PEGASUSASTRO

INDIGO

OFF AXIS GUIDER

PRODUCT MANUAL

Version 1.0

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VERSION HISTORY

Version #	Implemented By	Revision Date	Reason
1.0	George Karantzalos	17-Oct-24	Initial document

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INTRODUCTION

Thank you for purchasing Pegasus Astro Indigo OAG

1.1 PURPOSE

Our thin and solid design OAG can easily bond with our Indigo Filter Wheel. The OAG supports through holes (M2.5 and M3) in its body for direct connection with the latest CMOS cameras and other Filter Wheels.

The main advantage of having an OAG is that it uses the same optical path as your primary imaging camera. This avoids any issue with differential flexure that can occur when using a separate guide scope on top of your main telescope.

New **helical focuser addon** providing precise focusing capabilities and seamless compatibility with 1.25" guiding cameras commonly available in the market.

Please note that the Indigo OAG is available in two variations.

PEG-INDIGO-OAG (OAG Body + 1.25" Barrell)

PEG-INDIGO-OAGPREM (OAG Body + Helical Focuser)

1.2 IN THE BOX

The box contains the following items

PEG-INDIGO-OAG

- 1 x Indigo OAG Body + 1.25" Barrell
- 1 x M54F threaded adapter for telescope connection. (adds a thickness of 4mm)
- 1 x M48F threaded adapter for camera connection. (adds a thickness of 4mm)
- M3 bolts for mounting the adapters

PEG-INDIGO-OAGPREM

- 1 x Indigo OAG Body + Helical Focuser
- 1 x M54F threaded adapter for telescope connection. (adds a thickness of 4mm)
- 1 x M48F threaded adapter for camera connection. (adds a thickness of 4mm)
- M3 bolts for mounting the adapters

1.3 DEVICE CARE

The device is made from aircraft aluminum alloy type 6061 which provides very good corrosion resistance.

- While the device is safeguarded against moisture, it is essential to emphasize that it is not waterproof and should always be maintained in a clean and dry environment.
- Avoid any contact between solvents or chemicals and the device, as these substances can have adverse effects on its functionality.
- When the device is not in use for extended periods, it is advisable to store it indoors within a dry room to prevent any potential moisture-related issues.

DEVICE DESCRIPTION

2.1 DESIGN OVERVIEW

Indigo OAGPREM – side view

2.2 FEATURE LIST

- **Thin Design:** Indigo OAG has a very thin design. Its back focus is 10mm + 4mm of the telescope adapter. 14mm in total. OAG is CNC made of airplane 6061 aluminum alloy which ensures a lightweight and solid piece of equipment.
- **Adjustable prism:** The prism height can be easily adjusted to allow better illumination of the field of view of the guiding camera. If your imaging camera sensor is large, the prism can be moved (and secured with set screws) upwards to disallow blockage of the sensor's optical path.
- **Large mirror:** A 12×8 mm fully multicoated & anti-reflection mirror offers high illumination to your guiding camera. Stars are round and bright across the OAG 's field.
- **Helical Focuser:** a high-precision helical focuser helps you focus with ease
- **Wide Compatibility:** M2.5 and M3 through holes for direct connection with the latest CMOS cameras and filter wheels. M48 female and M54 female adapters allow screw in connection.

