



STARGAZER

Omegon Ritchey-Chrétien Pro 154/1370

Broaden your astronomical horizons with an instrument that is capable of providing incredibly crisp and clear views

Telescope advice

Cost: £415 (€465)
From: Astroshop.de
Type: Ritchey-Chrétien
Aperture: 6"
Focal length: 54"

Best for...

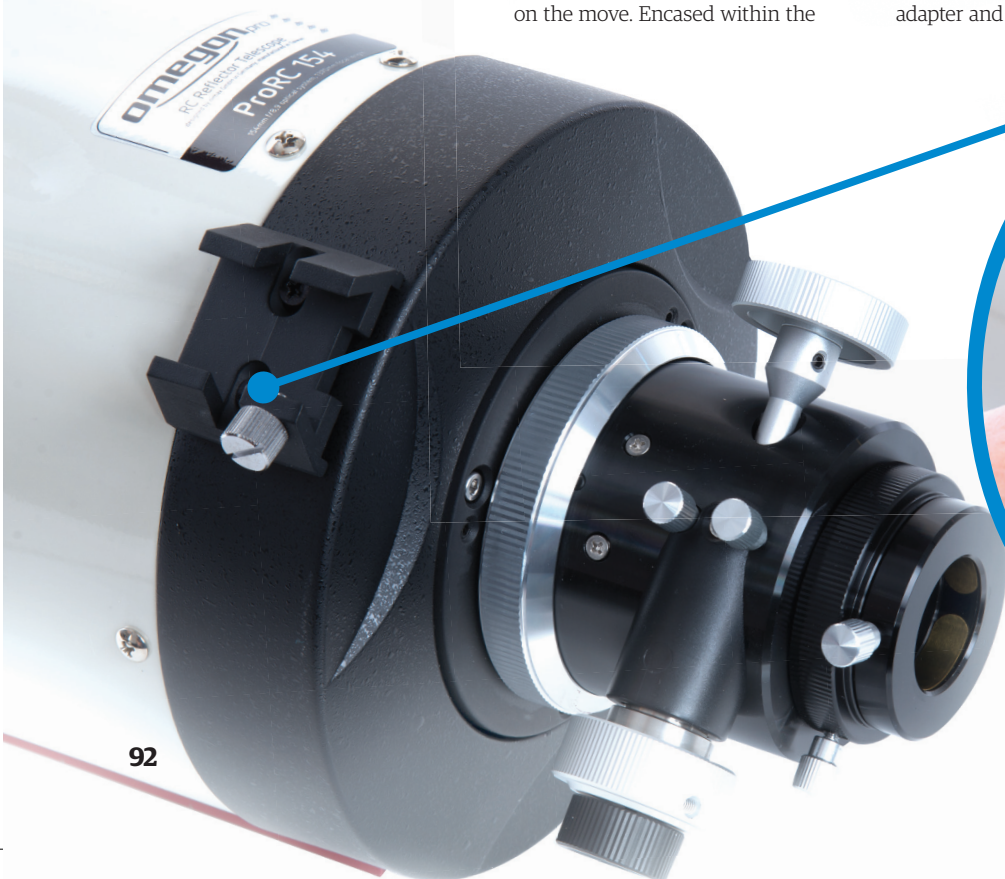
- Intermediate
- Advanced astrophotography
- Planetary viewing
- Deep-sky objects
- Medium budget

Astrophotography often starts by simply attaching a smartphone to your telescope's eyepiece or clamping a DSLR to the eyepiece. However, if it's a hobby you're keen on perfecting the art of, there will come a time when you realise you have surpassed your beginner or equipment, and it's time to upgrade. When that time has come, it is worth considering Astroshop's own Omegon Ritchey-Chrétien (RC) Pro 154/1370 telescope. Although you are paying for just the telescope tube, it certainly takes care of an astronomer's needs when imaging the night sky. Being a specialised adaptation of the conventional Schmidt-Cassegrain (SC) telescope, the RC telescope provides an incredibly sharp and crisp view of celestial objects, making it ideal for picking out details in an array of both planetary and deep-sky objects.

