

Trident **GTR**

Installation Manual

NEVER STOP EVOLVING

Getting Started



Safety First



Read all four manuals provided with the Trident GTR before starting the installation process. All tools and hardware should be prepared in advance along with a clean and tidy work area.

The GTR mount is heavy, take appropriate precautions and get assistance when lifting it into position. Mechanic style gloves and steel toe boots are required.

Never attempt solar observation without appropriate equipment.

Packing List

The Trident GTR is delivered as a complete system. Before proceeding please check all items are present -

- Mount head assembly
- Counterweight shaft
- 1x 10 kg counterweight
- Controller
- Accessories box
- Power cable
- Can of stroopwafels (important)

Digital delivery- Manuals & software license

Before Installation

Prerequisites

The following items need to be installed before the mount can be used.

- [OnStep Driver](#)
- [Sky Planetarium](#)
- [ASCOM Platform](#)

Optional

- 3rd Party ASCOM software (do installation using Sky Planetarium first)

Important!

Never:

- Release brakes with large imbalance on the mount
- Release polar alignment locks for latitude without confirming that the retaining pin is installed
- Try to force rotation of the mount while the motors are powered
- Disassemble the mount to solve a problem without contacting us first
- Operate the mount with protective covers removed

Modification of mount or control is at own risk

Bench Testing

Setup

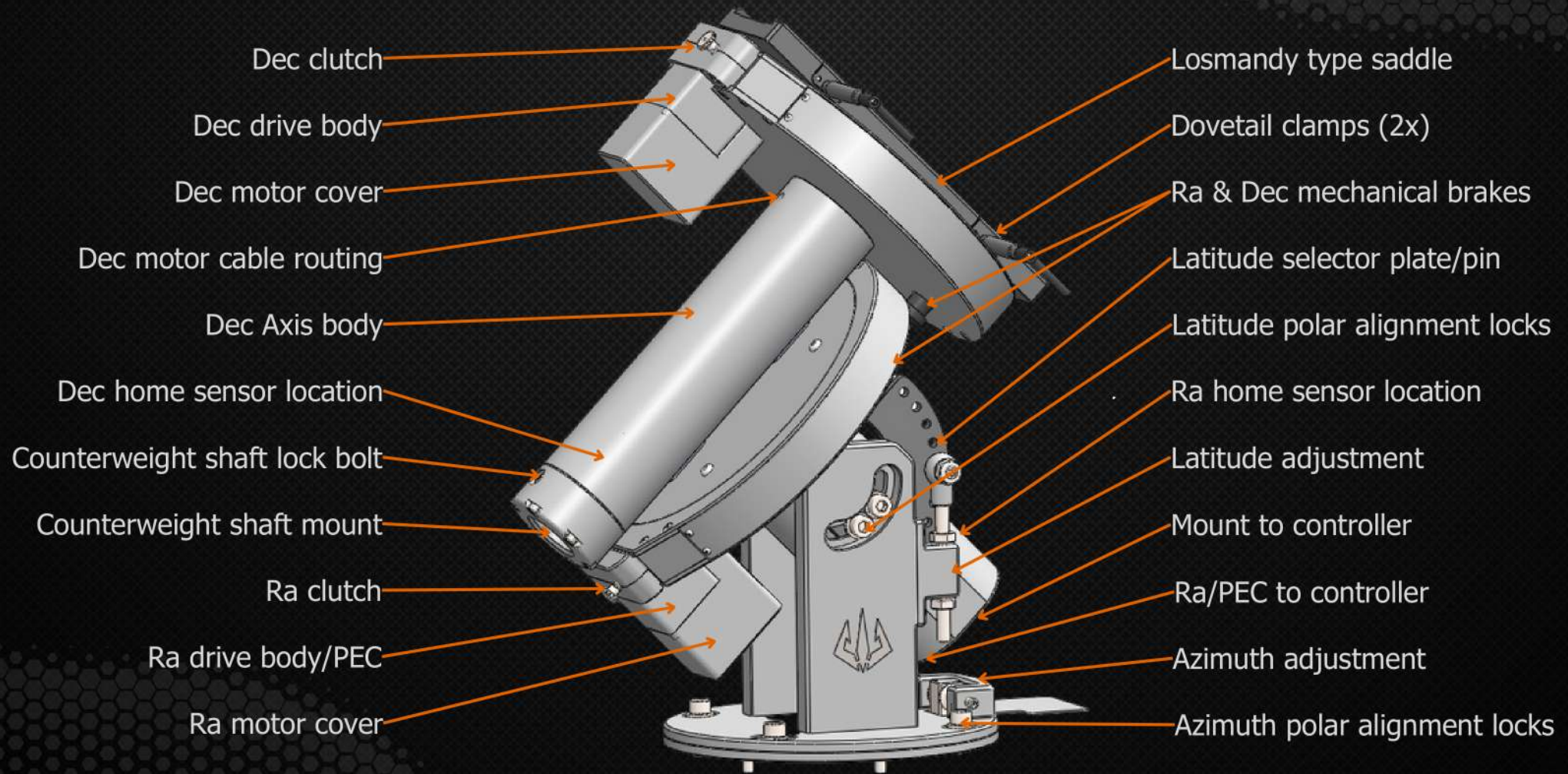
Before installing the mount it is recommended to quickly check that the mount works as expected.

