

Orion 0.8x Reducer-Flattener for EON Triplet ED Apochromatic Refractors

#8932 For EON 115mm ED

#8933 For EON 130mm ED

The 0.8x Reducer-Flatteners were designed specifically for use with the Orion EON 115mm and 130mm ED Triplet Apochromatic Refractors. They are intended for photographic use only.

The #8932 0.8x Reducer-Flattener for EON 115mm ED shortens the focal length from 805mm to 644mm (f/7.0 to f/5.6). The #8933 0.8x Reducer-Flattener for EON 130mm ED shortens the focal length from 910mm to 728mm (f/7.0 to f/5.6).

The 0.8x Reducer-Flattener has a 55mm backfocus distance. This is the distance from the front flange of the Reducer-Flattener housing to the image plane. To produce a focused image, your camera's sensor must be positioned 55mm from the housing flange. Most DSLR cameras, when used with a T-ring, have the requisite 55mm backfocus distance. For other cameras, which have their sensor closer to the front opening of the camera, one or more spacer rings (sold separately) will be needed between the camera and the Reducer-Flattener to achieve the 55mm requirement. Consult your camera's manual to determine how far back the sensor is recessed. Subtract that number (in millimeters)

from 55mm to get the length of spacer rings needed to reach 55mm backfocus distance.

Installing the 0.8x Reducer-Flattener

Before installing the 0.8x Reducer-Flattener, for the EON 130mm ED (only), you should remove the 30mm extension collar between the focuser and the optical tube (**Figure 1**). To do this, you will first remove the entire focuser, including the extension collar. Grasp the focuser at the collar (**Figure 2**) and unscrew it, turning it counterclockwise. The whole focuser will rotate until it is removed, as shown in **Figure 3**. Next, remove the 30mm extension collar from the focuser by turning the collar counterclockwise (**Figure 4**). Now thread the focuser back on to the optical tube (**Figure 5**).

The EON 115mm ED does not have an extension collar, so the above procedure applies only to the EON 130mm ED.

The installation of the 0.8x Reducer-Flattener described below applies to both the EON 115mm and EON 130mm.



Figure 1. To achieve proper focus with the EON 130mm when using the 0.8x Reducer-Flattener, you should remove the 30mm extension collar.



Figure 2. Remove the focuser of the EON 130mm by grasping the extension collar and turning it counterclockwise.



Figure 3. This shows the EON 130mm's focuser removed, including the 30mm extension collar.



Figure 4. Unthread the extension collar from the focuser.



Figure 5. With the extension collar removed from the EON 130mm's focuser, thread the focuser back on the optical tube.



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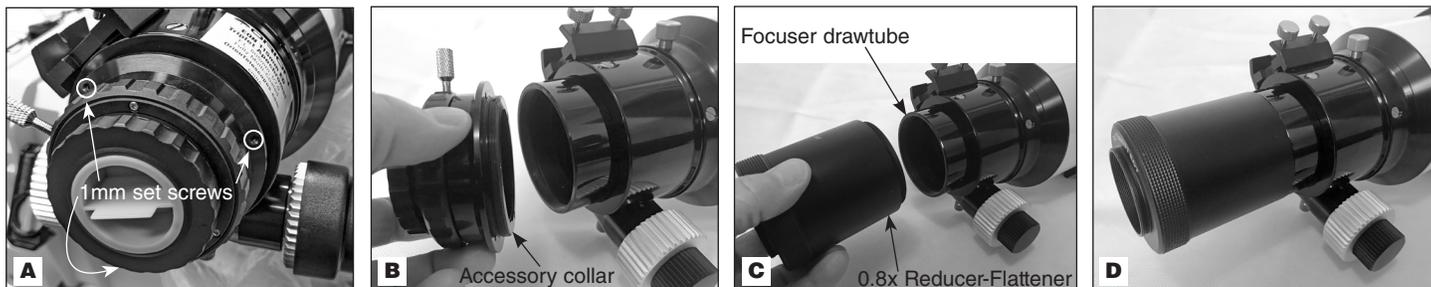


Figure 6. **A)** Loosen the three 1mm Allen setscrews on the collar. **B)** Unthread the accessory collar from the focuser. **C)** Thread the Reducer-Flattener onto the focuser drawtube. **D)** Installation of the Reducer-Flattener is complete.

