

Variable focal lengths with the Hyperion 2" Finetuning Rings (FTR) 14 und 28 mm

also with 2" Baader eyepiece filters

Hyperion eyepiece with FTR 14 and 28mm

Hyperion eyepiece with FTR 14mm (this combination is also portrayed in the picture below which features the 2" mirror star diagonal).

Available combinations of Hyperion eyepieces with Finetuning Rings or 2" Baader Filter to modify the focal length and the field of view.

Effective focal length in mm	Field-stop mm	with 14 mm FTR	with 28 mm FTR	with 14 + 28 mm FTR	with 2" Baader Filter*	without first group of lenses
Hyperion 21.0	22.5	17.6	19.9	15.5	17.5	14.0 15.8 18.5 20.6 32.2 35.0
Hyperion 17.0	20.9	13.1	17.1	10.8	14.1	9.2 12.1 14.6 18.7 21.8 30.0
Hyperion 13.0	17.7	10.8	14.6	9.2	12.5	8.1 11.0 11.7 14.2 22.9 30.0
Hyperion 8.0	10.7	6.0	8.6	5.0	7.1	4.3 6.1 6.9 9.3 21.8 30.0
Hyperion 5.0	6.5	4.0	5.4	3.2	4.5	2.6 3.9 4.3 5.8 22.5 30.0
Hyperion 3.5	4.3	2.5	3.5	2.1	2.9	1.8 2.5 2.9 3.7 21.8 30.0

*Baader 2" eyepiece filter with a height of 8 mm. Yellow column of the table: focal length, Light-Grey column: diameter of the field stop



A variety of additional Hyperion focal lengths can be obtained at very moderate prices by using our 2" Finetuning Extension Rings 14 and 28 mm, or even our 2" eyepiece filters. Thus an eyepiece of 3.5 mm focal length can be converted into one of 1.8 mm focal length – without loss of sharpness – above all, because no additional lenses are introduced into the beam, which is unavoidable when using a Barlow lens. For marginal cost such experimentation is possible. You will discover how much your telescope can achieve, exceeding the recommended range of magnification without an additional Barlow lens. With real apochromats the usable exit pupil may be considerably smaller than the literature recommends!

Hyperion eyepiece with 11/4" barrel unscrewed

Finetuning 2" Extension Ring 28 mm # 2958228

Finetuning 2" Extension Ring 14 mm # 2958214

2" Stop ring with captive brass locking ring and two locking screws # 2958027

Front Hyperion lens element, built into the 11/4" barrel.

The M 48 filter thread is located here! To remove the first group of lenses, all Hyperion eyepieces must only be opened here. Disassembling the eyepiece elsewhere will void the warranty!

Combination of the Hyperion eyepiece and the 14 mm Finetuning Ring as well as the 2" stop ring.

The stop ring prevents the eyepiece barrel from hitting the mirror star diagonal or prism.



Hyperion eyepiece
2" Stop ring #2958027
Finetuning Ring 14 mm #2958214
11/4" Hyperion barrel with built-in negative lens group

Adaption of the Hyperion-Eyepiece to the Zeiss Diascope Fluorite-Spotting Scope



Hyperion Eyepiece used as Diascope-camera adapter – an excellent substitute for much more expensive Zeiss Diascope Photo-adapter

Visual Observation:
The Hyperion 21-/17-/13-/8 mm eyepieces may be adapted to the Zeiss spotting scope with the aid of a bayonet-adapter # 2454500

Video-camera, e.g. Sony HDV

Hyperion DT-ring SP54/M37 # 2958037

Hyperion extension DT-ring 11mm SP54i/SP54a # 2958090

Hyperion Eyepiece

11/4" Baader Diascope bayonet-adapter # 2454500 with built-in captive brass locking ring – slipped over and fastened onto the chromium-plated eyepiece barrel

Carl Zeiss Diascope 85T*FL

More Informations:
www.Hyperion-Okulare.de

... and if everything fails...
... for instance - if you want to use a small digital camera without lens thread for afocal projection-photography... why not use our

Baader-Microstage II (# 2450330)
- it will solve all adaptation problems!

The Baader Microstage II enables camera adaptation onto almost any telescope, spotting scope and many binoculars. The Camera Support Arm rotates to the side for visual aiming (with Clickstop action!). Camera remains completely adjusted and is ready for shooting the image when the support arm is clicked back into working position.



The whole family of Hyperion 68° Eyepieces:



3,5 mm # 2454603 5 mm # 2454605 8 mm # 2454608 13 mm # 2454613 17 mm # 2454617 21 mm # 2454621 24 mm # 2454624



Authorized Hyperion Dealer:

We reserve the right for errors and technical changes - Illustrations may differ slightly from the original - Copyright by Baader Planetarium GmbH - Layout by MB-GRAFIK-DESIGN. The terms Astro T-2 System* and Hyperion* are copyrighted. Any Use of our brand-names, copying or commercially using our sales-material without our expressive authorisation will be prosecuted. We reserve all rights.

