
Orion® Helical Fine-Focusing Adapter

#13025

Introduction

Most modern telescopes come equipped with rack-and-pinion focusers. These are adequate for focusing at low powers.

However, when high powers are used, the limitations of the focuser come into play and make finding the precise focus point difficult. Worse, the act of adjusting most telescope focusers applies force to the telescope, resulting in unwanted vibrations and possibly moving the telescope off its target.

The Helical Fine-Focusing Adapter solves these problems. With just a twist of the fingers, the observer has precise control over the eyepiece position. The helical adapter has no backlash and allows much smaller focusing increments than can be achieved with standard focusers. When used in conjunction with your telescope's standard focuser, the helical adapter will greatly enhance your focusing precision. The gentle twisting action of the adapter means no extra force is applied to the tube during focusing, so images remain steadier.

Installation

The helical adapter will fit into any 2" focuser and accepts eyepieces with a barrel diameter of 1.25" (only).

To install the helical adapter, first remove any existing 1.25" adapter from the focuser if you have not already done so. Then insert the adapter into the focuser and secure it with the thumbscrew(s), just like you would a 2" eyepiece. Then insert the 1.25" eyepiece you wish to use into the adapter and secure it with the thumbscrew.



The helical adapter requires that the telescope have at least 9mm of inward focus travel to focus. It requires 17mm of inward focus to utilize the full focus range of the helical adapter. Most telescopes will have this amount of inward focus travel.

Operation

Initial coarse focusing should be done by adjusting the telescope's main focuser. Once you are close to being in focus, rotate the helical adapter with your fingers until the object comes into focus. Go a little bit beyond sharp focus until the image just starts to blur again. Then reverse the rotation of the adapter, just to make sure you've hit the exact focus point. You will find the helical adapter easy to use when making small focusing adjustments.

Do not turn the helical adapter past its natural limit of travel. If you find that you cannot reach focus within the focus range of the helical adapter, then make further coarse adjustments with the main focuser before using the adapter to fine-focus.

Care and Maintenance

With proper care, your helical adapter will last a lifetime. Store it in a protective box or eyepiece case when not in use. Keep the adapter as clean as possible to ensure that the adapter threads have the smoothest motion possible. Over time, you may wish to add a small amount of light oil to the adapter's threads to aid in reducing friction.

Specifications

Size: Fits 2" focusers

Eyepieces: Holds 1.25" eyepieces

Focusing design: Helical

Material: Machined aluminum

Grips: Rubber

Extension rate: .16" per revolution