

Askar 71F

Askar 71F Flat-Field Telescope Instruction Manual

Model: 71F

1. INTRODUCTION

Welcome to the Askar 71F Flat-Field Telescope instruction manual. This guide provides detailed information on the assembly, operation, and maintenance of your new 71mm aperture F6.9 ED Glass Refractor. Designed for both deep sky astrophotography and visual astronomy, the Askar 71F offers a quadruplet air-spaced APO optical design for excellent image quality and a flat field across the entire view.

2. PACKAGE CONTENTS

Upon unpacking your Askar 71F Flat-Field Telescope, please verify that all the following components are present:

- Askar F Series Telescope (Main Tube)
- Lens Cap
- Dew Shield
- Dew Shield Locking Screw
- Tube Rings
- Vixen Style 230mm Dovetail Plate
- Multifunctional Handle Bar
- Finder Base
- Fine Adjustment Knob
- Coarse Adjustment Knob
- 2" to 1.25" Adapter
- M64 to 2" Adapter
- 360° Rotator Locking Screw
- 360° Rotator

- 1.25" 45° Erecting Prism
- 1.25" 8mm Eyepiece
- 1.25" 20mm Eyepiece
- M64-M54/M54-M48 Photographic Adapters
- Inspection Check List
- Product Card
- User Manual (this document)
- Certificate Card
- Carton