- Using a PC or Android device, install the relevant software (see User Manual)
- Setup the Trident GTR on a stable surface. Ensure that the manual brakes are engaged.
- Do not fit the counterweight shaft.
- Adjust Latitude to Alt-Az position to remove need to balance the mount
- Leave the drive protectors in place.
- Connect the controller and turn the mount on

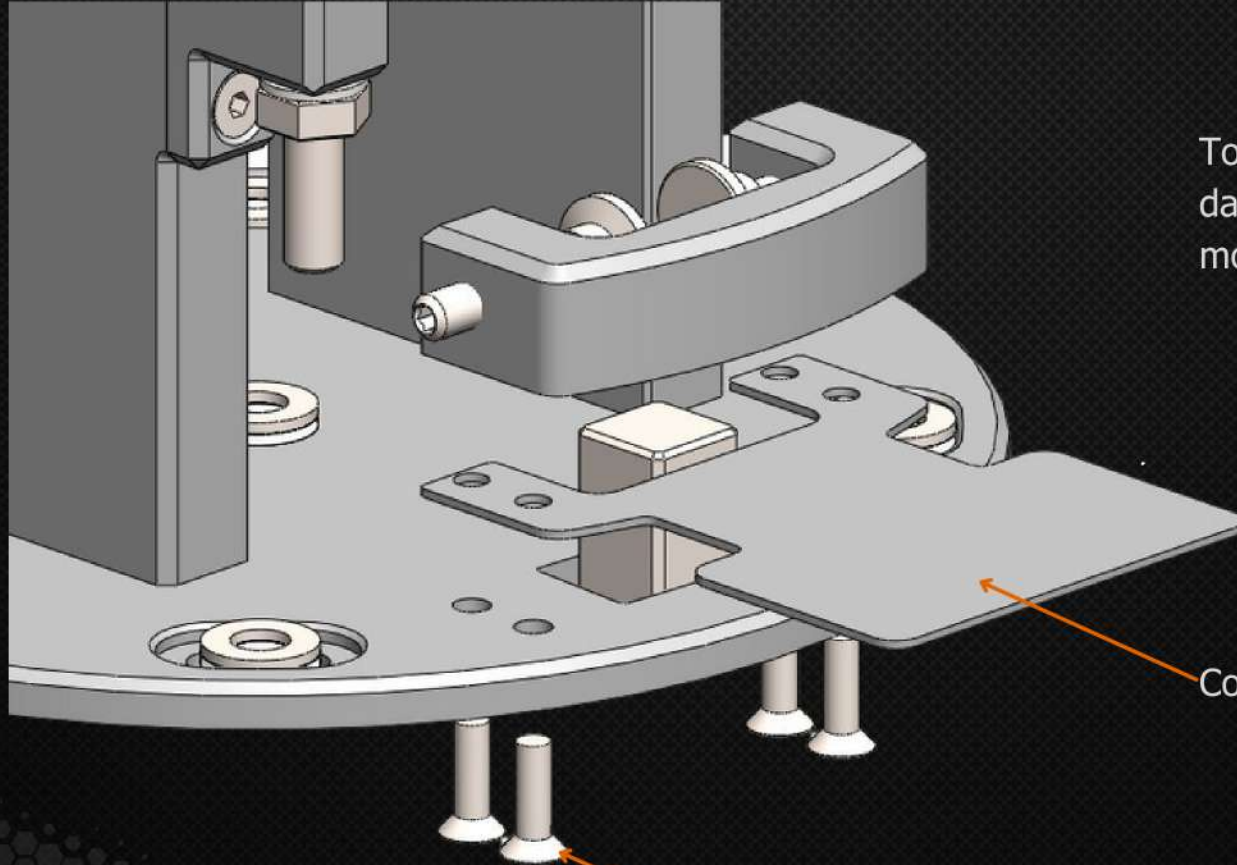
Test Items

- Controller powers on, no fault LED
- USB is detected by PC
- Computer connects to WiFi
- ASCOM connects to the mount
- Test slew to confirm motors operate
- Check that the mount homing works
- Optional - Check functionality with any 3rd party app via ASCOM/INDI/etc

Anatomy of a GTR



Install Controller Mount/PA Boss



To eliminate the risk of shipping damage the controller bracket is not mounted at the factory