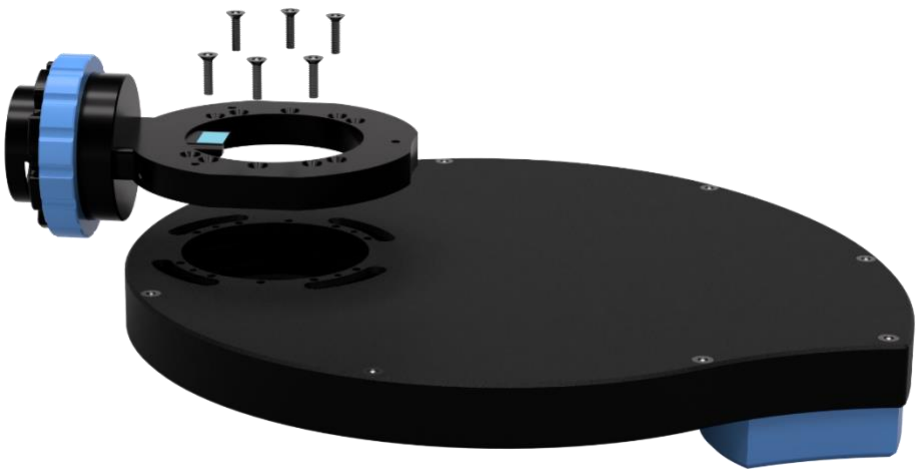
INSTALATION

3.1 OAG CONNECTION

OAG CONNECTION TO 6x OR 4x SCREW PATTERN IMAGING TRAINS

Indigo OAG is compatible with 6 x and 4 x screw hole pattern filter wheels (62mm diameter pattern)

- Place Indigo OAG on the telescope side of your filter wheel. Use six M3 bolts if you have a FW that supports the 6 x circular pattern or use four M2.5 bolts if the filter wheel supports the 4 x square pattern.