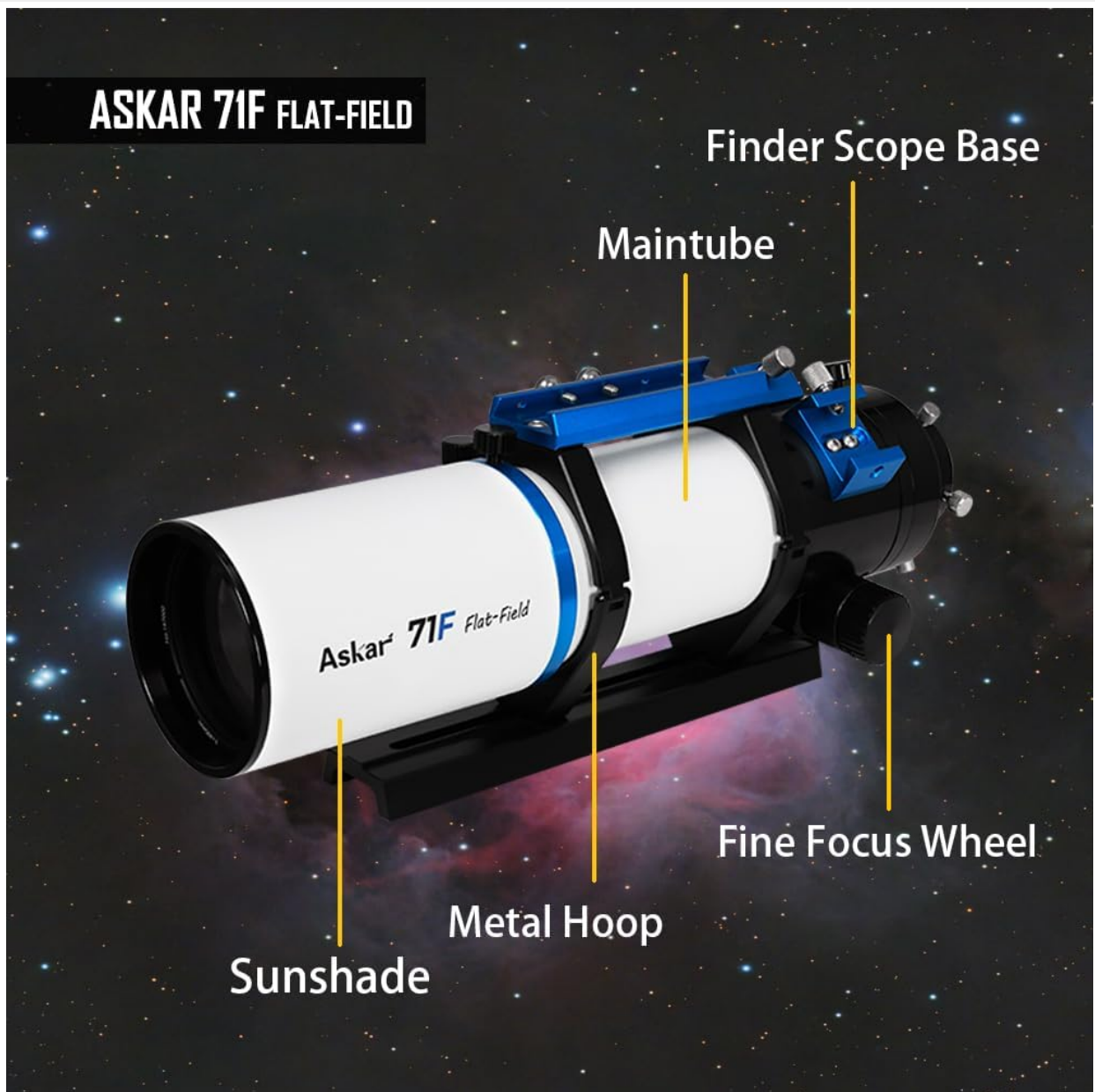


This image displays the Askar 71F telescope alongside its packaging and a numbered list of included accessories, ensuring all components are accounted for.

3. PRODUCT OVERVIEW

Familiarize yourself with the main components of the Askar 71F Flat-Field Telescope using the diagrams below.

ASKAR 71F FLAT-FIELD



The image displays the Askar 71F telescope with key components labeled: Sunshade, Maintube, Metal Hoop, Finder Scope Base, and Fine Focus Wheel.



This infographic highlights the telescope's features including 71mm aperture, 490mm focal length, quadruplet APO design, 1 piece ED glass, no need for a flattener, 1.25-inch visual adapter, 1:10 fine adjustment, and 360-degree rotator.

4. SETUP

4.1. Mounting the Telescope

The Askar 71F is equipped with a Vixen-style dovetail plate for secure attachment to compatible equatorial or altazimuth mounts.

1. Securely attach the dovetail plate to your telescope mount's saddle.
2. Ensure the tube rings are properly tightened around the main tube to hold the telescope firmly.
3. Adjust the balance of the telescope on the mount for stable tracking and movement.

4.2. Attaching Eyepieces and Accessories

Depending on your intended use, attach the appropriate accessories to the focuser.

- **For Visual Observation:** Insert the desired eyepiece (e.g., 8mm or 20mm) into the 1.25-inch visual adapter. For terrestrial viewing, use the 1.25-inch 45-degree erecting prism to achieve an upright, non-inverted image.

- **For Astrophotography:** Attach your camera using the M64-M54/M54-M48 photographic adapters. Ensure all connections are secure to prevent light leaks and maintain optical alignment.



The image shows the Askar 71F telescope with its blue accents, mounted on a tripod, illustrating a typical setup configuration for observation or imaging.

