

opticon



BINOCULARS • MONOCULARS • TELESCOPES • ACCESSORIES

PRODUCT GUIDE 10/11



Thank you for considering Opticron as the supplier of your new Binocular or Telescope. We would like to take this opportunity to tell you a little more about us, our philosophy towards you the customer and the products and services we provide.

Founded forty years ago, our aim continues to focus on providing the best mix of product choice, quality and value backed up with a customer service function worth the name.

Choice

As you will see we offer an extensive array of equipment designed to meet the varied demands of sometimes highly discriminating users. The reason for so many individual models and model variants is to maximise the opportunity for you to purchase the best instrument suited to you.

Quality and Value are two factors critical to the success of our business. Both have been developed and are maintained in partnership with a small number of Japan's elite optical manufacturers. The benefits of these relationships are best seen in the optical performance of the equipment, the guarantees offered and the value for money which we believe is second to none.

Customer Service

If you are a professional, enthusiast or occasional user of optical equipment, we have the knowledge and expertise to help you make the right choice based on price and application.

In addition to our network of Opticron stockists, you can contact us directly and purchase through our Mail Order Service if you are unable to purchase locally. We have on-site testing facilities for the entire Opticron range and operate a **UK based** service centre for all our equipment.

The Product Guide follows a logical pattern making it easy to compare the products, while comprehensive 'Chooser Guides' offer practical information and advice on the equipment illustrated.

For up to the minute information on new products please visit our online catalogue at www.opticron.co.uk

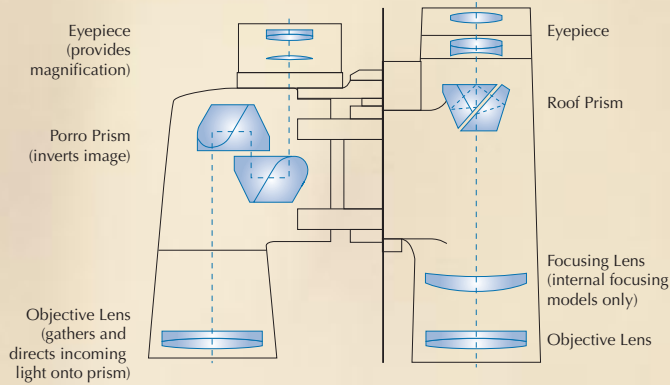
We hope you find the contents interesting and informative. If you have any comments we would be happy to hear from you.

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Choosing your Binocular

The following information aims to give you a basic understanding of how binoculars work, the different specifications available and what they mean, plus some points to help you choose the best instrument suited to you.

Specification E.g. 8x42. The number '8' denotes the magnification and means an object appears to be 1/8th of its actual distance away. Using this rule an object 40m distant appears to be only 5m away. '42' is the diameter of the objective lens (the large end) in mm through which light enters the binocular.

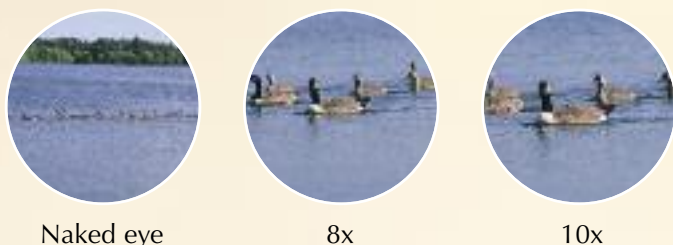


Z or **B** stand for **porro prism** binoculars. The basic optical design of these 'traditional-shape' instruments mean they tend to deliver better optical performance for your money compared to **roof prism (D)** binoculars, which are more compact but also more expensive.

The rise in popularity of roof prism binoculars is as a direct result of this system being favoured in the development of instruments with user oriented features. These include; internal focusing for waterproofing, long eyerelief eyepieces that enable the viewer to obtain the full field of view with or without glasses and close focus making them useful for watching butterflies and other insects.

B when seen on roof prism binoculars including Opticron **BGA** = full field of view for spectacle wearers. **GA** = rubber armouring and **W** or **WA** = wide angle vision. **CF**, (centre focusing) is more popular than **IF** (individual eyepiece focusing) especially when you need to focus at different distances under 50m. Most 'IF' binoculars are 7x magnification and have a large depth of focus which usually eliminates any need for focusing adjustment at distances over 50m.

What magnification? Within any given range of binoculars the higher the magnification relative to the objective lens diameter, the lower the apparent image quality. Images appear less sharp and have a lower 'relative' brightness and poorer colour contrast.



