



**Attention** This letter should be read BEFORE unpacking or any assembly. Failure to perform the following tasks could result in damage to your new iStar optical instrument, void the warranty and personal injury. **NEVER** point your telescope toward the SUN without a proper filter installed.

Hello iStar Optical buyer,

thank you for purchasing **Phantom FCL 140-6.5**, a professional grade 3x ED glass Apochromatic astro-imaging / visual refracting astrograph OTA in Super-APO class.

The entire body of this telescope is CNC machined and assembled with 0.05 mm tolerances. The instrument was hand-assembled, lab tested and precision collimated prior shipment from our Tucson, Arizona location.

There are several major improvements on this optical instrument, please pay close attention to the following information.

## 1| 80 mm REMOVABLE REAR SECTION

Phantom FCL 140-6.5 OTA is the first-ever refractor with removable precision-threaded 80 mm wide rear section of the telescope. If you are using special eyepieces, imaging systems, binoviewers, or other equipment with longer optical path, please take the following steps.

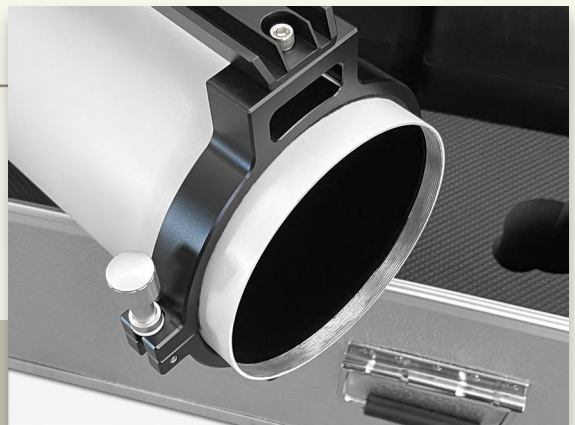
- Unscrew the 100 mm large format rack and pinion focuser.



- Unscrew and remove the focuser flange.



- Unscrew and remove the 80mm rear tube section.



- All removed parts - the 100 mm focuser, focuser flange and 80 mm tube section.



- Reattach the focuser flange to now 80 mm shortened main tube.



- Reattach the 100 mm focuser

- Here you have the Phantom FCL 140-6.5 in ultra compact size ready to accept any special eyepiece or equipment requiring longer optical path.



## 2| DUAL DOVETAILS

Phantom FCL 140-6.5 OTA is equipped with dual dovetail so you have always the correct dovetail type available regardless of the mount used.

- CNC machined 300 mm Losmandy style dovetail attached on the bottom of the tube ring assembly.



- CNC machined 300 mm Vixen style dovetail attached on the top of the tube ring assembly. The Vixen dovetail serves a dual purpose. As a dovetail and also as a rock solid top handle.



- The complete tube ring assembly with both types of dovetails attached.



### 3| THREADED LENS DUST CAP WITH BUILT-IN FRONT BAFFLE

- Front ring of the dew shield is threaded to accept a special CNC machined dual purpose lens cap.



- Threaded lens cap shown from both sides.



- If you want to reduce the effective aperture to view planets, Moon and other objects, simply unscrew and remove the center portion of the lens cap.





- Any time you have an issue with loosening the lens cap (because of previous over-lightning), remove the center portion of the lens cap, fully extend the dew shield and lock it in position. Now you will be able to reach with your hand into the central opening, grab the lens cap and loosen it by counter-clockwise rotation.



#### 4| 100 mm FOCUSER ACCESSORY BRACKET

- The large format 100 mm rack and pinion focuser is equipped with one standard accessory bracket that will allow you to attach a guidescope or any other type of accessory.



- A guidescope attached to the accessory bracket.



## 5| LOCTITE THREAD LOCKER THREAD RETAINING WAX

- Every front dew shield ring is threaded in and secured in place by Loctite “thread locker” wax. This will prevent accidental removal of the front ring when removing the threaded lens cap.



## 6| DUAL SPEED, ROTARY LOCK, RACK & PINION FOCUSER

- Every Phantom FCL 140-6.5 tube assembly is equipped with 100 mm (4") large format, smooth-action dual speed focuser equipped with rotary locking mechanism, accessory bracket, and 2" and 1.25" reductions.

