

FIRST LIGHT

See an interactive 360° model of this scope at www.skyatnightmagazine.com/evostar72ed



Sky-Watcher Evostar 72ED DS-Pro refractor telescope

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Looking for a multitasking scope that's as good for viewing as for imaging?

VITAL STATS

- **Price** £299
- **Aperture** 72mm
- **Focal length** 420mm, f/5.8
- **Optical design** ED doublet lens with multicoated surfaces
- **Mounting** Tube rings & 45mm dovetail bar (with 1/4-20 tripod threads)
- **Focuser** Dual-speed 2-inch Crayford Focuser, 11:1 ratio
- **Weight** 1,955g
- **Extras** Removable dew shield, standard finderscope shoe, aluminium carry case
- **Supplier** Optical Vision Ltd
- **Tel** 01359 244200
- **www** www.opticalvision.co.uk

Short-focus ED refractors are a highly popular and versatile class of telescope that can be happily used in a variety of roles from the purely visual through to wide-field imaging purposes. So let's take a look at Sky-Watcher's latest offering in this area – the Evostar 72ED DS-Pro.

What you get is a tube-only system with a finder shoe bracket, tube rings and a small Vixen-style mounting bar, along with a dual-speed Crayford anti-backlash focuser. Be aware, though, it doesn't come with an eyepiece, finderscope or star diagonal – great if you own them already as it keeps the cost of the 72ED down – but if you don't, it's something to factor in to your buying decision.

In the past Sky-Watcher, like most manufacturers, went into detail about the glass being used for their scopes' objective lenses, but the company seems to have changed its policy. For this model we only learn that the doublet objective lens has one Extra-Low Dispersion (ED) glass element and that Schott glass is used for the crown element. That aside, the lens has been treated with Sky-Watcher's Metallic High-Transmission Coatings, which,

according to the company's blurb, gives a 99.5 per cent transmission of the light.

We approached the review in two stages, with a visual performance test and tour first, after which we did some deep-sky imaging using both a Canon EOS 50D DSLR and a GPCAM2 290C camera.

Performance test and tour

To help with the visual test Sky-Watcher also loaned us a dielectric diagonal and a 9x50 right-angle finder, which are optional extras. We used our own eyepieces which included 26mm, 10mm and 6.4mm 1.25-inch fit along with our Sky-Watcher 28mm and Ethos 21mm 2-inch eyepieces. One thing to note: the standard 9mm Sky-Watcher 1.25-inch fit eyepiece often supplied with many of the company's scopes would not come to focus but we had plenty of other options and all our other eyepieces focused fine.

With our reliable 26mm eyepiece we found Regulus pin sharp across three quarters of the view with some distortion towards the edges. Overall the view was good with pleasing colour correction. It ▶

Take it anywhere!

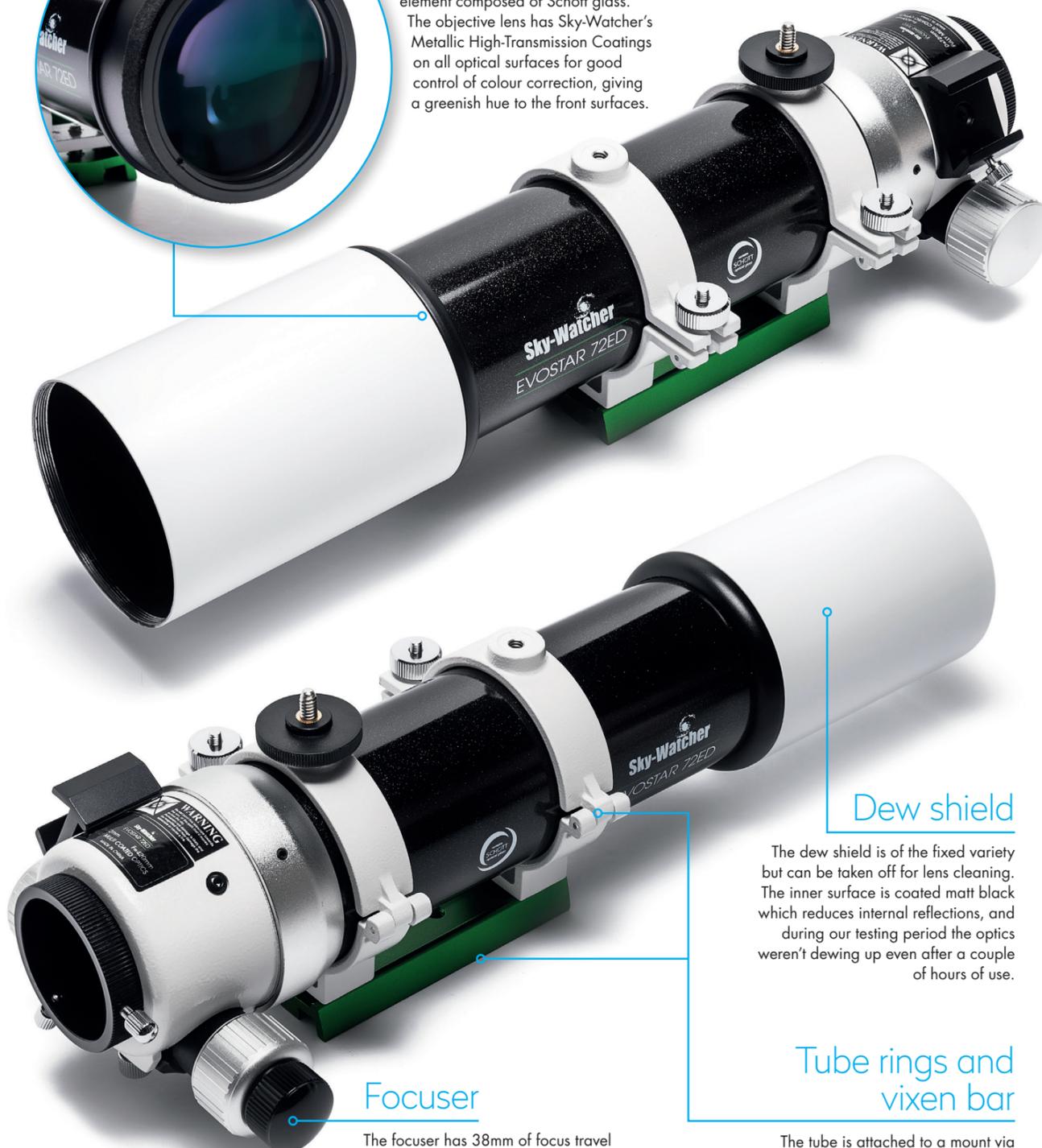
Small apo class refractors such as the original Equinox 80ED used to be quite heavy for their size but the latest small scopes from Sky-Watcher and other manufacturers have brought the weight down considerably and the 72ED DS-Pro is no exception. The optical tube weighs less than your average Chihuahua, just 1,955g. Plus, it's only 42cm long, so it's a very short tube system, and the dew shield is removable, all of which adds up to a great get-up-and-go-anywhere telescope, perfect for taking on holiday for viewing and imaging under far-flung dark skies. The 72ED DS-Pro is also an ideal companion to Sky-Watcher's Star Adventurer travel mount that we've reviewed in the past (see issue 113 and issue 143 for the mini version). Indeed, we used it to take images with our Star Adventurer, and found the whole system quick and easy to set up, a great incentive to invest in the telescope.