Much more than an eyepiece HYPERION®-eyepieces

How to use the modular eyepiece system – illustrated instructions for the whole range of Hyperion accessories



Case for free if you buy the whole Eyepiece-Set

individually packaged Hyperion eyepieces:



Scope of Supply of each Hyperion 68°-eyepiece (1-5):

Soft-leather Bag: Guaranties highest protect - inspite of little space requirement

1 1/4" (31,7mm) Ø Dust Cap

68° Hyperion-eyepiece with two draw tube diameters of 2" and 1 1/4", with Phantom-Group® Coating and two Photo-threads M 43 und SP 54

Two end dust caps with inner diameters of 48mm und 45mm



11/4" barrel with safety groove and filter thread, suitable for all 11/4" eyepiece-filters, as well as for the Baader 11/4" extension tube (# 1905130)

End dust caps

All Hyperion eyepieces are equipped with two dust caps which protect the eye lens side. This leaves you the choice of storing the eyepiece protected from dust with rubber eye cap folded down (especially for persons who wear glasses) or folded up.

System-threads M43 and SP54

The Hyperion threads are located beneath the rubber eye cap, or rather beneath the thread-protecting ring (made of high-quality and aging-resistant silicone rubber). The large number of Baader adapting rings allows use of the Hyperion eyepiece for (almost) every task in astronomical – and nature – photography as a high-quality projection optic or as a tele-extender.

The following pages describe in detail many of the adaptations and variations that are possible with the Hyperion system.



1 System thread M43



2 System thread SP54

Hyperion Eyepieces Classical Eyepiece Projection

The T-2 Adapter ring # 2958080 fits the smaller M 43 system thread of the Hyperion eyepiece. Thus every Hyperion eyepiece can be used as a classical projection eyepiece. The whole range of adapter rings of our Baader Astro T-2 System[®] for moon- and planetary photography is available for this purpose. With eyepieces of 5 and 3.5 mm focal lengths, the highest projection magnifications are attainable.



More conveniently priced alternative to the Click-Lock clamp – the standard eyepiece clamp 1 1/4"/T-2 # 2458120

Video or CCD-camera with 1 1/4" barrel
Baader Click-Lock 1 1/4" eyepiece clamp # 8 (# 2458100)

As needed: T-2 extension tube 40 mm (# 1508153) for enlarging the factor of projection

Recommended: T-2 extension tube 7.5 mm # 1508155

Hyperion M43/T-2 ring # 2958080

Hyperion eyepiece system thread M 43 is exposed by removing the rubber eye cap

Simpler alternative to the DSLR T-ring (on the right side): Standard EOS T-ring without dust-seal (# 2408319)

DSLR-camera e.g. Canon EOS (DSLR)

Baader Canon EOS DSLR T-ring with built-in dust protection infrared blocking filter # 2458036 F

Additionally as needed: T-2 extension tube 15 mm, to increase the projection factor (# 1508154)

Rubber protecting ring for the SP 54 system thread

As needed: T-2 extension tube 40 mm (# 1508153), to increase the projection factor

Recommended: T-2 extension tube 7.5 mm # 1508155

Hyperion M43/T-2 ring # 2958080

M43/T-2-Adapter # 2958080
Adapter system SP 54 – for afocal Projection:
The Hyperion DT-rings SP 54 are optimized to provide the shortest possible distance between the eye lens of the eyepiece and the digital camera lens. Only in this way is a fully illuminated photographic field possible without vignetting



2 adjustment Spacer Rings made of hard plastic for the SP 54 thread are part of each Hyperion DT-Ring free of charge. With these rings (each ring has a thickness of only 1 mm), differences in mechanical heights may be adjusted, to be able to adapt the camera front lens as close as possible, without having to use the 11 mm Extension Ring (# 2958090). Caution when mounting the camera! Camera-front lenses may be too close to the first lens of the Hyperion eyepiece only by a tenth of a millimetre. When mounting the Hyperion-eyepiece onto any camera-front-lens, always proceed with the greatest care, possibly using the additional Spacer Rings.



Using SP 54 connecting rings, the objective of the camera and the Hyperion eyepiece may be connected with a minimum of separation distance.

All adaptation requires careful handling. Before connecting the eyepiece tightly to the camera, please make sure that the lens surface of the camera lens is not touched or scratched by any part of the eyepiece.



Digital DSLR-camera, for example: Canon EOS DSLR

Attachment to the camera lens using the Hyperion DT-ring SP 54/M 62 # 2958062
1mm thick Spacer Ring – as needed to prevent contact between the lenses of the eyepiece and the camera lens # 2958001

Hyperion eyepiece system thread SP 54 is exposed by removing the thread-protecting silicone-ring.

