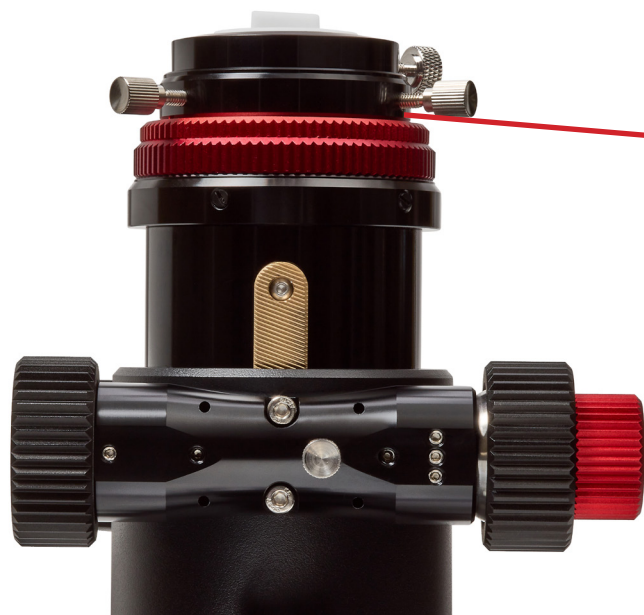


ASTRO-TECH

Reducer/Field Flattener and Field Flattener Tech Sheet

ASTRO-TECH AT60ED AND AT72EDII



The AT60ED field flattener or reducer/field flattener and the AT72EDII reducer/field flattener will attach at this part of your focuser. Simply unthread the 2" eyepiece adapter and thread in your field flattener or reducer/field flattener. Make sure the thin red trim ring is still attached to the telescope so your piece of gear will thread onto the telescope.

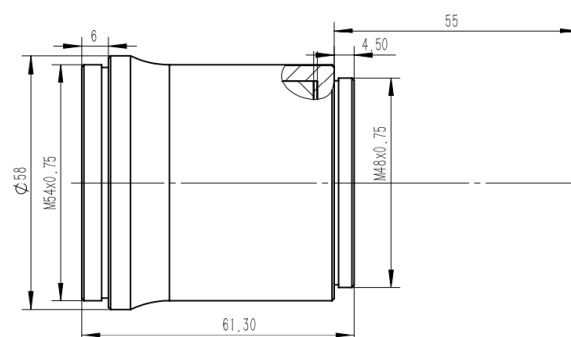
AT60ED Field Flattener

The AT60ED field flattener will not change the focal length or focal ratio of your telescope. It is designed to allow you to image at your native design, but flatten the field for a better image. The camera side of the adapter is 48mm t-threads. So make sure t-ring is correctly sized. If your AT60ED is an early model without a camera angle adjuster, then this piece will thread directly to the focuser drawtube.



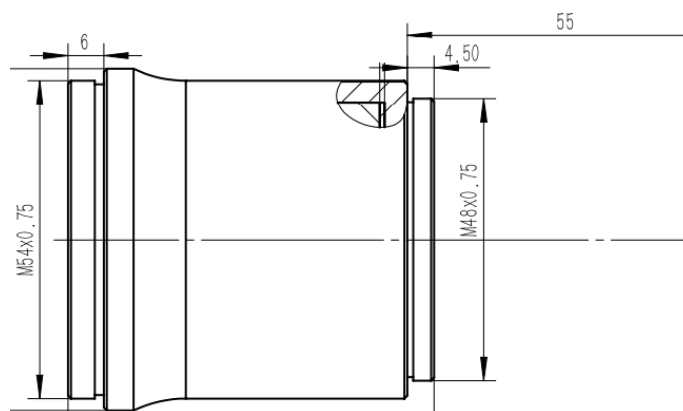
AT60ED Dedicated 0.8x Reducer/Field Flattener

The AT60ED reducer/field flattener is designed to shorten the focal length and speed up the f ratio. This particular model is a 0.8x reducer making your AT60ED 288mm and f/4.8 when attached. The camera side of the reducer/field flattener is 48mm t-threads so make sure you have the correct t-ring. The telescope side of the reducer/field flattener is threaded to accept most 2" filters as well. Simply thread your filter onto the ATRF60 and then thread the ATRF60 into the telescope.