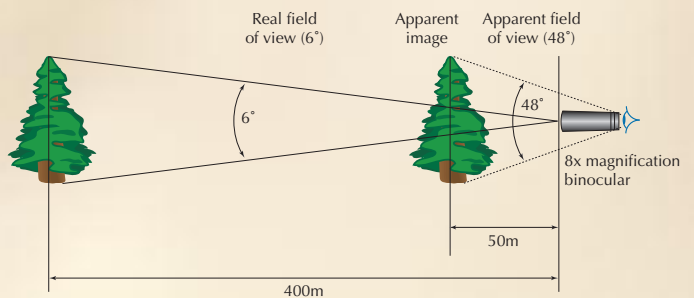
Higher magnification binoculars also;

- have a shallower depth of focus (distance in focus at any one focus setting), requiring more use of the focus wheel
- amplify natural hand-shake affecting the stability of the image being viewed.

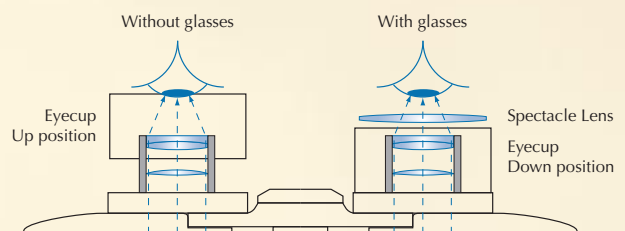
For general observation choose a 7x or 8x magnification. If you want binoculars of 10x or over try them first.

What objective lens size? The amount of light entering a binocular is directly related to the surface area of the objective lens (OG). A 50mm OG will admit 2.5x the light of a 30mm OG. The amount of light reaching the eye is known as the exit pupil diameter (EPD) and its size can be found by dividing the OG diameter by the magnification. For example the EPD of an 8x32 = 4mm while the EPD of an 8x56 = 7mm. As a general rule the iris dilates between 2 and 3 mm (bright sunlight) and 6 and 7 mm (twilight) and so a choice should be made on the type of use the binocular is being put to. For general use choose a 7x42 or 8x42 binocular with an EPD of +5mm.

The field of view of a binocular is dependent on the optical design and not simply a product of the magnification and objective lens diameter. It is expressed as either the width of panoramic view in metres from a distance of 1000 metres or in degrees where 1° is approximately 17.45m.



Wearing glasses Many binoculars provide the full field of view when wearing glasses by either folding down the rubber eyecups or by turning/pushing retractable eyecup assemblies to the 'down' position. As a general rule the longer the eyerelief - the distance between the surface of the eyepiece and the point where the pupil is positioned for full field of view - the better the instrument for spectacle wearers. If you think you want to wear glasses while using your binocular, choose one with an eyerelief of 15mm or over.