The 0.8x Reducer-Flattener threads directly onto the focuser drawtube via 63mm threads (M63 x 1). To install it you must first remove the accessory collar from the focuser drawtube. To do so, first loosen the three setscrews on the collar a turn or two (see **Figure 6A**) using the 1mm Allen key that came with the telescope. You do not need to remove the setscrews, just loosen them. Next, grasp the collar and rotate it counterclockwise to remove it (**Figure 6B**). Then simply thread the 0.8x Reducer-Flattener clockwise onto the drawtube until it is tight (**Figures 6C** and **6D**). Keep the accessory collar in a safe place for later replacement onto the drawtube.

Note that the male threads on the camera side of the 0.8x Reducer-Flattener are 48mm in diameter (M48 x 0.75). They are wider than the 42mm threads of a standard T-mount. The wider 48mm threads reduce the likelihood of vignetting of the image, especially when using a full-frame camera sensor. So for DSLR use, you will need a 48mm “wide” T-ring to connect the camera to the 0.8x Reducer-Flattener (**Figure 7**).

Care and Cleaning

Keep both rubber caps on the 0.8x Reducer-Flattener when it's not in use to protect the optics, and store it in a dry place. If dust builds up on the lenses, simply blow it off with a blower bulb or lightly brush it off with a soft camel-hair brush. Avoid touching optical surfaces with your fingers, as skin oil may mar the optical multi-coatings.

To remove fingerprints or smudges from the lenses, use photographic-type lens cleaning fluid and lint-free optical lens cleaning tissue. Don't use household cleaners or eyeglass-type cleaning cloth or wipes, as they often contain undesirable additives like silicone, which don't work well on precision optics. Place a few drops of fluid on the tissue (not directly on the lens!) and wipe gently in a circular motion, then remove the fluid with a dry tissue or two. Do not “polish” or rub hard when cleaning the lens, as this may scratch it. The tissue may leave fibers on the lens, but they can simply be blown off with a blower bulb.

Never disassemble the lens assembly to clean optical surfaces! Doing so will void the warranty and may result in misalignment of the optics.

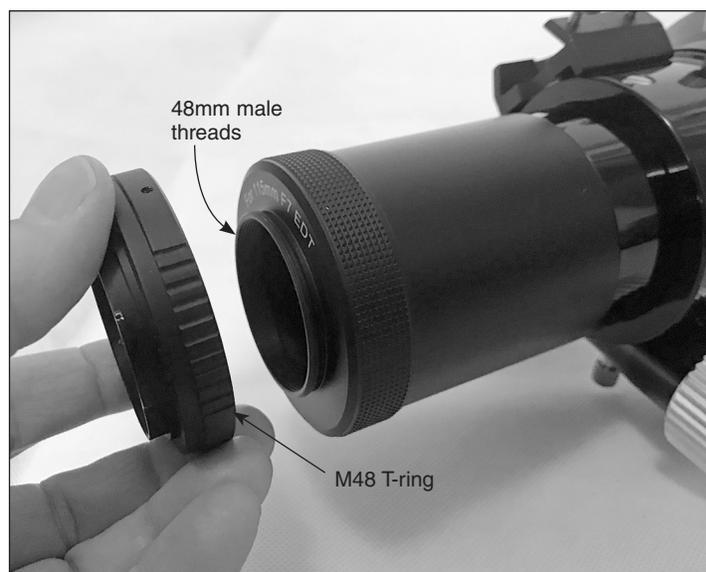


Figure 7. To attach a DSLR or mirrorless camera, you need to first install a T-ring for your particular camera. The male threads on the Reducer-Flattener have a 48mm diameter, so the T-ring will need to have 48mm female threads.

Specifications

Dimensions:	3.6"L x 2.8"W
Weight:	17.6 oz.
Backfocus distance:	55mm
Threads, camera side:	M48 x 0.75 (male)
Threads, focuser side:	M63 x 1.0 (male)
Coatings:	Fully multi-coated



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