5. OPERATING INSTRUCTIONS

5.1. Focusing

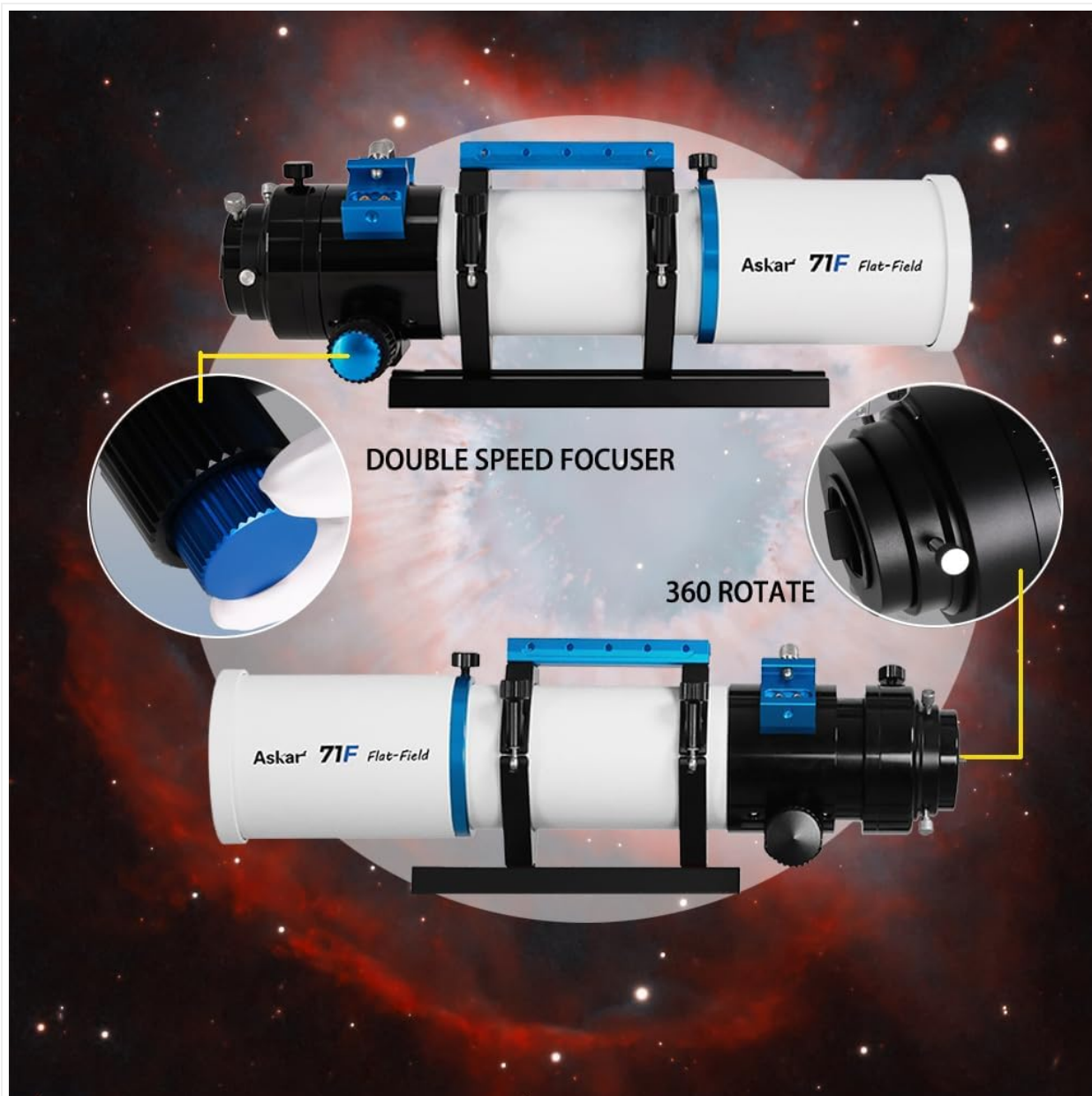
The Askar 71F features a dual-speed focuser for precise adjustments, crucial for achieving sharp images.

1. Use the larger coarse adjustment knob for initial, rapid focus changes to bring the object into approximate focus.
2. Utilize the smaller fine adjustment knob (with a 1:10 ratio) for minute, precise focusing. This is especially important for critical focus in astrophotography.

5.2. 360-Degree Rotator

The focuser assembly can be rotated 360 degrees, allowing for optimal photographic composition or comfortable visual observation without repositioning the entire telescope.

1. Loosen the 360° rotator locking screw.
2. Carefully rotate the focuser assembly to the desired orientation.
3. Tighten the 360° rotator locking screw to secure the position.



This image highlights the double speed focuser for precise adjustments and the 360-degree rotator, which allows for easy photographic composition and visual observation by loosening screws to rotate the focus mechanism.

5.3. Visual Observation

For visual use, insert either the 8mm or 20mm eyepiece into the 1.25-inch adapter. For observing terrestrial objects, the 45-degree erecting prism will correct the image orientation, providing an upright view.

5.4. Astrophotography

The Askar 71F is optimized for astrophotography with its flat-field optical design. Connect your camera using the appropriate M64-M54/M54-M48 adapters. Achieving precise focus with the fine adjustment knob is paramount for capturing sharp, detailed astronomical images.