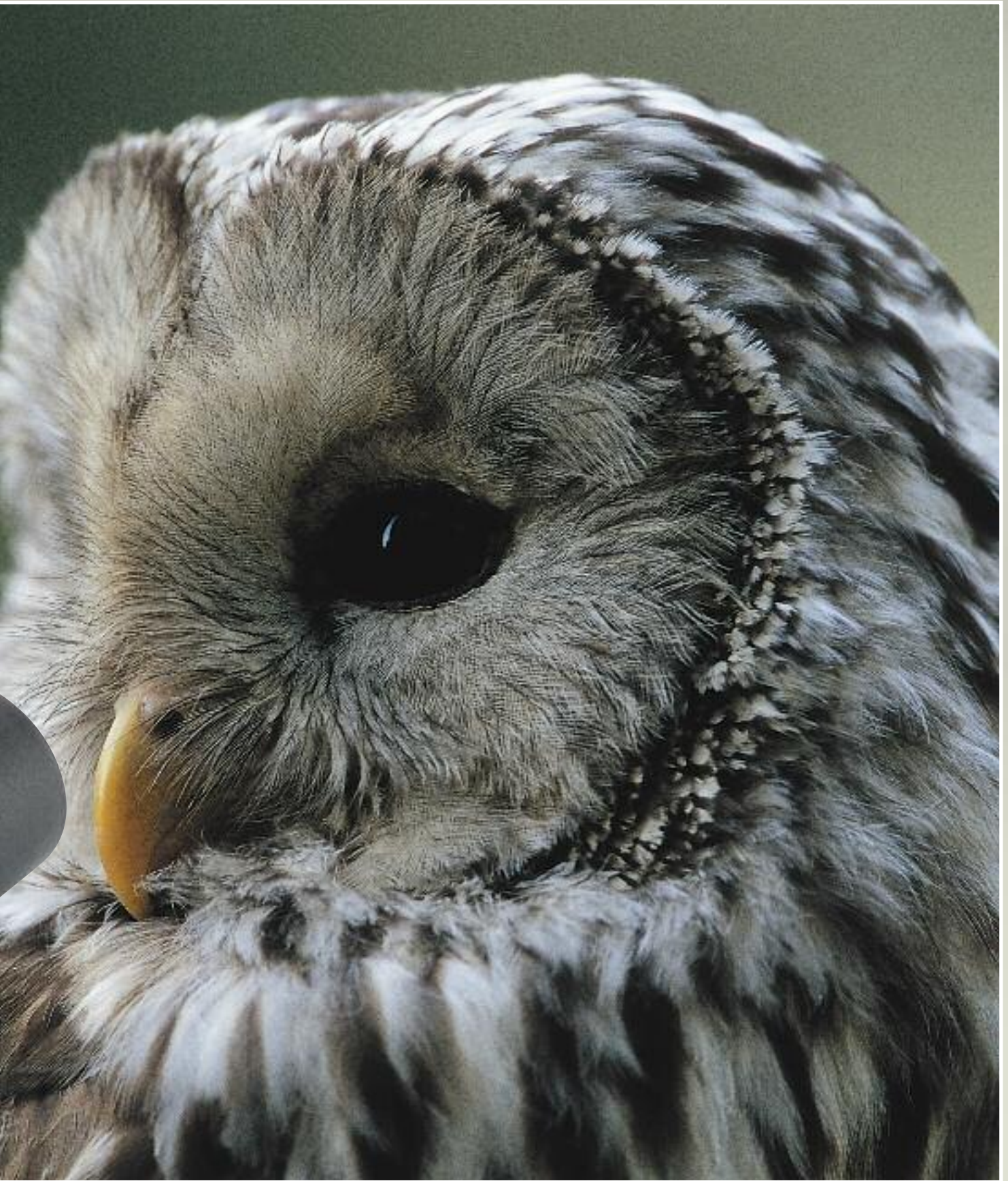


Weight For many people, small, lightweight binoculars that can be taken anywhere will be used much more than larger, heavier ones which tend to be left at home or in the car!

Aurora® BGA

Roof Prism





The advantages are perfectly clear

Aurora® BGA

Roof Prism



8x42 BGA

The Aurora BGA is the latest example of putting our maxim “smaller, lighter, sharper” into practice.

Building on the strengths of the original BGA concept and models like the DBA Oasis, both the 8x42 and 10x42 resemble and handle like smaller 8x32/10x32 binoculars but with the performance advantages of a larger 42mm objective lens.

Designed and manufactured to be smaller, lighter and sharper with a wider field of view and better close focus compared to any previous BGA model, the Aurora delivers the ultimate balance between size and weight, resolution and field of view currently attainable from this roof prism format.

The optical design doesn't just reduce the overall dimensions and finished weights of the Aurora but delivers 7.2° (8x42) / 6.5° (10x42) field of view with stunning resolution guaranteed at under 4' for each and every binocular. Close focus is under 2m and the model is fully compatible with the 2.5x UTA.

Manufactured using a lightweight magnesium alloy body and protected from heavy use and the elements in a beautifully finished textured rubber covering with patented shock-proof rubber objective lens protection, the Aurora feels very special in the hand, is perfectly balanced and comes with a focusing set-up other binoculars can only aspire to.



The Aurora BGA is available in a choice of colour combinations:

1. Black & Gunmetal - see pages 4-5
2. Black - main
3. Green - left

See table on opposite page for product codes and specifications.



10x42 BGA

Other features include:

- Fully nitrogen gas filled waterproof construction to a depth of 5m
- Internal focusing with 540° rotation allowing precise adjustment with sub 2m close focus
- The highest quality roof prisms featuring Oasis prism coating and phase correction coatings
- Opticron S-type multi-coating that allows both models to achieve the highest possible clarity & colour contrast in the widest range of light conditions from early morning till dusk
- Durable alloy 4-stage locking rotating retractable eyecup assembly with 'click stop' dioptre adjustment
- Finished weights of under 670g
- Integral tripod adapter socket

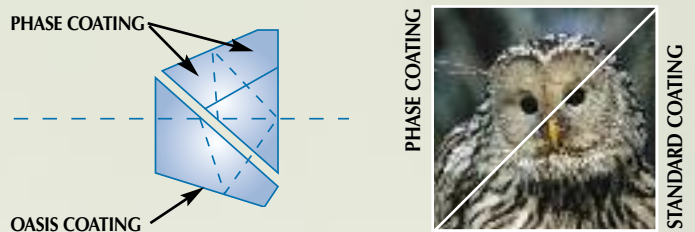
Available in 8x42 and 10x42 and a choice of finishes; black, green or black & gunmetal, each Aurora BGA is supplied complete with a comprehensive 30 year guarantee.



Oasis is the name given to a 64 layer coating process applied to the reflective surface of each roof prism. Oasis improves light emission to 99% over a broader spectrum at the reflective face when compared to silver coating traditionally used on many high quality roof prism binoculars. The result is a measurable increase in light transmission and overall image clarity.

PC phase correction coating

When light waves are reflected at the opposite faces of a roof prism, phase shift occurs resulting in marginal deterioration in sharpness. Phase corrected coatings are designed to correct this phase shift within the prism – increasing overall clarity and definition.



