

Askar

# FRA600

## ■ 使用说明书

## ■ User's Manual

### 警告 WARNING!!

请不要通过本望远镜直接观察太阳，这样做可能导致瞬间失明，  
请购买专用太阳观测滤镜或滤膜，来获得最安全的观测指导。通过  
寻星镜，也可以造成眼睛的严重损害。请让孩子白天远离望远镜。

**DO NOT LOOK AT SUN THROUGH TELESCOPE.  
IT WILL CAUSE IRREVERSIBLE DAMAGE TO YOUR EYE.**

欢迎使用ASKAR FRA600  
www.askarlens.com

一对多功能报箍预留多排连接孔位，使得用户在布置寻星镜等相关附件时非常灵活，方便。

FRA600如同FRA400一样，除了完美支持平坦的大画幅天文拍摄之外，  
高质量观测也是其拿手的强项，提供极小色差以及高对比度的目视畅快  
体验，让您身临其境，难忘于其高品质表现。

如果说FRA600只是一套三片式APO折射镜，相对于其价格也是合理的；  
而FRA600 是拥有五片镜片的4.3英寸超级APO摄星镜，集高质量拍摄观  
测于一体，其高性价比不言而喻。

### 规格

口径：108mm

焦距：600mm

焦比：F5.6

物镜类型：五片式全分离APO(包含两片ED)

影像圈：66mm

后截距：160mm（从旋转器M90x1端面开始算起）

全长：493mm

本体重量：6.5kg

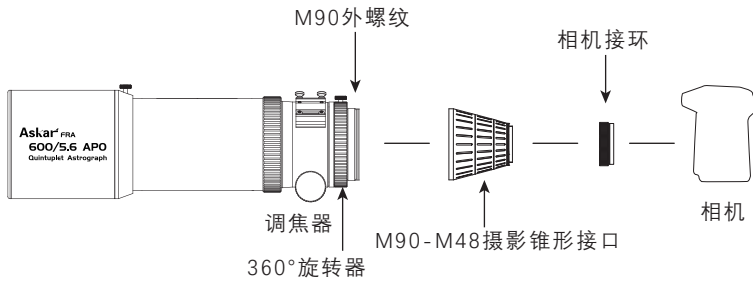
标准装重量：7.8kg（不含铅箱）

末端接口：M108×1外螺纹（不含旋转器），M90×1外螺纹，2英寸插  
口/1.25英寸插口

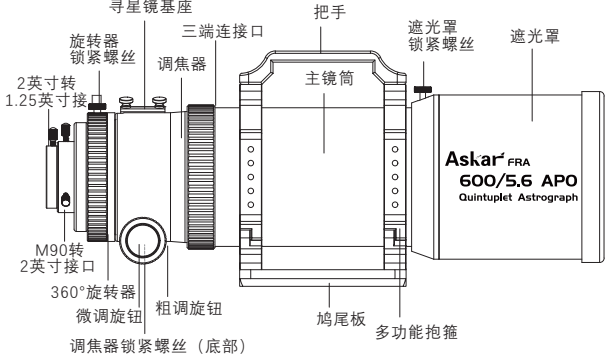
锥形接口：M90×1转M68×1，M68×1转M54x0.75，M54×0.75转  
M48×0.75

标准附属品：抱箍一对，把手一个，鸠尾板一个，分段式锥形接口（含  
M54X0.75以及M48x0.75外螺纹），质保书一份，说明书一份

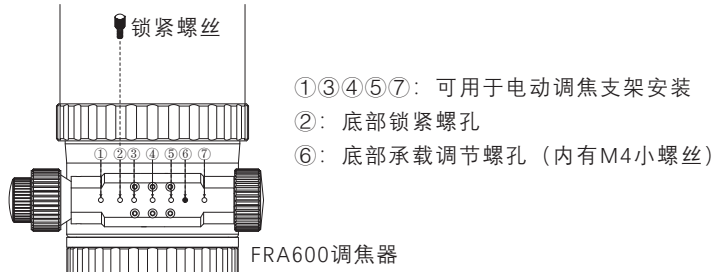
### 相机连接示意图



### 部件图



### 锁紧螺丝示意图



### 包装含有：



### English

### Instructions for use

Today Sharpstar announces the newest addition to its Askar FRA series, the Askar FRA600/5.6. Following the excellent optical performance of its first FRA400/5.6, the FRA600/5.6 is an evolution of the FRA series, an upgraded lens has a 108mm aperture and a 600mm focal length, the f/ratio is still f/5.6, and the image circle is 66mm surpass the full frame!

This FRA600 Quintuplet Refractor is also built on a Petzval design, offering a front triplet and rear doublet lens constructed of 5-element, includes two ED elements. This combination provides a high level of apochromatic performance for astroimaging.