6. MAINTENANCE

6.1. Cleaning the Optics

To maintain optimal performance, keep the optical surfaces clean. Use a soft, lint-free cloth specifically designed for optics and a specialized optical cleaning solution. Avoid touching lens surfaces with bare hands, as oils can leave residues.

6.2. General Care and Storage

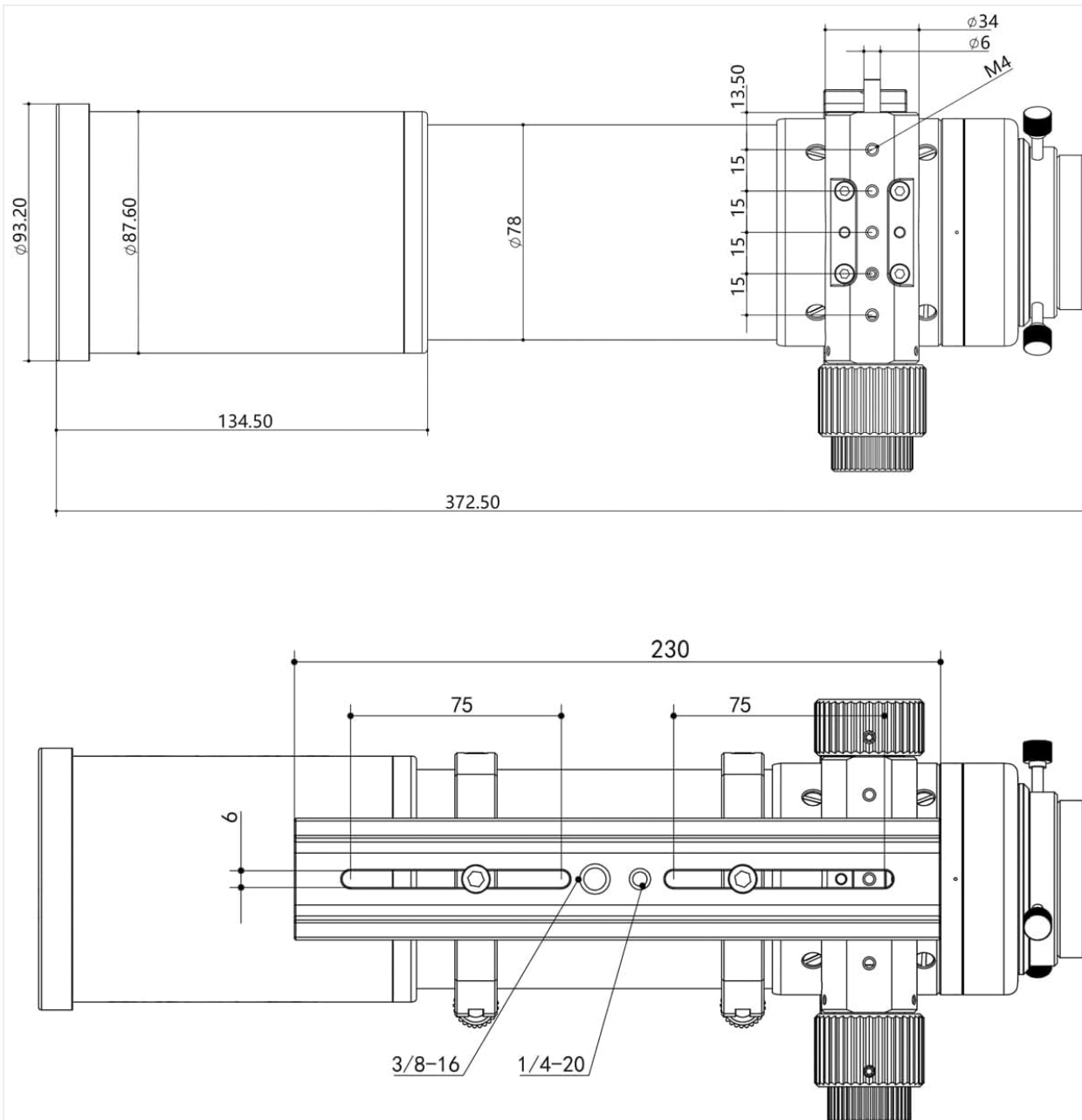
Store the telescope in a dry, dust-free environment when not in use. Always keep the lens cap on the objective lens to protect it from dust and accidental damage. Avoid exposing the telescope to extreme temperatures or sudden temperature changes.