SKY SAYS...
A satisfying, lightweight ED refractor, but be aware of what it isn't supplied with



Optics

The front lens element consists of a doublet objective lens with extra-low dispersion (ED) glass and a crown element composed of Schott glass. The objective lens has Sky-Watcher's Metallic High-Transmission Coatings on all optical surfaces for good control of colour correction, giving a greenish hue to the front surfaces.



Dew shield

The dew shield is of the fixed variety but can be taken off for lens cleaning. The inner surface is coated matt black which reduces internal reflections, and during our testing period the optics weren't dewing up even after a couple of hours of use.

Focuser

The focuser has 38mm of focus travel and is a dual-speed, 11:1 ratio, 2-inch, fine-focusing rack and pinion design with tension adjustment underneath. The latter allows for heavy equipment such as large cameras to be attached and locked, so the focus doesn't slip during imaging.

Tube rings and vixen bar

The tube is attached to a mount via two tube rings and a short Vixen-style, dovetail bar. The bar can attach to a standard telescope mount via a Vixen saddle or, for lightweight tracking mounts, the bar has two 1/4-20 tripod threads giving flexibility for mounting.

FIRST LIGHT



Carry case

Consistent with many Sky-Watcher small telescopes this one comes with a smart, sturdy, aluminium hard case to protect the 72ED DS-Pro. Inside is plenty of room and cut-outs for other equipment such as diagonals and eyepieces. It can be locked for secure storage.

► gave a wide-field view of the Beehive Cluster, M44, in Cancer which sparkled with stars. For many deep-sky targets the view was quite wide so even the widely spaced galaxy pair of M81 and M82 seemed small. However, swapping to our 10mm eyepiece we enjoyed the subtle glow of the oval disc of M81 and could discern the irregular, mottled disc of M82.

It's always fun to seek out double stars so we turned to Algieba in Leo then Castor. They just split with the 10mm but by swapping to a hardly used and almost-forgotten 6.4mm eyepiece they split very cleanly to give a great view. Noting that Arcturus was well above the horizon, we sought out the globular cluster M3, and were rewarded with very satisfying views using the 10mm and 6.4mm eyepieces, while the Eskimo Nebula, NGC 2392, over in Gemini was a lovely, if small sight, in the 10mm.

Attaching the camera

We found we had to use a spare extender when we tried to attach our DSLR, otherwise we couldn't achieve focus. The focuser has 38mm of travel with a 12mm thickness adaptor at the end while our own adaptor added another 47mm giving us more leeway for focusing. We took a selection of images using our Star Adventurer tracking mount, imaging M44



M44 taken with the Canon EOS 50D DSLR on a Star Adventurer mount, 13x30-second exposures at ISO 1000



▲ M81 and M82 captured with a Canon EOS 50D DSLR on an AZ-EQ6 mount, 12x120-second exposures at ISO 1000



▲ M82 captured with a AZ-EQ6 mount and a GPCAM2 290C camera, using a stack of 90x40-second exposures

with 13x30-second exposures for a satisfying image. On another night, using our AZ-EQ6 mount, we imaged M81 and 82, using 12x120-second exposures showing how wide the view was.

We also used our GPCAM 290C, which gave a closer view of M82 and took 90x40-second exposures showing pleasing detail. Then we caught a good view of the crescent Moon with both cameras to round off the test. Swapping back to our various eyepieces, we achieved some crisp views of the Moon and, later, Jupiter. The latter was quite small and needed high magnification, but we could see the bands and spot the four Galilean moons too.

It was a shame the summer nebulae were not available as we suspect the North America Nebula, NGC 7000, would be a great target for this scope. Overall, the Evostar 72ED DS-Pro was a satisfying, lightweight scope to use. **S**

Verdict

Build and design	★★★★★
Ease of use	★★★★★
Features	★★★★★
Imaging quality	★★★★★
Optics	★★★★★
OVERALL	★★★★★

SKY SAYS... Now add these:

1. 2-inch dielectric diagonal
2. 9x50 right-angled finder
3. 0.85x focal reducer/corrector

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