Specifications	8x42	10x42
Product Code Bl	30490	30491
Product Code Gr	30492	30493
Product Code Bl/Gm	30494	30495
Field (m)	126	113
Min Focus (m)	1.8	1.8
Eyerelief (mm)	20	19
IPD (mm)	58-76	58-76
HxW (mm)	140x126	140x126
Weight (g)	654	663

Models supplied in soft leather case with 31020 rainguard, neoprene bungee lanyard and removable integral objective lens caps

DBA® Oasis® S-Coat

Roof Prism



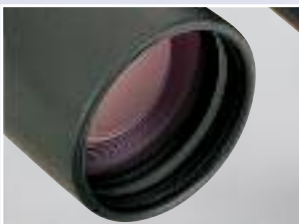
8x42 BGA



Recently updated with a brand new multi-coating, DBA Oasis S-Coat binoculars are among the very best compact roof prism binoculars available to today's birdwatcher, offering sublime performance and comfort in a class leading compact body.

Designed for the professional birdwatcher and wildlife enthusiast, principle features of the DBA Oasis S-Coat include:

- Complex multi-element long eyerelief eyepieces with large diameter eye lenses that provide 7° (8x42) and 6° (10x42) fields of view with complete viewing comfort
- The highest quality roof prisms featuring phase correction coating and Oasis prism coating (see page 7)
- S-type multi-coating helping both models achieve extremely high levels of clarity & colour contrast in a variety of light conditions
- Glide-action wide wheel focusing (infinity to 2.2 metres close focus) with 500° rotation allowing precise adjustment



Opticron 'S-type' combination multi-coating on all air/glass surfaces



Large diameter eyepieces for viewing comfort



'Click-stop' dioptre adjustment



500° rotation wide wheel focusing infinity to 2.2m



10x42 BGA

Manufactured to deliver this high level of performance throughout the 30 year warranted lifetime each DBA Oasis S-Coat also benefits from:

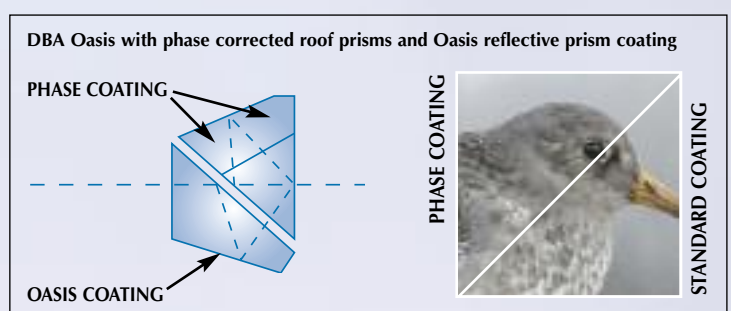
- Fully nitrogen gas filled waterproof construction to a depth of 5m
- Natural rubber armoring with contoured ribs on the main body and focus wheel to maximise comfort and handling with or without gloves
- Durable alloy 3 stage locking rotating retractable eyecup assembly with 'click stop' dioptre adjustment
- Finished weights of under 25oz with perfect balance
- Integral tripod adapter socket
- 2.5x UTA option (see page 47 for details)



3 stage locking rotating retractable eyecup assembly

Specifications	8x42	10x42
Product Code	30307	30308
Field (m)	122	105
Min Focus (m)	2.2	2.2
Eyerelief (mm)	18	18
IPD (mm)	57~77	57~77
HxW (mm)	152x128	152x128
Weight (g)	691	707

Models supplied in soft leather case with 31020 rainguard, neoprene bungee lanyard and removable integral objective lens caps



Imagic® BGA SE

Roof Prism

The 6th generation Imagic BGA will challenge any preconceptions you may have concerning the quality and performance you can expect when spending £400 on a roof prism binocular.

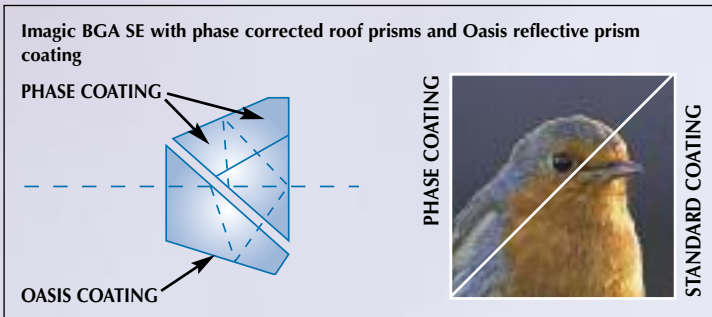
Remaining true to the original design concept; a range of compact, lightweight and ergonomically sound instruments packed with the latest features, the Imagic BGA SE steps-up the challenge to premium roof prism binoculars offering outstanding performance and value for money.



