional equipment or features.
iMAR Navigation GmbH, located in Germany, is manufacturer and system integrator of the iIPSC-MSG-40.

Options

- The central payload platform can be replaced with a roll axis assembly enabling 3 DOF stabilization
- iOET² Opto Electronic Target Tracking for Auto Tracking, (with multi target capability and fast 50 meas./second); video blending available
- Dynamic Inertial stabilization with integrated INS/GPS positioning
- Spring isolated base plate to filter high frequency disturbance from the instrument.
- Separate shelter with operator console and integrated video recorders, UPS (uninterrupted power supply), joystick panel etc.

Specification Summary

General Configuration	Payload:	customer specific or standard sensors (see separate datasheet "iIPSC Payload Selection"	
	Payload weight, nominal:	40 kg on centered platform Inner lower size of mounting plate: approx.. 430 x 230 x 780 mm	
	Payload Signals:	Slip rings for payload data available (up to 7 x video, power, discrets); option: FORJ	
	Power Consumption:	up to 4'000 W, 230 VAC	
	Platform Total Size:	approx. 1'100 x 1'300 x 1'800 mm	
	Platform Weight:	approx. 350 kg	
Performance		**Azimuth**	**Elevation**
	Angular freedom (deg)	continuous	-30 to +185 (or tbd)
	Position		
	• encoder resolution	better 20 bit	better 20 bit
	• resolution shaft	1 arcsec	1 arcsec
	• repeatability	±1.2 arcsec	±1.2 arcsec
	Rate (deg/sec)	> ±100	> ±100
	Acceleration (deg/sec²)	> ±100	> ±100
	Torque cont./peak (Nm)	80/150	40/50
	Perpendicularity (arcsec)	better than ±100	
Environment	Operating Temperature	-10 °C to +50 °C	
Gyro Stabilisation (option)	Stabilization Performance	iNAT-RQH: < 0.2 mrad abs roll/pitch stabil. < 1 mrad abs heading stabi. < 200 µrad relative stabilization iNAT-CFM: < 0.2 mrad relative stabilization	
Image Tracker	Stabilization Feedback	iOET²: 50 Hz, video target tracking, video fusion	
Command	via CAN or RS232/422 or Ethernet or/and joystick (see iMAR's iSCU interface)		



(drawings as example, depending on payload and required accuracy)

Contact

iMAR Navigation GmbH, Systems for Inertial Navigation, Stabilization and Control
Im Reihersbruch 3
D-66386 St. Ingbert
Germany
Tel: +49-6894-9657-0
Fax: +49-6894-9657-22
eMail: sales@imar-navigation.de
Internet: www.imar-navigation.de