

# Askar

# 185 APO

■ User's Manual

**WARNING!**

**DO NOT LOOK AT SUN THROUGH TELESCOPE.  
IT WILL CAUSE IRREVERSIBLE DAMAGE TO YOUR EYE.**

[www.sharpstar-optics.com](http://www.sharpstar-optics.com)

## Instructions for use

The Askar 185APO is an OTA with a 185mm aperture, 1295mm focal length, and f/7 native focal ratio. The Askar 185APO adopts a triplet air-spaced APO lens design, including one piece of ED glass.

As a large aperture, long focal ratio telescope, the Askar 185APO was designed with portability in mind. Due to the retractable lens tube design, the shortest overall length is only 1081mm, the net weight is 14.9kg, and the gross weight is 17.2kg (including the handle, tube ring, and dovetail plate).

The entire Askar 185APO tube is crafted using high-quality CNC machining with anodized and surface spray paint treatments. The retractable design of the dew shield, along with the enlarged locking screws, provides convenient usage.

The Askar 185APO has an extended 400mm handle with a special slot design, making it also a base for installing a finder scope. The Askar 185APO has an integrated design for the tube ring, the thumb screws enable easy opening and locking of the tube rings. The dovetail plate of the Askar 185APO is the standard Losmandy dovetail plate, which is compatible with most equatorial mounts and bases on the market. The dovetail plate is designed with multiple holes, which makes it easy to adjust the position. The length of the dovetail plate has been extended to 400mm, which is more convenient for balancing on the mount.

The rear lens tube of the Askar 185APO has an integrated retractable design. We strengthen the overall stability and ensure that the optical axis will not be affected when the lens tube is stretched, thus guaranteeing the quality of the image. The retractable part also features a rudder-type locking ring that makes it easy to loosen or tighten.

When the lens tube is contracted, the Askar 185APO can be used with a binoviewer for visual observation. When the lens tube is stretched, the 185APO can be connected with a specific 0.8x reducer or 1.0x flattener for imaging or a diagonal and eyepiece for observing.

In terms of the focuser, the Askar 185APO is equipped with a dual-speed rack and pinion large 3.5-inch rigid focuser, which can be compatible with most motorized focusers on the market. There is a high-precision scale printed on the 100mm focusing travel. The rear of the focuser features a 360° high-precision big rotator, along with precise scales for convenient adjustment and saving of rotation angles, enabling precise rotation. It is also equipped with an

enlarged rotator locking screw that can be easily secured even under high loads. The entire focuser barrel is CNC machined with an anti-reflective internal design and matting paint, providing extra measures to eliminate stray light.

There are two finder bases on both sides of the focuser, which not only eliminates the need for disassembling when changing the position of the finder scope but also provides additional mounting positions for other astronomical accessories.

In terms of visual observation, the focuser interface at the rear comes with a 1.25"/2" adapter, so the 185APO can easily achieve focus when connected to 1.25" or 2" diagonals or various eyepieces. Because of the retractable lens tube design, it can also be attached to a binoviewer for visual observation.

Aperture size:185mm

Focal length:1295mm

Focal ratio:f/7

Objective lens: Triplet air-spaced APO(including one ED glass)

Total length:1081mm(when the dew shield is contracted)

1222mm(when the dew shield is stretched)

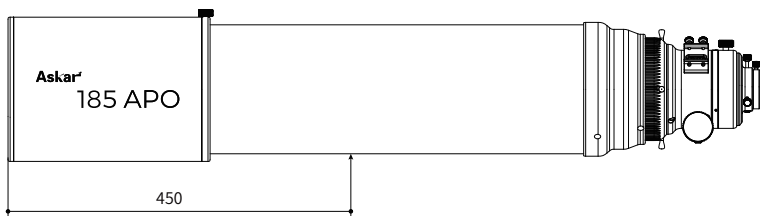
The length of the rear retractable lens tube: 95mm