Controller bolts here

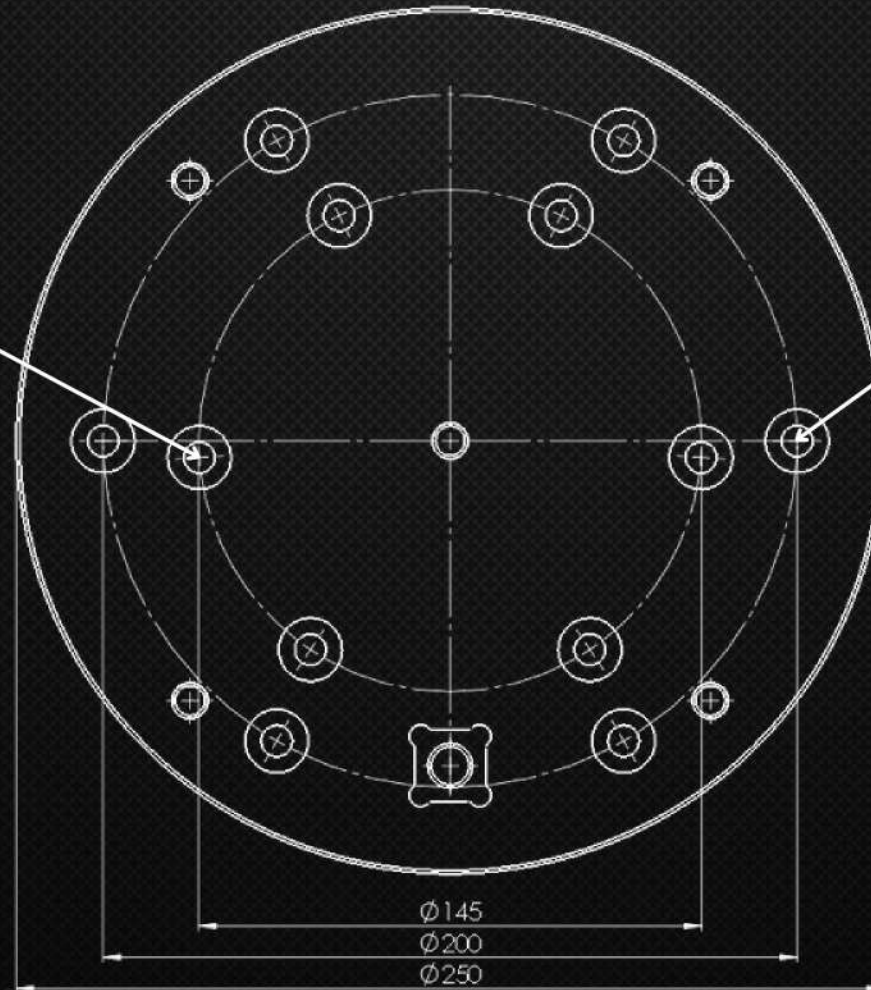
Install 4x M6x20 DIN 7991 bolts

Pier/Tripod Bolting Pattern

NORTH

Tripod - 6x M8, Berlebach Planet
Bolts - DIN 7991 - M8 x 20 mm

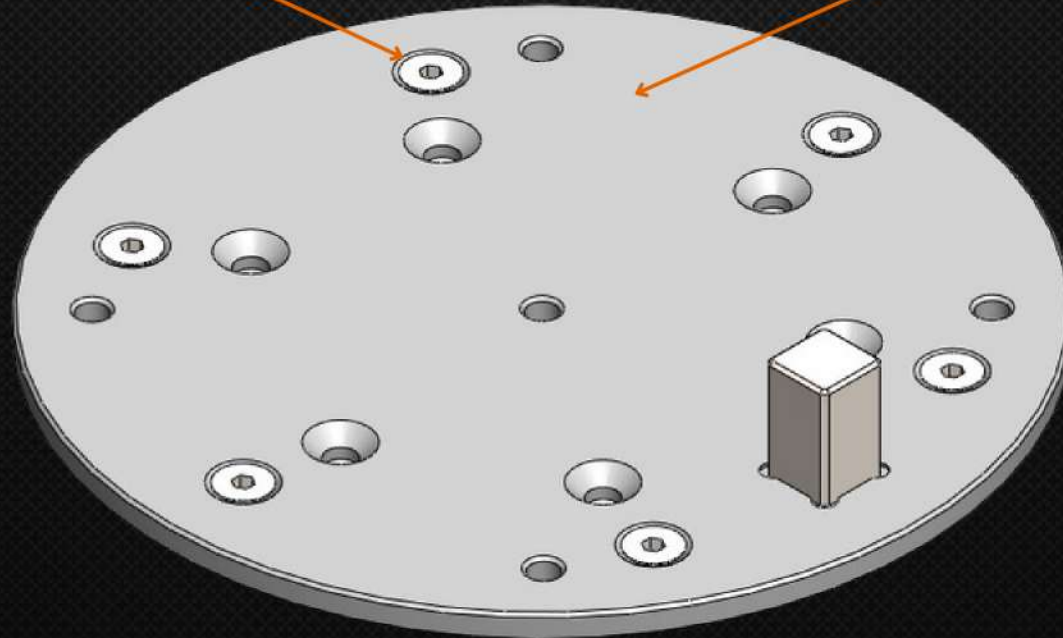
Pier - 6x M8, 200 mm PCD
Bolts - DIN 7991 - M8 x 20 mm