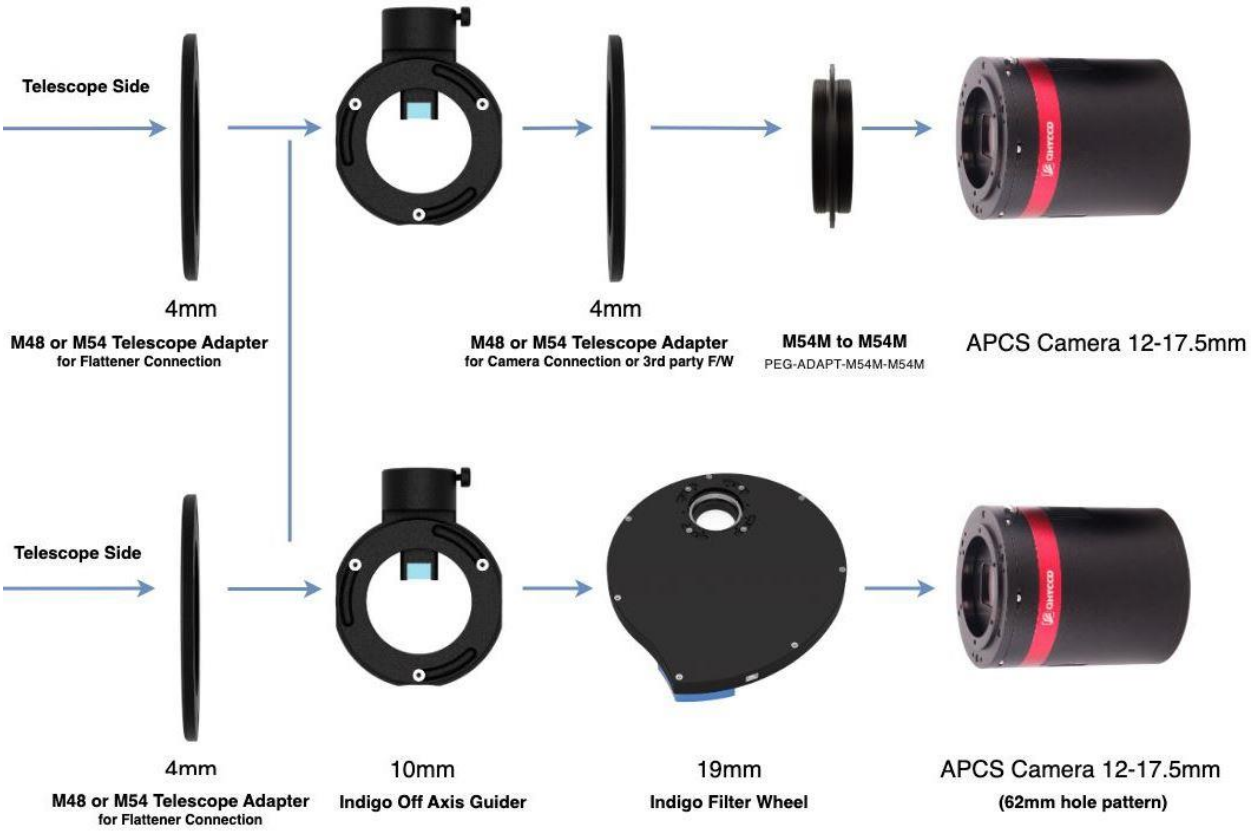


We recommend using Indigo FW. The Indigo OAG can be directly mounted onto the Indigo Filter Wheel. Combining both products sums 19 mm + 14 mm (33 mm total) of back-focus optical distance. Indigo Filter Wheel

- Place the M48F or M54F adapter on Indigo OAG, set the desired rotation angle and tighten the three (3) M3 bolts.

OAG CONNECTION TO THREAD PATTERN IMAGING TRAINS

- Place the M54 female and M48 female adapters on the telescope and camera side of Indigo OAG, rotate it to the desired orientation and secure it using 3 x M3 bolts on each side.