With wonderful optics design, the FRA600 telescope provides a 66mm image circle to ensure excellent star shape across the entire flat field whilst controlling chromatic aberration, minimizing the distortion.

The two lens in the rear group have a 80mm diameter, effectively reduces the occurrence of decreased field illumination. With the precision lens manufacturing, it obtains theoretical optimal pinpoint stars, bringing you beautifully round stars and clean detail image.

The FRA600 comes fitted with a large 4.2" rack and pinion focuser and includes the standard 1:10 micro-adjustment knob, the focuser lift the payload to a pro level, offers smoothly operation when heavy imaging equipment and accessories are attached, without slipping, becomes a performance upgrade.

The focuser allows multiple connection thread. Askar offers a standard conical extension tube with M54x0.75 and M48x0.85 thread to connect various photography equipments.

Mechanically, the FRA600 has a tube diameter of 120mm and a retractable dew-shield. With the dew-shield retracted, the total length is only 493mm, making it a great portable 4" astrograph.

A set of multifunctional red anodized tube rings that include mounting points on three sides, makes it easy to attach accessories such as guider scope for backyard viewing.

In addition to supporting wide field astrophotography, the FRA600 is also perfect for high quality observation, provides complete lack of chromatic aberration and create images with impressive contrast of realistic visual experience.

If the FRA600 is just a triplet APO refractor, then the price is reasonable, but the FRA600 is a 4.3" Quintuplet Super APO

FRA600 Astrograph, its build and finish are unprecedented for an astrograph in this price range, moreover, the FRA600 offers cost-effective superb performance, is a pleasure to use.

### Specification

Aperture: 108mm

Focal length: 600mm

Focal ratio: F5.6

Objective type:Quintuplet flat-field APO (including two ED elements)

Image circle: 66mm

Back focus: 160mm (from the end of rotator M90x1 thread)

Overall length: 493mm

Tube weight: 6.5kg

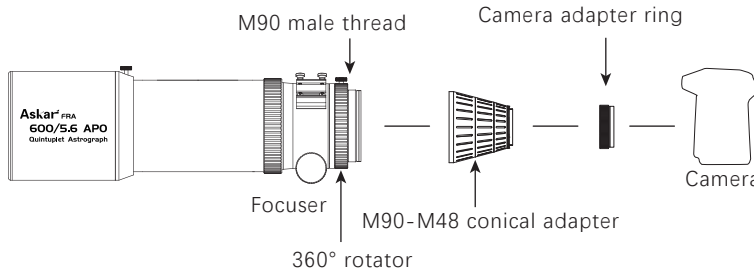
Standard packing weight: 7.8kg(not include Aluminum case)

Back-end adapter: M108x1 male thread (no rotator), M90x1 male thread, 2" adapter/ 1.25" adapter

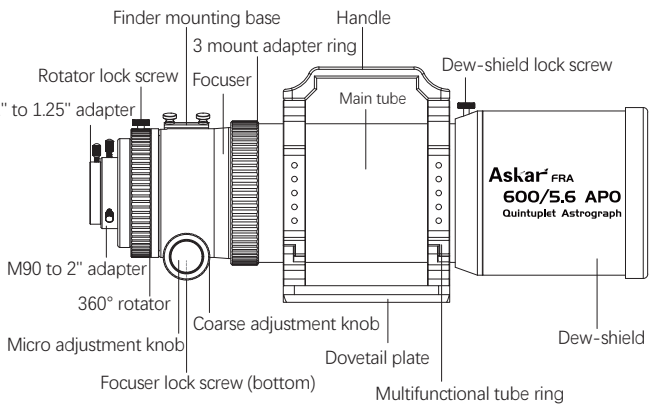
Conical adapter: M90×1-M68×1-M54x0.75-M48×0.75

Accessories: a pair of tube rings, a handle, a dovetail plate, sectional conical tube adapter (with M54X0.75 and M48x0.75 male thread), an inspection list, a manual

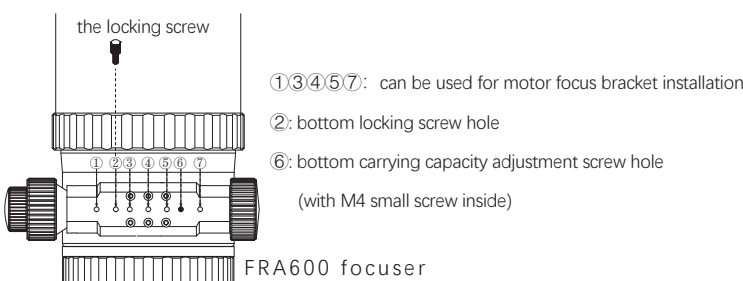
### Connection Diagram of Camera



### Product Parts Diagram



### The Locking Screw Position Diagram



### Items in FRA600 Packaging