Hyperion Eyepieces Afocal Projection with DSLR-Cameras



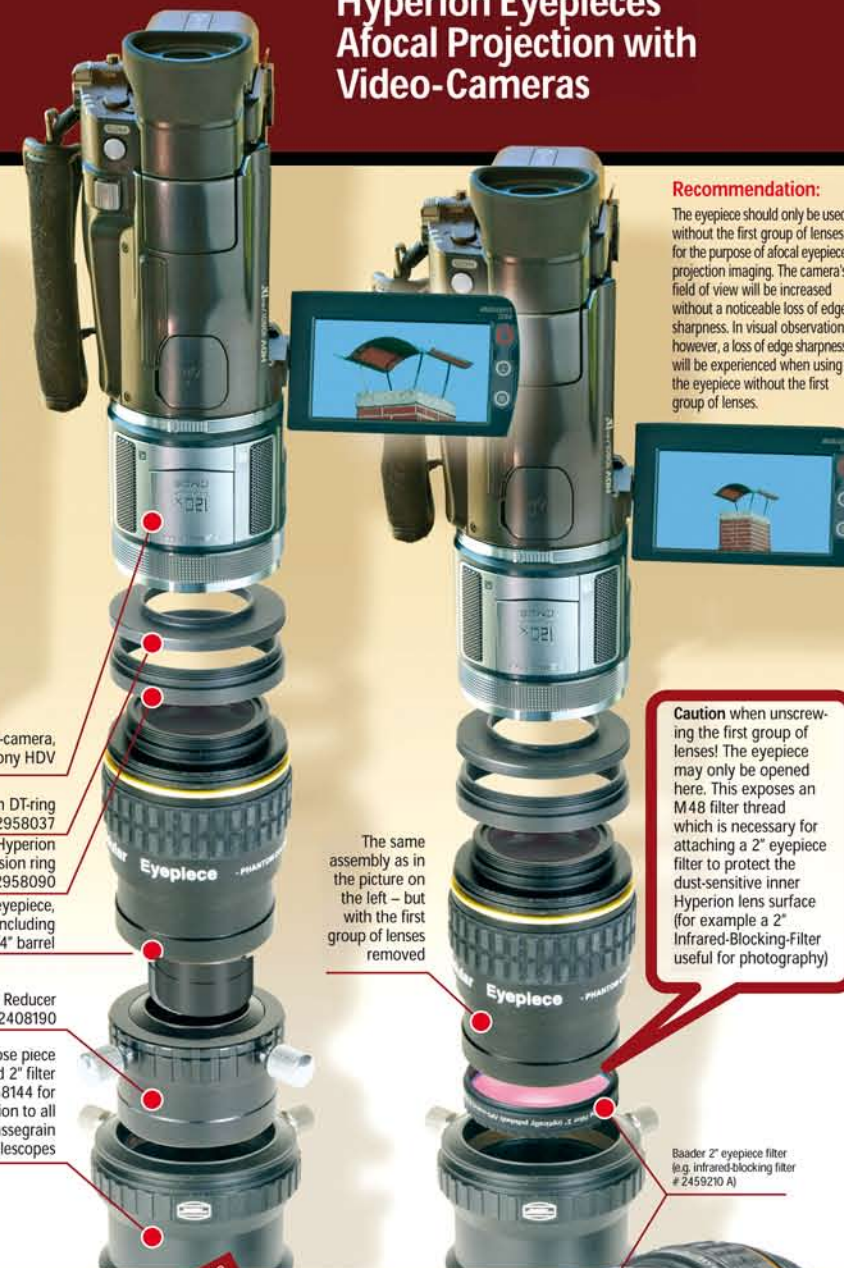
Video camera with M28 filter thread in front of the lens

Hyperion DT-Ring SP 54/M28 # 2958028

Hyperion 11mm long extension ring # 2958090 (required to adapt DT-rings SP 54/M28 and M37)

Hyperion eyepiece

Hyperion Eyepieces Afocal Projection with Video-Cameras



Recommendation:
The eyepiece should only be used without the first group of lenses for the purpose of afocal eyepiece projection imaging. The camera's field of view will be increased without a noticeable loss of edge sharpness. In visual observation, however, a loss of edge sharpness will be experienced when using the eyepiece without the first group of lenses.

Caution when unscrewing the first group of lenses! The eyepiece may only be opened here. This exposes an M48 filter thread which is necessary for attaching a 2" eyepiece filter to protect the dust-sensitive inner Hyperion lens surface (for example a 2" Infrared-Blocking-Filter useful for photography)

The same assembly as in the picture on the left – but with the first group of lenses removed

Baader 2" eyepiece filter (e.g. infrared-blocking filter # 2459210 A)

Please consult our Astro-accessories pricelist to find further adapter rings, including the Astro T-2 System[®].