7x42 BGA
8x42 BGA
10x42 BGA

Designed and manufactured to feel as good as they look, these highly durable field binoculars come in six specifications including;

- A compact 8x32 with an 8.0° FOV and extreme close focus
- A 7x42 and 8.5x50 delivering large depth of focus and superior low light performance
- The popular 8x42 and 10x42 general birdwatching models
- A 10x50 that offers the highest combination of magnification and brightness



<p>Long eyerelief eyepieces with 4 stage rotating retractable eyecup assembly</p>	<p>Moulded thumb grips for optimum handling</p>	<p>Wide wheel focusing infinity to 2m Tripod adapter socket</p>	<p>Optional Extra: 2.5x UTA (see page 47 for details)</p>



8x32 BGA

Optically the Imagic BGA SE's feature:

- All new eyepiece designs that offer class leading fields of view 8° (8x32), 7° (7/8x42), 6.5° (10x42), 6° (8.5x50), 5.8° (10x50)
- Large diameter long eyerelief eyepieces that guarantee a really comfortable viewing experience with or without glasses
- 'PGK' glass prisms with PC phase correction coating and Oasis prism coating (see page 7)
- Opticron F-type combination multi-coating constructed to maximise colour contrast in poor light so often associated wildlife observation in N. Europe

Mechanically the binoculars:

- Feature a new lightweight magnesium body
- Are nitrogen gas filled and waterproof to 3 metres
- Are internally focused with close focus to 2 metres (8x32, 7x42, 8x42, 10x42)
- Are covered in a revised and lightly textured natural rubber armouring contoured to deliver a truly positive handling experience with or without gloves
 - Include 3 stage twist type retractable eyecup assembly
 - Feature a wide wheel focusing with an easy-grip rib pattern
- Provide a connection to a photo/video tripod using 31022 or 31012 binocular mounts

Each Imagic BGA SE is supplied with a 30 year guarantee.



8.5x50 BGA
10x50 BGA

Specifications	8x32	7x42	8x42	10x42	8.5x50	10x50
Product Code	30477	30478	30479	30480	30481	30482
Field (m)	140	122	122	113	105	101
Min Focus (m)	1.5	2	2	2	3.5	3.5
Eyerelief (mm)	17	24	22	21	23	23
IPD (mm)	58~74	58~74	58~74	58~74	58~74	58~74
HxW (mm)	133x121	152x124	152x124	152x124	177x132	177x132
Weight (g)	657	669	698	706	795	790

Models supplied in soft leather case with 31028 rainguard and neoprene lanyard

Verano[®] BGA PC Oasis[®]

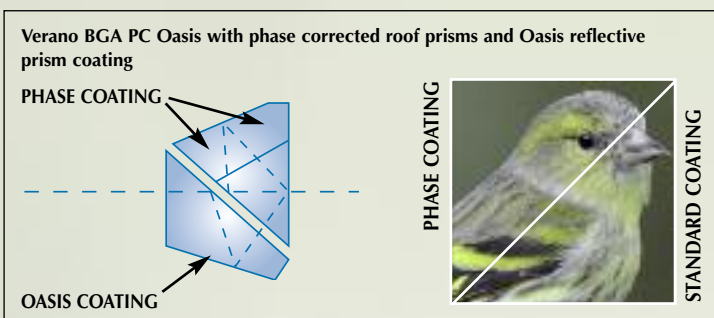
Roof Prism

8x42 BGA
10x42 BGA



Named after the Spanish word for summer, the latest Verano BGA PC Oasis builds on the strengths of previous models offering unbeatable performance and value in a brand new super lightweight polycarbonate and alloy body. The design is both elegant and simple and delivers a range of Opticron BGA models with finished weights between 524g and 654g.

Fitting neatly between the Imagic BGA SE and Countryman BGA T PC in terms of overall optical performance and specification, the three models; 8x32, 8x42 and 10x42 utilise a fully multi-coated, internally focused roof prism optical system which has been 'balanced-out' to deliver optimum colour contrast across a wide range of different light conditions. The combination of high quality PC phase corrected prisms and Oasis high reflection prism coatings maximise light transmission and resolution while the complex multi-element eyepiece designs ensure comfortable vision for spectacle wearers with minimal edge distortion.





8x32 BGA

Mechanically the Verano benefits from:

- Internal focusing with close focus to 1.8 metres or under
- Nitrogen waterproof construction to a depth of 3 metres
- Highly durable textured rubber covering for comfort and grip
- Revised Opticron 'house style' wide wheel focusing
- 4-stage smooth action aluminium twist type eyecup assemblies

Verano BGA PC Oasis models offer full compatibility with the Opticron 2.5x UTA (see page 47 for details) and benefit from a comprehensive 30 year guarantee.