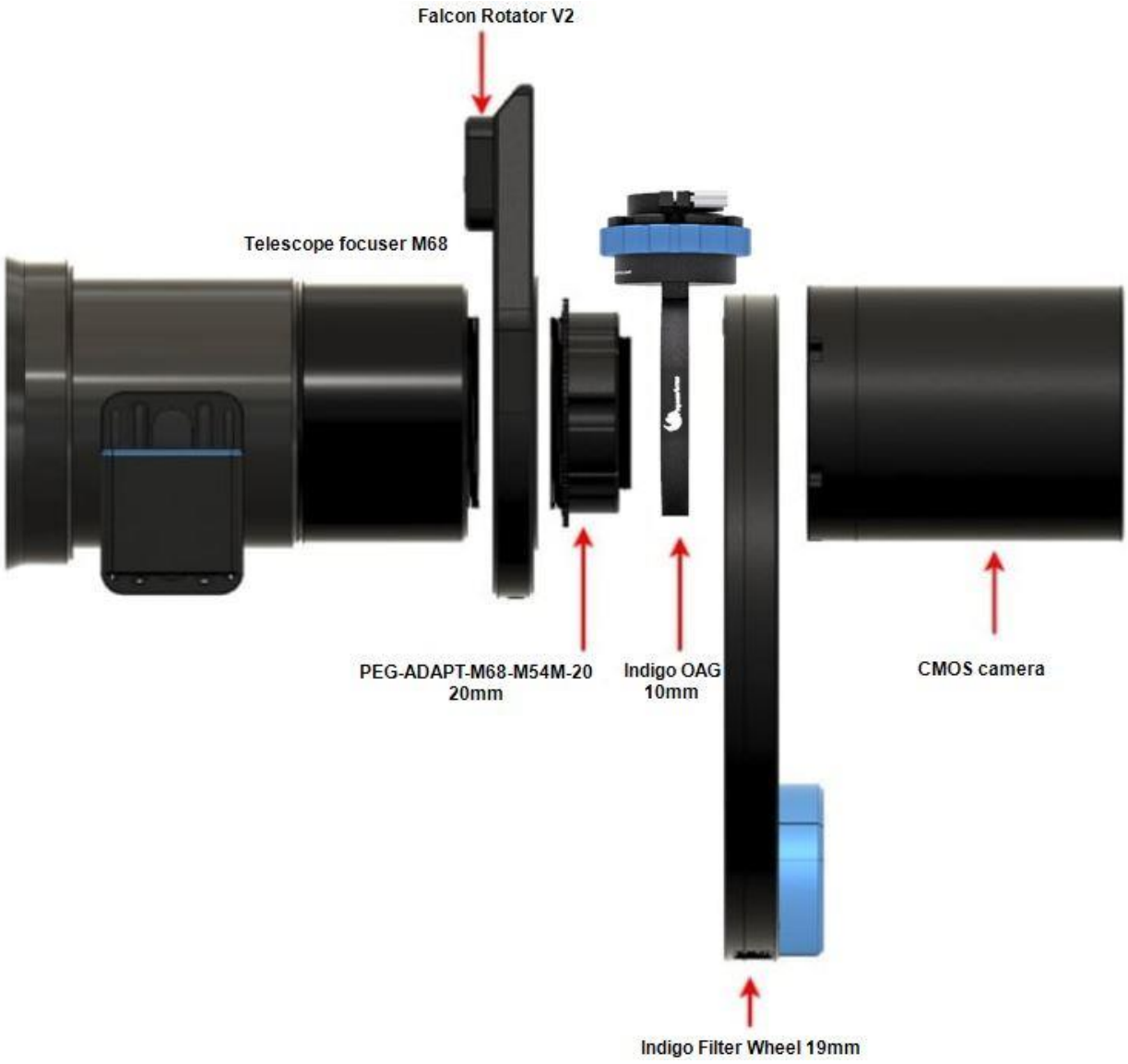


Please note that your backfocus might exceed the recommended optical distance of your telescope or flattener /reducer. Always calculate the recommended optical distance of your telescope imaging train

3.2 INDIGO OAG CONNECTION WITH FALCON V2 ROTATOR

To connect the imaging train with Falcon V2 rotator an adapter (**PEG-ADAPT-M68M-M54M-20)** must be installed between the rotator and Indigo OAG to leave enough clearance for the helical focuser.

Make sure the back focus requirements of the imaging setup are met.



3.3 PRISM HEIGHT ADJUSTMENT

- Adjust the prism height. The prism height can be adjusted to allow better illumination of the field of view of the guiding camera. If your imaging /main camera sensor is large you must move the prism upwards to disallow blockage of sensor's optical path. On the side of the OAG's body there is a 4mm set screw (requires an 2mm Allen wrench – not included) which allows slide the prism housing up or down (gently by moving It with your fingers). Tighten again the set screw to lock the prism position.

Warning: Loosening the set screw forces the prism housing to slide

Indigo OAG side view

3.4 GUIDE CAMERA CONNECTION

Indigo OAG is compatible with 1.25” (31.75mm) guide cameras

- Loosen the helical focuser camera lock thumb screw (1)
- Insert the guide camera into the helical focuser
- Fix the camera orientation
- Tighten the helical focuser camera lock thumb screw (1)

3.5 FOCUSING

- Open the imaging software and focus the telescope main camera.
- Open the guiding software and start the camera preview mode.
- Rotate the blue focusing ring (2) until you have perfectly focused stars.
- Rotate the focuser locking ring (3) to lock the focuser.

INDIGO OAG UPGRADE

If you already own an Indigo OAG and you want to upgrade it, you can easily install the helical focuser **SKU: PEG-INDIGO-OAGHF.**

- Remove the two M2 bolts holding the 1.25” barrel and remove it.
- Place the helical focuser on top of the OAG body and tighten the two M2 bolts.

MAINTENANCE

The Indigo OAG requires no maintenance. Grease or dirt on the prism can be cleaned with medical-grade cotton and optical cleaning liquid.

TECHNICAL SPECIFICATION

Material	airplane 6061 aluminum alloy
Thickness	10.0mm (18.0mm if both adapters are used)
Weight	215 gr without the adapters, each adapter weighs 35gr
Clear aperture	53.5mm
Prism dimensions	12mm x 8mm
Focusing	Helical focuser
Connection	M54F / 0.75mm pitch(4mm), M48F / 0.75mm pitch(4mm), 6 x and 4 x hole (62mm diameter pattern)
Camera compatibility	1.25” (31.75mm) mini guide cameras

RETURNS AND SERVICE POLICY

Device is covered by two (2) years warranty

For detailed information on returns and service policy follow the link below

https://pegasusastro.com/returns/

Designed and assembled in Greece

For any questions, feedback and support please contact: support@pegasusastro.com