

## Gimbals & Optical Mounts



### Features

- 360° infinity rotation in 2 axes with gimbal system
- Non-contact torque motor drive for high dynamic response
- High stiffness, high precision cross roller guide
- Built-in slip ring with long-lifetime

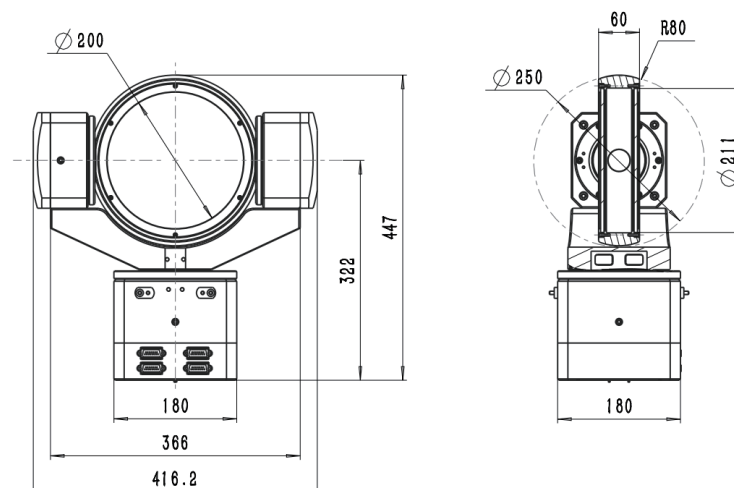
### Description

The stage adopts large-size aperture and orthogonality design. High-precision, high-stiffness 360-degree infinity rotation for pitching and vertical rotation.

### Applications

- LiDAR and air target tracking
- Photoelectric sensors and forward-looking infrared testing
- Angle testing of gyroscopes
- Acceleration testing of inertial units

### Interface Definition



\*Interface dimensions from GS200

## Technical Specifications

|                             | GS100-00                                        | GS150-00    | GS200-00             |
|-----------------------------|-------------------------------------------------|-------------|----------------------|
| Travel range                | 360° continuous rotation/pitch                  |             |                      |
| Max. velocity               | 100 rpm                                         |             |                      |
| Max. acceleration           | 100 rpm                                         |             |                      |
| Accuracy                    | ±24 μrad to ±192 μrad (±5 arcsec to ±40 arcsec) |             |                      |
| AZ repeatability            | 19.4 μrad (4 arcsec)                            |             |                      |
| EL repeatability            | 14.5 μrad (3 arcsec)                            |             | 19.4 μrad (4 arcsec) |
| Axis wobble                 | 97 μrad (20 arcsec)                             |             |                      |
| Orthogonality               | 72 μrad (15 arcsec)                             |             |                      |
| Mechanical properties       |                                                 |             |                      |
| Max. load                   | 6.8 Kg                                          |             | 16 Kg                |
| Inertia AZ                  | 0.046 Kg·m²                                     | 0.088 Kg·m² | 0.277 Kg·m²          |
| Inertia EL                  | 0.001 Kg·m²                                     | 0.004 Kg·m² | 0.016 Kg·m²          |
| Stage mass(without mirror)  | 9.5 Kg                                          | 11.1 Kg     | 22 Kg                |
| Height to mirror centerline | 181 mm                                          | 220 mm      | 322 mm               |
| Hollow aperture             | 95 mm                                           | 144.3 mm    | 206 mm               |
| Material                    | Aviation aluminum, black anodized               |             |                      |

## Customization Information

The series is configured with options that can be selected based on the user's actual application. Options include hollow aperture, encoder, and more.

Table 1 Aperture Option

|      |                                               |
|------|-----------------------------------------------|
| -100 | 100mm hollow size with linear motor and limit |
| -150 | 150mm hollow size with linear motor and limit |
| -200 | 200mm hollow size with linear motor and limit |

Table 2 Encoder Options

|     |                                            |
|-----|--------------------------------------------|
| -S1 | Incremental analog optical encoder, 1Vpp   |
| -S2 | Incremental digital optical encoder, RS422 |
| -S3 | Absolute optical encoder, BISS             |