The Verano BGA PC Oasis 8x42 is recommended by the British Trust for Ornithology

Specifications	8x32	8x42	10x42
Product Code	30500	30501	30502
Field (m)	131	109	105
Min Focus (m)	1.5	1.8	1.8
Eyerelief (mm)	18	21	19
IPD (mm)	56~74	56~74	56~74
HxW (mm)	120x122	142x125	142x125
Weight (g)	524	654	653

Models supplied in soft neoprene case with rainguard and neoprene lanyard



Long eyerelief eyepieces with rotating eyecup assembly and right side dioptre adjustment



Wide wheel focusing



Lightweight ergonomic polycarbonate and alloy body



Tripod adapter socket

HR WP

Porro Prism

8x42 BCF.GA



In a market segment dominated by the roof prism binocular, the HR WP re-thinks, re-works and re-packages the porro prism binocular for today's more demanding user.

Designed for both the enthusiast and those seeking the very highest optical resolution for their money, the HR WP successfully combines the inherent qualities of both traditional porro prism and modern roof prism formats into a single multi-purpose, user friendly, high performance field glass.

Available in 8x42 and 10x42, each optical system uses the enlarged 'B' porro prism format in combination with internal focusing and long focal length long eyerelief eyepieces. Each glass component is of a very high quality and all air-to-glass surfaces are fully multi-coated to minimise light loss throughout the system.



Rotating retractable eyecup assembly



Centrally located locking dioptre adjustment wheel



Ergonomic shoulder design with high contact rubber covering



Wide wheel focusing Tripod adapter socket



10x42 BCF.GA

To keep weight at a minimum while maintaining rigidity, the chassis is built using a mix of aluminium, magnesium and plastics. Hermetically sealed, each instrument is fully nitrogen waterproof to a depth of 3m and is guaranteed for 30 years against manufacturing defects.

The bold and innovative design is finished in a smooth natural rubber covering with a high contact surface pattern for extra grip. The models also feature Opticron house-style focusing wheel covering, twist type retractable eyecups and left side dioptre adjustment controlled on the centre focus wheel.

For truly high resolution optics in a modern form, look no further than the HR WP.



Specifications	8x42	10x42
Product Code	30090	30091
Field (m)	112	89
Min Focus (m)	3	3
Eyerelief (mm)	20	17
IPD (mm)	56-73	56-73
HxW (mm)	126x183	126x183
Weight (g)	715	725

Models supplied in soft case with 31025 rainguard and wide lanyard

Countryman® BGA T PC Oasis®

Roof Prism



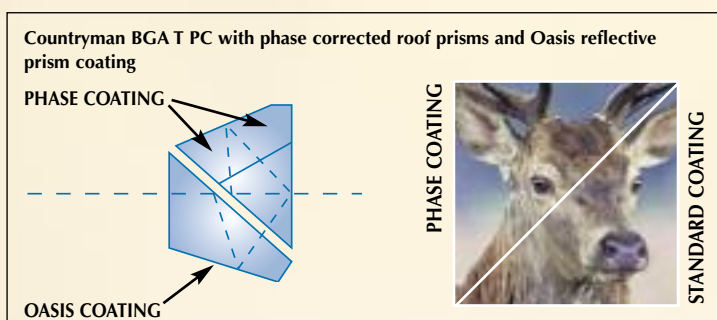
8x42 BGA
10x42 BGA



The new Countryman BGA T PC Oasis binoculars are a range of rugged, lightweight roof prism binoculars offering all the advantages of internal focusing so popular with today's wildlife observer. Upgraded in 2010 with a brand new soft touch textured rubber finish for extra grip and featuring a revised 3-stage retractable eyecup assembly, these Japanese made models punch above their weight for resolution, light transmission and colour contrast.

Specifications and features include:

- Fully multi-coated optical system, including high quality PC phase corrected prism units and Oasis prism coating
- Long eyerelief eyepieces giving full field of view for glasses wearers
- Nitrogen filled construction for waterproofing to a depth of 3 metres





10x50 BGA
12x50 BGA

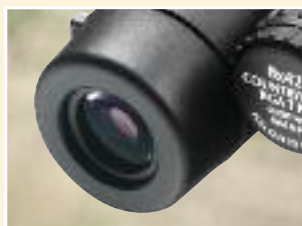
- Durable textured 'natural' rubber armouring delivering comfort and grip
- Wide wheel glide-action focusing with right hand side dioptre adjustment
- 3-stage alloy retractable eyecup assemblies
- Tripod adapter socket
- Comprehensive 10 year guarantee

Specifications	8x42	10x42	10x50	12x50
Product Code	30505	30506	30507	30508
Field (m)	109	88	88	74
Min Focus (m)	2.9	2.7	4	3
Eyerelief (mm)	19	18	19	18
IPD (mm)	56~74	56~74	56~74	56~74
HxW (mm)	138x126	138x126	167x131	167x131
Weight (g)	654	664	797	800

Models supplied in soft case with 31020 rainguard and wide lanyard



Fully multi-coated optics
(all air/glass surfaces)



Rotating retractable eye cup
assembly



Wide wheel focusing with
centrally located locking
dioptre adjustment wheel



Tripod adapter socket

BGA Classic 7x36

Roof Prism



7x36 BGA



Fifth generation BGA offering superior performance to the enthusiast looking for a compact, well balanced, easy to use wide-angle binocular with large depth of field and 2m close focus.