Pier/Tripod Adapter System

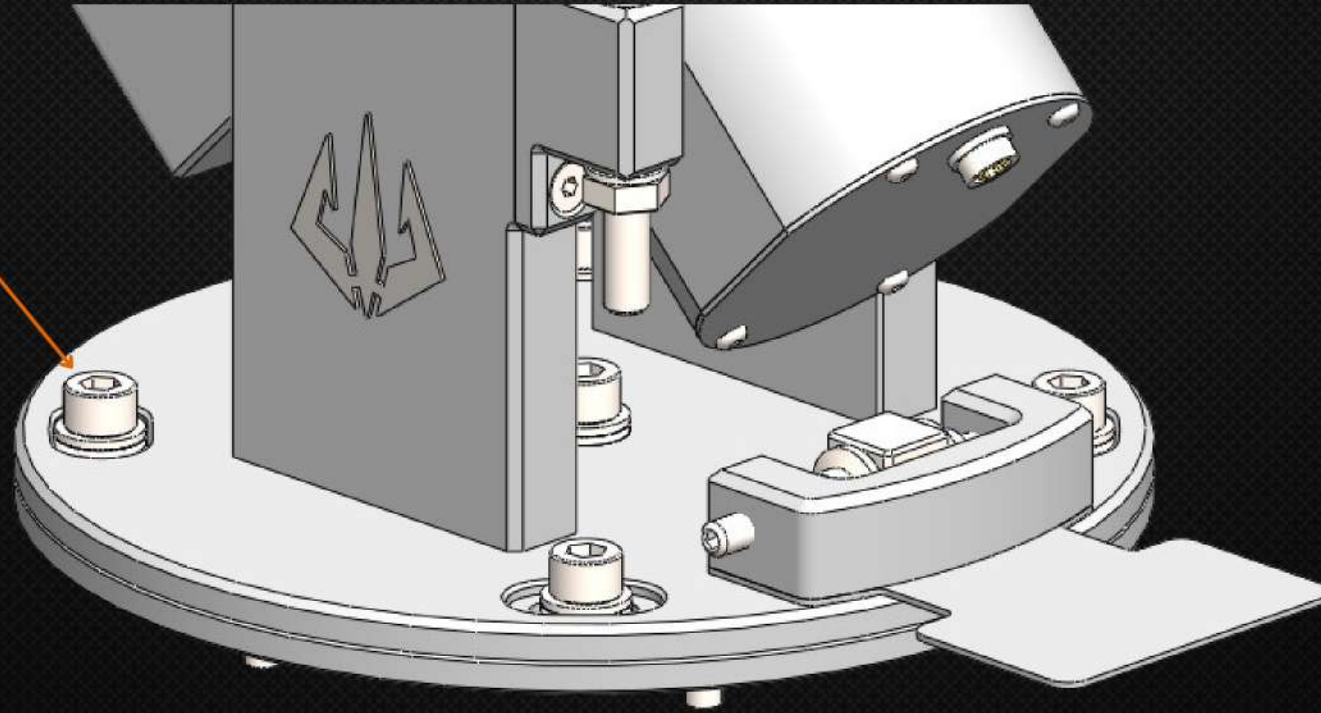
Install 6x M8 DIN7991 bolts

Apply thin layer of multi-purpose synthetic grease to the top surface.