7. TROUBLESHOOTING

- **Blurry Images:** Ensure the focuser is precisely adjusted. Check for atmospheric conditions (e.g., heat haze, turbulence) that can degrade image quality. Verify that all optical components (lenses, eyepieces, camera sensors) are clean.
- **No Image Visible:** Confirm that the lens cap has been removed from the objective lens. Ensure the eyepiece or camera is correctly inserted and securely fastened in the focuser.
- **Image Inversion (Visual):** For astronomical observations, images will naturally appear inverted. If an upright image is desired for terrestrial viewing, use the 1.25-inch 45-degree erecting prism.

8. SPECIFICATIONS

Feature	Detail
Brand	Askar
Model Name	71F
Optical Tube Length	71 Millimeters
Objective Lens Diameter	71 Millimeters
Aperture	71mm
Focal Length	490mm
Focal Ratio	F6.9
Optical Design	Quadruplet air-Spaced APO Refractor
Glass Type	ED Glass
Focuser	Dual-speed (1:10 fine adjustment), 360° Rotator
Dovetail Plate	230mm Vixen Style
Product Dimensions	14.67 x 3.67 x 4.37 inches
Item Weight	9.9 pounds (4.5 Kilograms)
Focus Type	Manual Focus
Power Source	Manual/Mechanical
Date First Available	April 24, 2024