The telescope is a reasonable size, with a length of 485mm (19") and a diameter of 191mm (7.5") and, with a weight of 5.5 kg (12 lbs), it is easily transportable and not a hassle when on the move. Encased within the

sturdy steel tube is the specialised RC structure, providing an aperture size of 154mm (6") and a focal length of 1,370mm (54"), boasting a focal ratio of f/9 - this is considered a medium focal ratio, as it provides both a reasonable field of view and high-powered views (depending on the eyepiece). The telescope tube also has a fitted finderbase, allowing you attach your favourite finderscope to make finding your target a much easier process. Built onto the instrument is a dovetail rail, which seems fairly universal among telescopes now, meaning you can attach the Omegon Ritchey-Chrétien Pro to an array of telescope mounts. For the sake of astrophotography, we would suggest staying away from an alt-azimuth mount, as it makes tracking an object as it moves across the night sky a much harder task, causing issues when it comes to imaging.

The full contents of this package are minimal compared to a beginner's telescope setup: it contains the telescope, a 2" to 1.25" eyepiece adapter and spacers (a 50- and two



The telescope caters for the most advanced astronomer, with minimal accessories supplied



“The optics of the telescope proved very impressive”

omegon^{pro}

The supplied spacers (right) allow the astronomer to adjust the position of the telescope's focus

25-mm focuser extension sleeves). But let's not forget, this package is catering to the more advanced astronomers, which also ensures you are purchasing optics capable of unveiling deep-sky objects, which are faint and diffuse in stunning clarity. A welcomed feature of the package is the 1.25" adapter, as it means you're not constrained to just using 2" eyepieces when using this scope.

Out in the field, the optics of the telescope proved to be very impressive. It is abundantly clear that a lot of thought went into the design to ensure an astrophotographer is well-equipped for a reasonable price. As mentioned previously, the RC structure is a variation of the classic SC models. The difference is that the RC includes a hyperbolic primary and secondary mirror, this corrects for any aberration through the eyepiece, ensuring that it provides the sharpest views possible. This structure is primarily used in major telescopes as well, such as the Subaru Telescope at

the Mauna Kea Observatory, ensuring it's the best tool for the job of imaging the cosmos. Without the need for a corrector plate, this means the telescope has an open design to it and as a consequence, the mirrors can be cooled by the cold air of the outdoors, instead of being encapsulated within the telescope and being heated. However, this open design means the mirrors are more likely to be contaminated, so it's important to maintain an internally clean telescope for optimal use.

The long winter nights provided a medley of fantastic sights to test the esteemed optics of the Omegon Ritchey-Chretien Pro. We initially began observations with a Plössl 25mm eyepiece with a magnification of 55x. With the 25mm eyepiece attached and we pointed the telescope towards the famous Orion Nebula (Messier 42), this provided a wonderful combination of starlight illumination clouded by interstellar dust. The view of the Orion Nebula was highly enjoyable; not only was it clear and crisp, but it didn't blur towards the edges in our field of view. After slewing across the sky to Bode's

Galaxy and the Cigar Galaxy (Messier 81 and 82) in Ursa Major, we achieved crisp and clear views towards the outer edges of the objective lens.

When using the Omegon Ritchey-Chretien Pro, you should use a motorised mount that can track the movement of a celestial object, or at least an equatorial mount with an attached motor drive. This is recommended for astrophotography with long-period exposure times, as the object won't move within the field of view and cause blurring to the image. As this is considered a medium focal ratio, we discovered that it's possible to image luminous objects, such as the Moon or planets. As these are very bright though, we found that a long exposure time won't be necessary, as the tracking of the object is negligible. Tracking came in handy when we were imaging deep-space objects such as Messier 78, a reflection nebula that's part of the Orion Molecular Cloud Complex, also home to the Orion Nebula, but Messier 78 is a much smaller and much less luminous version of its celestial companion. Messier 78 requires a long exposure time in order

to collect more of its distant light, but we still got a fantastically sharp and crisp view for a short exposure time. By imaging an object such as this using different colour filters and merging them on a computer software such as Adobe Photoshop, a truly striking and colourful image of Messier 78 was created with ease. We also suggest that if you cannot get to a dark-sky region, you should consider purchasing a City Light Suppression (CLS) filter, which will block out some light pollution and allow the light from the nebula to continue through to the camera's CCD.

A great telescope for an upgrade to improve upon your astrophotography skills, the Omegon Ritchey-Chretien Pro allows you to explore a roster of deep-sky objects from season to season at a reasonable price. We feel that this telescope is much too advanced for a beginner, and is much better suited to an intermediate astronomer that has grown beyond their original kit. If you are planning to progress much further in the hobby of astrophotography, then this observing-imaging combo is certainly worth a look.