Installing Mount to Pier

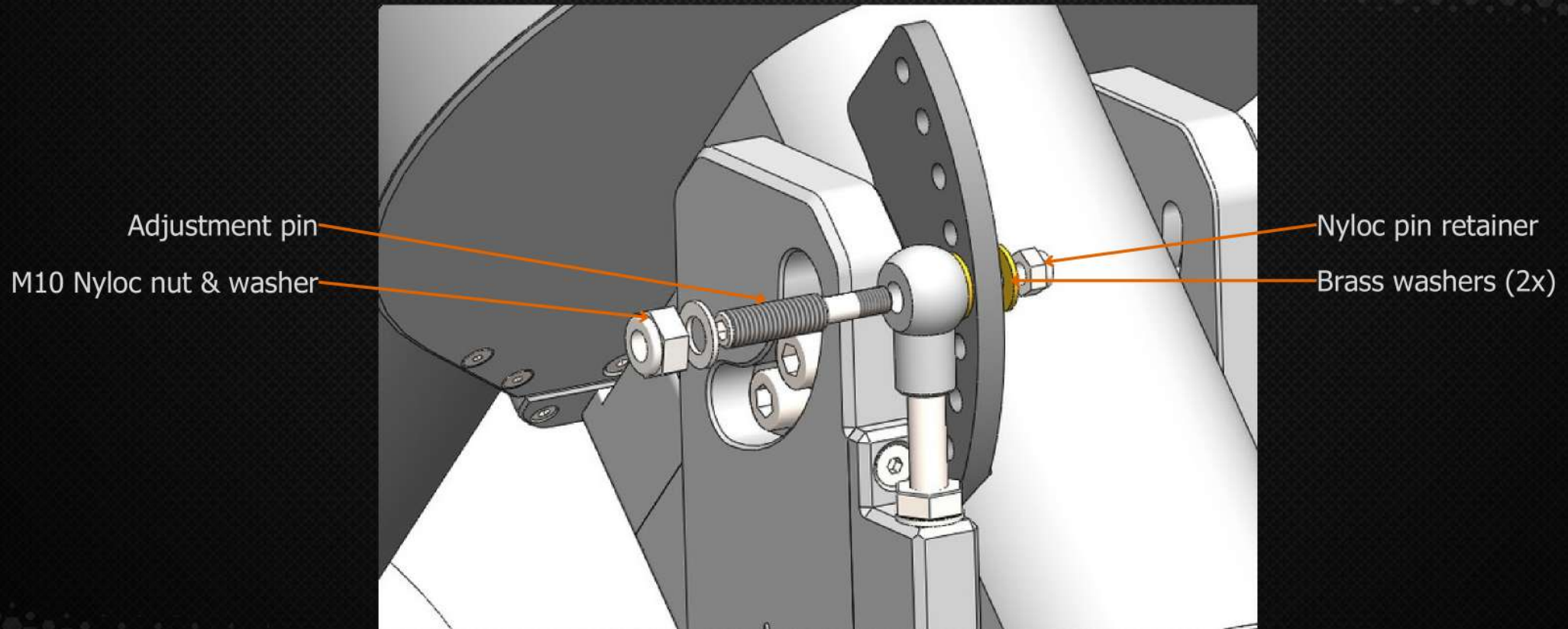
Install 5x M10x16 DIN 912 bolts



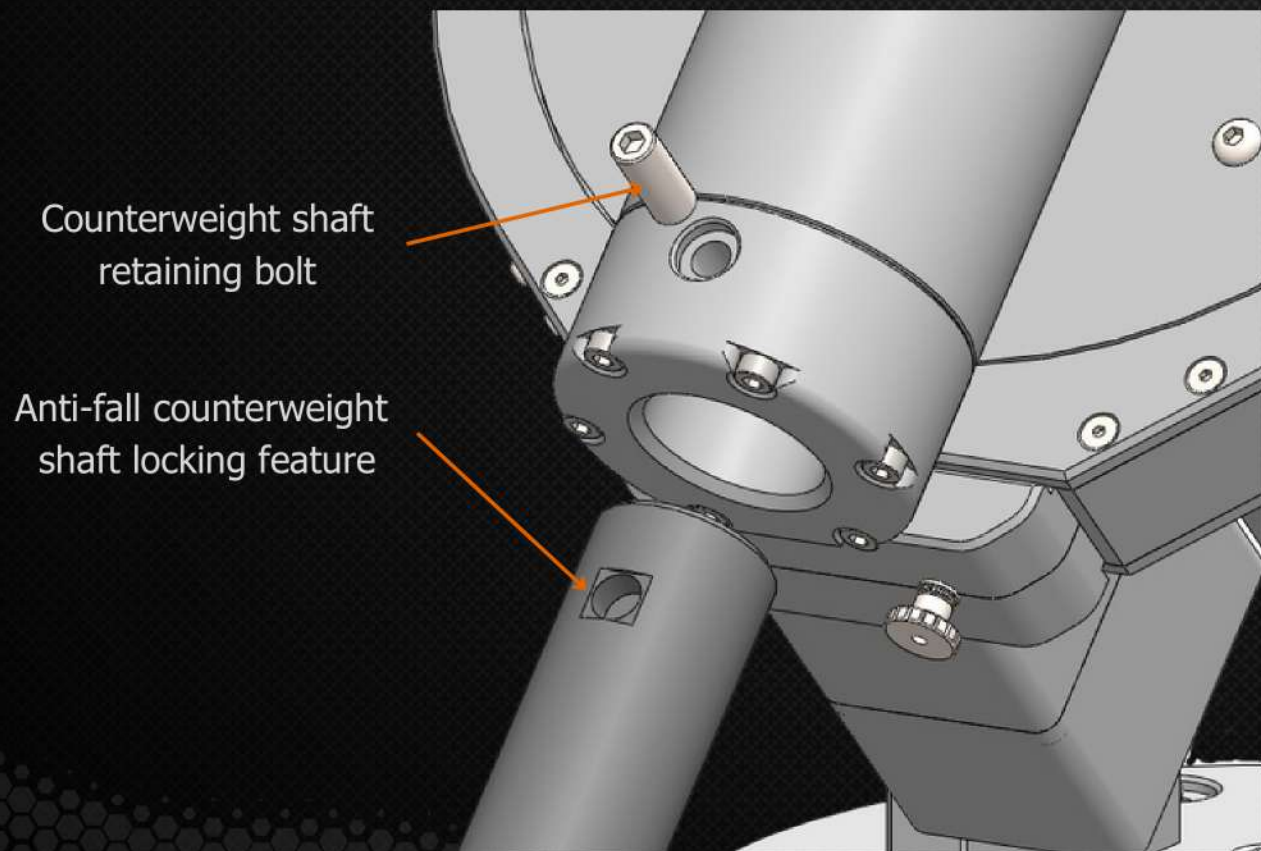
The mount is heavy, this task requires lifting equipment or at least two people with appropriate PPE