AT72EDII 0.8x Reducer/Field Flattener

The AT72EDII reducer/field flattener is designed to shorten the focal length and speed up the f ratio. This particular model is a 0.8x reducer making your AT72EDII 344mm and f/4.8 when attached. The camera side of the reducer/field flattener is 48mm t-threads so make sure you have the correct t-ring. The telescope side of the reducer/field flattener is threaded to accept most 2" filters as well. Simply thread your filter onto the ATRF72 and then thread the ATRF72 into the telescope.



Backspacing (also called back focus distance) for a telescope refers to the distance from the last optical surface of the telescope, or in this case, a focal reducer/field flattener to the imaging sensor. This measurement is crucial for astrophotography and ensures that the optical system delivers sharp, properly focused images.

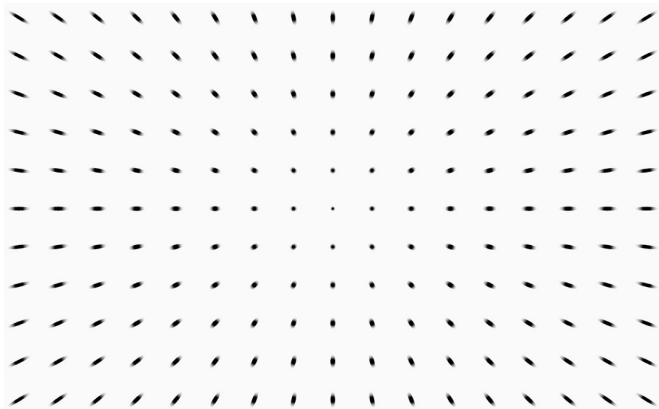
Why is Backspacing Important?

It Ensures Proper Focus – If the camera sensor is too close or too far from the optimal back focus distance, stars may appear distorted or out of focus. Field flatteners or focal reducers/field flatteners, require a precise back focus distance to achieve sharp stars across as much of the field as possible.

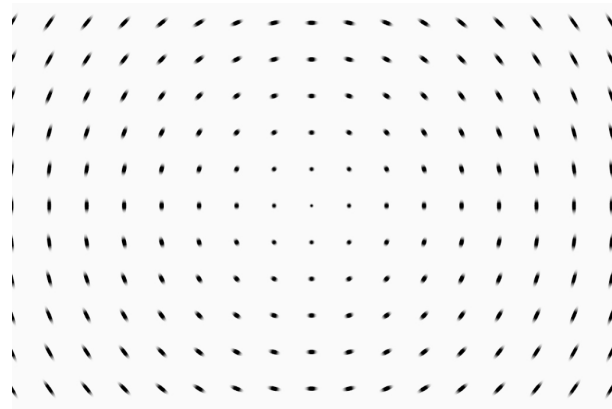
Our Backspacing Requirements:

Our flatteners or reducer/field flatteners require 55mm of back focus. Most modern imaging cameras come with the proper extensions to reach 55mm out of the box. However, if you add other components in your imaging train, like a filter wheel for example, you will have to do some math to make sure you are able to get to the proper 55mm. If using a DSLR with a T-ring, most T-rings are designed to provide a 55mm back focus when attached to the camera. Small adjustments (fractions of a millimeter) can sometimes make a significant difference in image quality. Also, falling temperatures or optical manufacturing tolerances can make minor differences in proper backspacing. So you may require 54mm of backspacing or even 57mm of backspacing. At times it can become a little extra trial and error to get it dialed in.

Common Star Patterns That Needs Some Backspacing Adjustment



If your stars are radiating out, then you need to add some spacers as your sensor is too close.



If your stars are bowing out, then you need to take some spacers out as your sensor is too far away.