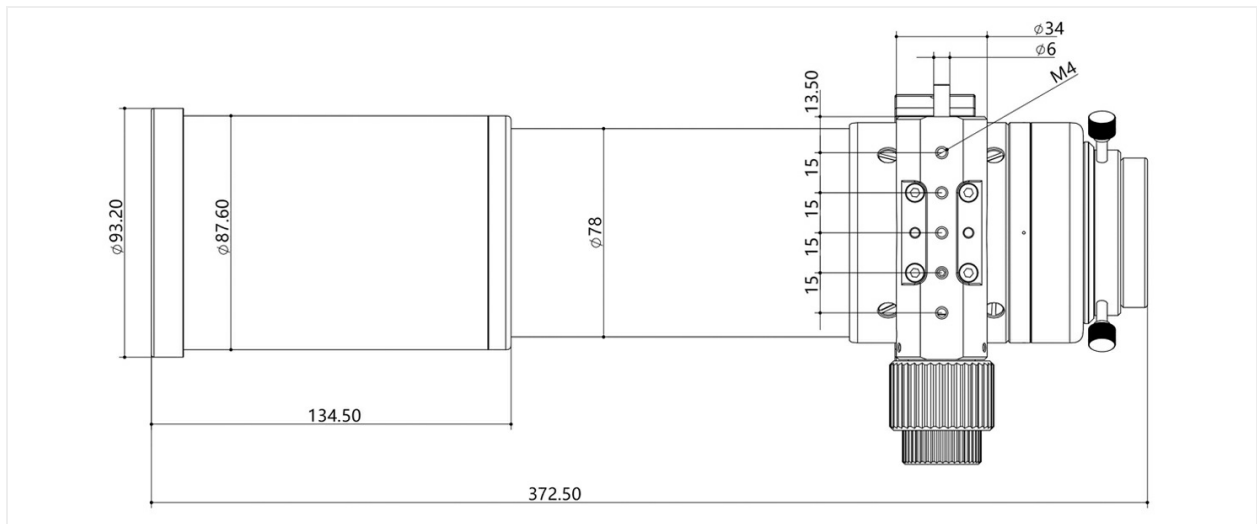


ASKAR 71F SIZE MAP

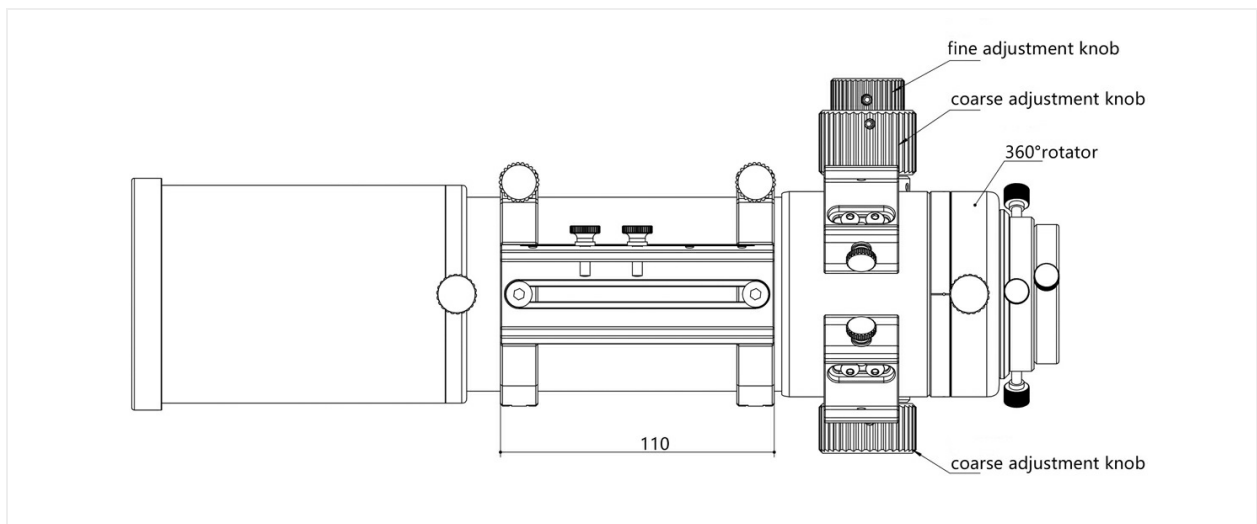
This diagram provides precise measurements and technical details of the Askar 71F telescope, including its length, diameter, and mounting points.



This technical drawing illustrates the telescope's structure, including the lens cap, dew shield, tube rings, handle, finder base, 360° rotator, and adapters, along with key dimensions.






The spot diagram shows the telescope's optical correction across the field of view, indicating excellent flat-field performance with minimal aberrations.



This diagram illustrates the light path through the quadruplet optical design of the Askar 71F, showing the placement of the ED glass elements for chromatic aberration correction.

9. WARRANTY AND SUPPORT

For detailed warranty information, technical assistance, or customer support, please refer to the product card included in your package. You may also visit the official Askar website for the most up-to-date support resources and contact information.

	<p>Askar 71F Flat-Field Refractor Telescope User Manual and Specifications</p> <p>Comprehensive user manual for the Askar 71F Flat-Field refractor telescope. Includes detailed specifications, features, assembly diagrams, usage instructions for visual observation and astrophotography, and packaging contents.</p>
	<p>Askar FRA400 F5.6 APO Refractor Astrograph Telescope User Manual</p> <p>Comprehensive user manual for the Askar FRA400 F5.6 APO Refractor Astrograph telescope. Learn about its specifications, features for astrophotography, and optical performance.</p>
	<p>Askar 130PHQ Astrograph Telescope User Manual and Specifications</p> <p>Detailed user manual and technical specifications for the Askar 130PHQ, a 130mm f/7.7 flat-field astrograph telescope. Includes instructions, specifications, and package contents.</p>
	<p>Askar 103 APO Refractor Telescope User Manual</p> <p>Comprehensive user manual for the Askar 103 APO refractor telescope, detailing specifications, features, assembly, and packaging contents. Learn about its 103mm aperture, 700mm focal length, and advanced focuser.</p>
	<p>Askar SQA55 User Manual: Astrophotography and Photography Guide</p> <p>Comprehensive user manual for the Askar SQA55 telescope, detailing its specifications, features, and usage for both astrophotography and general photography. Learn about its quintuplet air-spaced Petzval APO design, dual-speed focuser, and quick-release accessories.</p>
	<p>Askar FRA300 Pro Astrograph User Manual</p> <p>User manual for the Askar FRA300 Pro astrograph, detailing its specifications, features, and usage instructions for astrophotography.</p>