Install Latitude Adjustment Pin



Install Counterweight Shaft



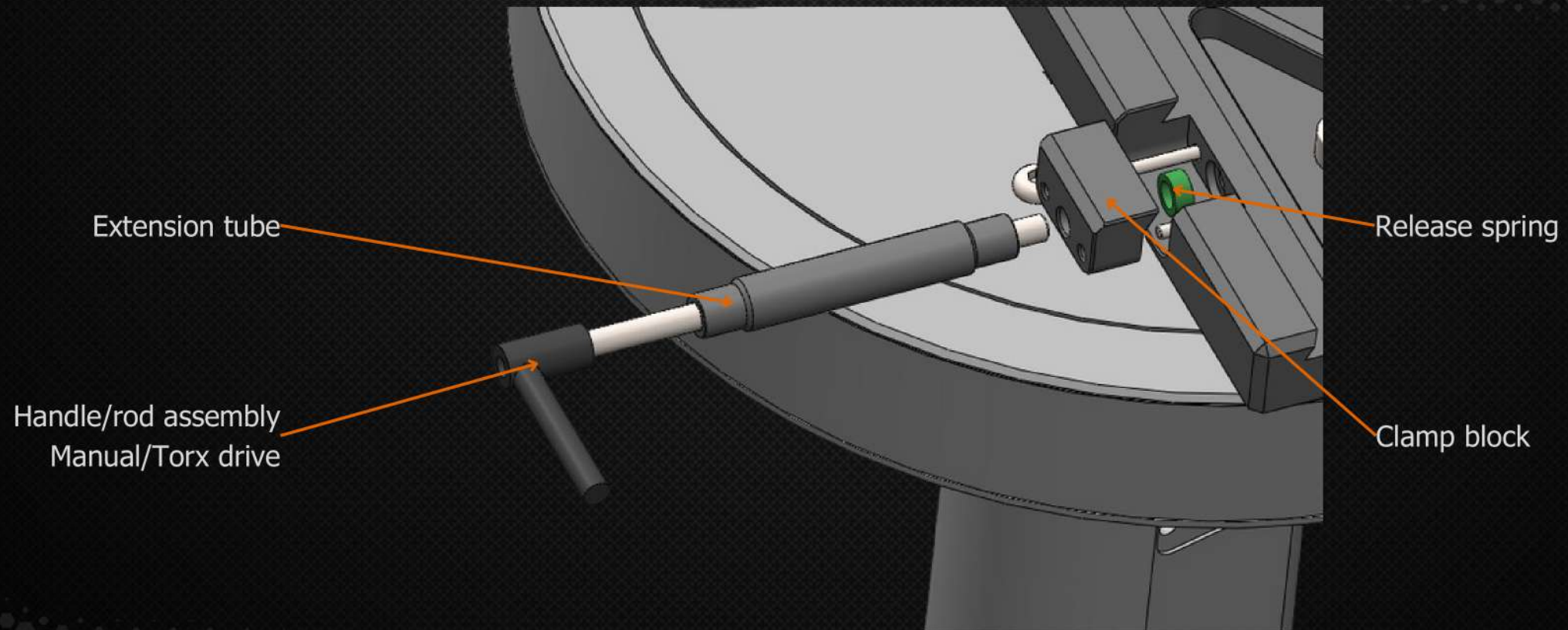
Never operate mount without counterweight safety stop



The mount is top heavy, never remove the brakes without the mount being balanced or having a counterweight fitted.



Install Saddle Hardware



Attaching Instrumentation



Setup Parameters

To get the best performance out of the mount it's recommended to take a bit of extra time on setup to really get it dialed in as well as possible

- Pier levelled within 0.05° using a digital inclinometer
- Polar alignment error under 30" per axis
- 3D balancing of payload should be considered and may be necessary with strongly asymmetric systems
- Cable management should be to a very high standard

Additional Support

Facebook



Contact

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