

ASTRO-PHYSICS

206mm EDF STARFIRE ASTROPHOTOGRAPHIC TELESCOPE

Our 206mm (8.1" aperture) EDF Refractor features a 3 element front objective with a 2 element rear field lens to image a highly corrected 3.5 degrees of sky over a 4" diameter field. With a focal length of 1620mm (64") the system operates at a speed of f7.9. This focal length coupled with the large field coverage is ideal for high resolution photography of deep sky nebulae, globulars, and clusters of galaxies.

The EDF optical design uses an advanced Super ED glass, chosen for its extremely good color correction well into the far violet regions where modern high resolution emulsions have their highest sensitivity. Resolution, contrast and color definition is superb, allowing extreme enlargements to be made from medium-format negatives. Multi-coatings are used throughout to increase overall efficiency well above 90%. Although mirror systems have been built with faster theoretical f ratios, their large central obstructions and reflective coating inefficiencies reduce their actual photographic speeds drastically. Actual side by side tests performed by top amateur astrophotographers using our refracting systems and comparable reflectors have shown that the refractors put more light down on the negative than the reflectors.

The 206mm EDF refractor is an outstanding visual telescope as well. Widefield oculars allow sweeping low-power views of the Milky Way and large extended nebulae. At high power, the 8.1" aperture shows crisp, sharp and contrasty views of the Sun, Moon, planets and double stars. All optical surfaces are carefully polished and the finished lens is tested and figured to a null under autocollimation. Under steady viewing conditions, you will see a hard white Airy disc at focus surrounded by the first diffraction ring. Inside and outside of focus you will see an evenly illuminated, expanded disc with concentric Fresnel rings, with the outermost ring brighter and wider than the rest.

MECHANICAL CONSTRUCTION

The 206mm EDF refractor is constructed as a compact portable telescope to minimize the size requirement for the mounting. We have incorporated several significant improvements to the tube assembly to make it easier to transport and set up in the field. The dewcap slides over the lens cell for easier storage. An aluminum dust cover protects the optical surface when not in use, and a foam-fitted carrying case will help retain the beauty of your tube assembly for years. The tube is fully baffled, painted with light absorbing flat black and features our adjustable push-pull cell.

The focuser on the EDF Refractor has a massive 4" inside diameter to allow full coverage of 6 x 7cm negatives. The components are machined on our own CNC to extremely high tolerances assuring that there is no wiggle between the drawtube and housing. More than a dozen knife-edge baffles are machined into the wall of the drawtube and painted flat black in order to maximize contrast by essentially eliminating any internal reflections. The camera adapter containing the field lens comes with a large adapter ring machined especially for the superb Pentax 6x7 camera (camera body is not included). A visual back is included that lets you use 2.7", 2" and 1.25" visual and photographic accessories. Recessed brass locking rings are installed at each thumbscrew location. As you tighten each thumbscrew, the brass locking ring clamps onto the part that has been inserted. Consequently, your focuser drawtube and 2" and 1.25" accessories are held securely in place. This is particularly important considering the heavy and expensive accessories that you may use. As an added advantage, the brass will not mar the surface of your accessories.



206mm EDF StarFire , 1200 German Equatorial, Pier

PERFORMANCE

The 206mm EDF StarFire refractor was developed as an outstanding astrophotographic system that can also be used as a super portable high resolution Lunar/Planetary refractor. In order for this instrument to achieve its resolution potential on fine grained emulsions, we recommend a very large, stable mounting that can be controlled to a high degree of accuracy. You may wish to consider our 1200 German Equatorial Mounting for your transportable use or permanent installation.

This instrument was requested by some of the world's most advanced amateurs who recognize the inherent advantages of a highly corrected, super-sharp refractive optical system for widefield high-resolution photography. These individuals are pushing the limits of astrophotography with new equipment and emulsions to achieve results that used to be the exclusive domain of large professional observatories. We are proud to be part of the push to extend the boundaries of amateur astronomy.