Net weight:14.9kg

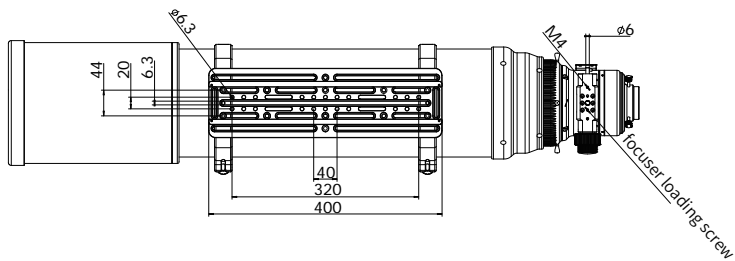
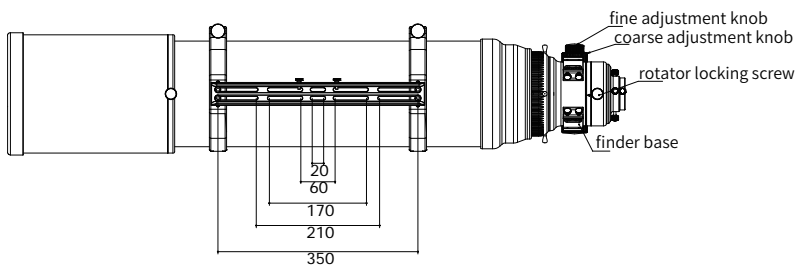
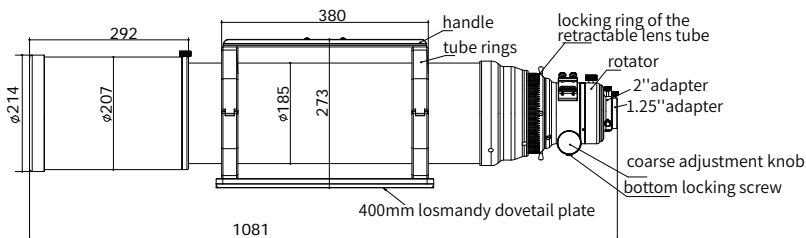
Gross weight:17.2kg

Rear-end adapter:2"adapter,1.25"adapter

With all tubes contracted, remove the lens cap, the center of gravity is about 450mm from the front end.

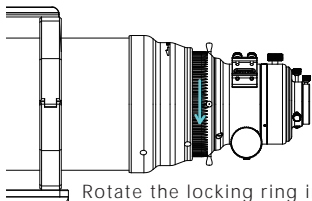


# Product Parts and the Size Diagram

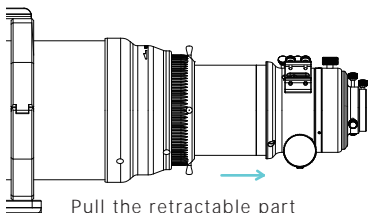
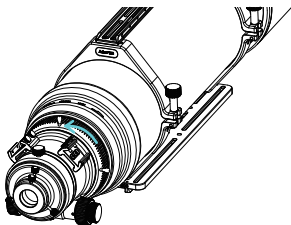


## Steps for using the retractable lens tube

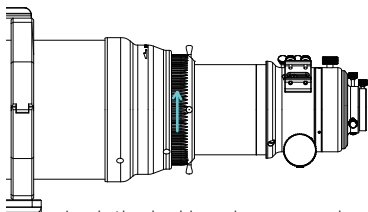
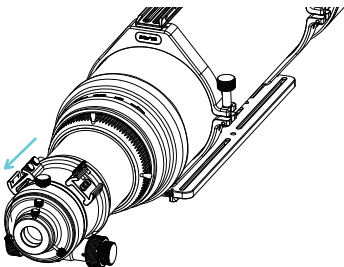
When used with 2" diagonal, 0.8x reducer or 1x flattener, please refer to the figure.



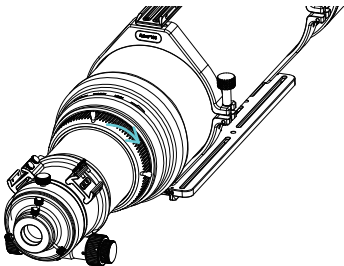
Rotate the locking ring in the direction of the arrow



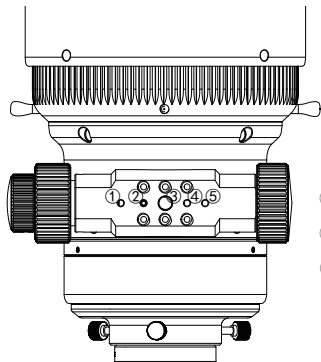
Pull the retractable part out completely



Lock the locking ring reversely



## The Locking Screw Position Diagram



② Bottom Load Adjustment Screw

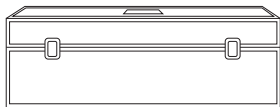
③ Bottom Locking Screw

①③④⑤ can be used for electric focusing bracket installation

## Items in 185APO Packaging



an 185APO OTA, a pair of tube rings, a handle,  
an Askar 400mm Losmandy dovetail plate



an aluminum case



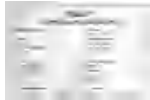
Instruction manual



Warranty card



Qualified certificate



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