

FIRST light

Baader Morpheus eyepiece series

A new range in varying focal lengths that would suit intermediate observers

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See an interactive 360° model of these eyepieces at www.skyatnightmagazine.com/Morpheus



VITAL STATS

- **Price** £175 each
- **Focal lengths** 4.5mm, 6.5mm, 9.0mm, 12.5mm, 14mm, 17.5mm
- **Apparent FOV** 76°
- **Eye relief** 20mm
- **Optics** Eight elements in five groups
- **Barrel size** 1.25- and 2-inch fit
- **Extras** Belt holster, eyecups, extra dust cap
- **Weight** 323-372g
- **Supplier** David Hinds
- **www** [dhinds.co.uk](http://www.dhinds.co.uk)
- **Tel:** 01525 852696

The introduction of a new range of eyepieces always sends a ripple of excitement through the ranks of observational astronomers, and when the company involved has a reputation like Baader's expectations will be especially heightened. The new Morpheus range includes six focal lengths (4.5mm, 6.5mm, 9mm, 12.5mm, 14mm and 17.5mm) and we had all but the 17.5mm for this review. Each eyepiece is supplied in a sumptuous hinged box, but this isn't just for show – the fact the box is foam-lined means it offers excellent protection for the eyepiece in transit. Each eyepiece is finished in a simple but well applied silk black with chunky rubber grips to ensure that they don't slip out of your grasp.

There are a couple of surprises in store. The first is the unusual ribbed affect on both the 1.25- and 2-inch barrels, referred to as 'safety kerfs' in the technical data supplied by Baader. The second is that the words engraved below the rubber grip – identifying the focal length, apparent field of view and brand name – glow a gentle green-white, although this was very subtle indeed and required absolute darkness to appreciate.

SKY SAYS...

These eyepieces have excellent sharpness over at least 90 per cent of the field of view

Baader's Morpheus eyepieces offer a 76° apparent field of view, 8° wider than its popular Hyperion eyepieces. Comparing the Morpheus eyepieces with their nearest Hyperion equivalents, they are about 11 per cent lighter, and although the field stop was not razor sharp and had a slight hazy blue tint it showed an improvement.

The power of eye relief

The series uses Baader's well-established Phantom multicoatings and these appeared to be very evenly applied. The eyepieces have a generous eye relief of just around 20mm, eye relief being the fixed distance from the curved surface of the outermost lens to the point at which the exit pupil is formed. It is important that your eye should be able to comfortably reach this point to take advantage of the available field of view. This is of particular importance if you wear glasses, as a long eye relief allows you to still enjoy the full field of view while wearing them.

The extendable rubber eyecups were not up to the standard of the rest of the eyepiece in that they were quite flimsy and fell off nearly every time they were deployed, which was rather a

TYRE TECH GIVES EXTRA GRIP IN THE TELESCOPE

Eyepiece and focuser manufacturers have long been aware of the risks of eyepieces slipping out of their holders and various designs have been adopted to reduce the chances of this happening. The original single bolt clamping method was improved by the addition of wide undercuts in the eyepiece barrel that acted as a détente if the bolt became loose.

However, none of us appreciate the score marks left in our eyepiece barrels by the bolts so manufacturers usually install brass compression rings inside the eyepiece holder that grip the eyepiece barrel when the securing bolt is tightened. This system works very well but the undercut and the position of the compression ring don't always align correctly and in the worse

cases, can result in an eyepiece becoming jammed in the focuser. Baader has devised a unique solution by machining multiple grooves encircling each barrel every 2mm. The company calls these 'Safety Kerfs', and they are reminiscent of the longitudinal slits cut in road tyres, which share the same name and are designed for increased grip. We found these kerfs worked extremely well.



M43 ADAPTOR THREAD

Substantial eyepieces like these are ideal for afocal imaging. Removing the rubber eyecup reveals a male M43 thread that can be used with an adaptor (not included) to attach a camera directly to the eyepiece.

RUBBER GRIP

It is every astronomer's fear that they will drop an eyepiece when installing or removing it from their focuser or star diagonal. The chunky waffle-ribbed design of the rubber grip surrounding the Morpheus eyepieces gives plenty of confidence when handling them, even with a gloved hand in the cold of night.



1.25- AND 2-INCH BARRELS

The Morpheus design incorporates both 1.25- and 2-inch eyepiece barrels, which allow them to be used in a range of focusers and star diagonals. The 1.25-inch barrel has a standard filter thread built-in, which serves the eyepiece well when used in either a 1.25- or 2-inch eyepiece holder.

BELT HOLSTER

Removing the padded interior of the box the eyepiece arrives in reveals a set of accessories. These include a rather sensible and practical belt pouch that holds eyepiece securely when not in use yet keeps it accessible. The pouch fits simply to a belt and fastens with a Velcro fastening.



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SKY SAYS...

Now add these:

1. Baader Optical Wonder fluid
2. Baader Optical Wonder cloth
3. Hyperion digital T-ring adaptor

► disappointment. Baader does include a second dust cap tailored to fit the eyecup in the extended position which does help to alleviate this issue.

We tested the eyepieces using a Sky-Watcher 250PX Newtonian and William Optics FLT 98 apo refractor with focal ratios of $f/4.7$ and $f/6.3$ respectively. Contrast, sharpness and colour were excellent when observing a range of stars and star clusters, with the beautiful colour contrasting pair of Albireo looking spectacular through the refractor. Examining brighter stars for consistent focus as they drifted across the field of view demonstrated that the field was very flat and certainly better than the equivalent Hyperions.

We found excellent sharpness over at least 90 per cent of the field of view, although as we approached the extreme edges a tiny amount of lateral colour, also known as colour fringing, started to become apparent. The eyepieces were pretty consistent here although we did feel that the 14mm version displayed slightly more lateral colour than the others. The eyepieces were very close to parfocal with just $\pm 88\mu\text{m}$ maximum variance, making it easy to swap from one focal length to another without having to tweak the focus too much, and each one afforded us an enjoyable and immersive experience.

We enjoyed the crisp views delivered by the Morpheus eyepieces and would certainly recommend them to intermediate observers as they produce wonderful views at a sensible price. **S**



TWO EYECUPS

The eyepieces are supplied with two types of fold-up eyecup, a standard circular one and a winged version that helps to reduce unwanted light intrusion from the side. These cups are made from soft rubber, making them comfortable to use, but they were rather flimsy and often fell off during deployment.

VERDICT

BUILD & DESIGN	★★★★★
EASE OF USE	★★★★★
EXTRAS	★★★★★
EYE RELIEF	★★★★★
OPTICS	★★★★★
OVERALL	★★★★★