With an optical system designed to deliver comfortable viewing for long periods, specifications include Oasis prism coating (see page 7), PC phase correction for optimum resolution and Opticron N-type multi-coating for superb colour contrast.

Delivering a wide-angle 7.2° field of view with long eyerelief for full field of view with glasses, the binocular features 3-stage rotating retractable eyecups and click-stop right diopetre adjustment. Focusing is via glide-action wide wheel geared for 540° or 1.5 turn from 2 metres to infinity.

Mechanically the instrument uses an alloy and polycarbonate main body structure and is nitrogen filled and fully waterproof to a depth of 5 metres.

Finished in contoured natural rubber armour shaped to reduce weight wherever possible but ensuring a good level of protection, the BGA Classic 7x36 is supplied with a comprehensive 30 year guarantee.

Specifications	7x36
Product Code	30208
Field (m)	126
Min Focus (m)	2
Eyerelief (mm)	19
IPD (mm)	57-77
HxW (mm)	138x128
Weight (g)	623

Model supplied in soft leather case with 31020 rainguard and neoprene lanyard



'B' specification eyepieces for full field with spectacles



Rotating retractable eyecups with 'click stop' right eyepiece adjustment



Moulded thumb grips for optimum handling

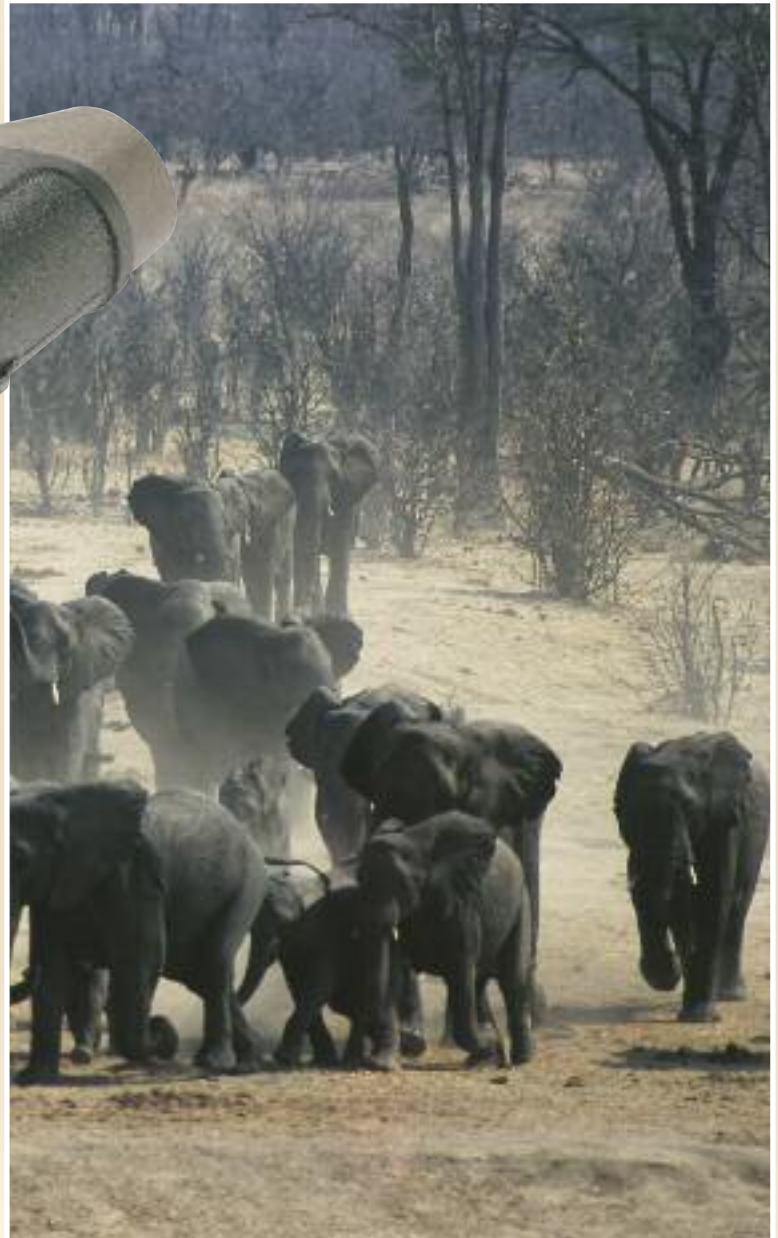


Wide wheel focusing infinity to 2m
Tripod adapter socket

Traveller® BGA

Roof Prism

- 6x32 BGA
- 8x32 BGA
- 10x32 BGA



Each Traveller BGA is a small, lightweight 'take anywhere' binocular encompassing all the features of traditional roof prism instruments, wrapped up in a body weighing under 460g (17oz) and standing only 10cm (4") off the table.

An excellent compromise for the wildlife enthusiast preferring the capability of a 40/42mm OG instrument but wanting the portability of a compact pocket binocular, the Traveller uses an internally focused roof prism design and is fully nitrogen gas waterproof to a depth of 3 metres.

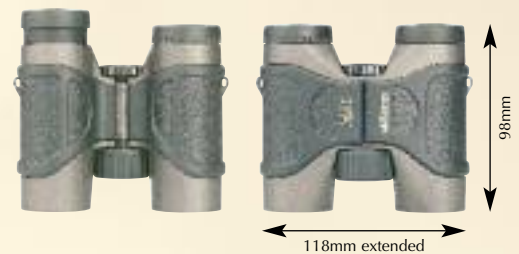
Other specifications include:

- Fully multi-coated optical system with BAK4 PC phase corrected roof prisms with HLT coatings
- Long eyerelief eyepieces for full field with or without glasses
- Push/pull retractable eyecups
- Close focus to under 2 metres
- Wide wheel focusing (positioned at the base of the focusing shaft)
- Main body rubber cover for comfort and grip
- Hinge lock system to maintain IPD while in use

Traveller BGA binoculars are supplied with a comprehensive 30 year guarantee.

Specifications	6x32	8x32	10x32
Product Code	30397	30398	30399
Field (m)	141	111	90
Min Focus (m)	1.5	1.5	1.5
Eyerelief (mm)	19	19	16
IPD (mm)	57~71.5	57~71.5	57~71.5
HxW (mm)	98x118	98x118	98x118
Weight (g)	450	460	445

Models supplied in soft case with 31025 rainguard and padded lanyard



Push/pull retractable eye cup assembly



Hinge lock to maintain a constant IPD



Wide wheel focusing



Rubber covering for comfort and grip

SR.GA®

Porro Prism

An up-rated version of the original Opticron HR, the SR.GA offers the highest standards of optical performance and manufacturing quality in a traditional porro prism format.

Simplicity of design coupled with high-grade glass components mean that all three models deliver stunning resolution – matching any roof prism binocular costing twice the price. In addition the instruments benefit from a combination multi-coating meaning different coating types are applied individually to different components within the optical system. More costly than a universally applied single multi-coating, the process has an appreciable effect, improving colour contrast in bright sunlight at midday or low light at dawn and dusk.

Finished in contoured natural rubber for positive handling with or without gloves, the 8x32 features wide-angle eyepieces, the 8.5x50 and 10x50 long eyerelief.

SR.GA binoculars are supplied with a comprehensive 30 year guarantee.



8x32 ZWCF.GA



8.5x50 ZCF.GA
10x50 ZCF.GA

Specifications	8x32	8.5x50	10x50
Product Code	30320	30324	30325
Field (m)	144	91	87
Min Focus (m)	4	7.5	7.5
Eyerelief (mm)	13	23	19
IPD (mm)	58~72	58~72	58~72
HxW (mm)	101x160	174x175	174x175
Weight (g)	546	820	820

Models supplied in soft leather case with rainguard and wide lanyard



Imagic® TGA WP

Porro Prism

Designed to look and feel exceptional, Imagic TGA Waterproof binoculars are guaranteed to outperform similarly priced roof prism models delivering class winning clarity and definition.

Lightweight, well balanced and nitrogen gas filled to protect against problems of misting up in wet weather, each body is covered in a natural rubber armouring specially designed with unique mouldings that maximise grip and comfort in the hand. Features include:

- BAK4 prisms and fully multi-coated optics
- Long eyerelief for spectacle wearers with rotating retractable eyecup assembly with extension lock & click stop
- Integral tripod adapter socket
- 30 year guarantee



7x42 ZCF.GA
8x42 ZCF.GA
10x42 ZCF.GA

Specifications	8x32	7x42	8x42	10x42	7x50	10x50
Product Code	30550	30551	30552	30553	30554	30555
Field (m)	122	126	114	97	105	93
Min Focus (m)	2.5	4	2.9	2.9	4.9	4.5
Eyerelief (mm)	21	22	21	21	21.5	19.5
IPD (mm)	57~73	57~73	57~73	57~73	57~73	57~73
HxW (mm)	114x165	142x180	142x180	142x180	173x191	173x191
Weight (g)	614	682	682	687	805	834

Models supplied in soft case with rainguard and wide lanyard



8x32 ZCF.GA

7x50 ZCF.GA
10x50 ZCF.GA

Explorer® BGA

Roof Prism

Designed to meet and exceed the demands of today's wildlife watcher looking for a quality field binocular for around £200, the Explorer BGA delivers class leading figures for resolution and brightness combined with better than average colour contrast.

The long eyerelief eyepieces offer 6.7° 8x42 and 6.1° 10x42 fields of view with a refreshing lack of edge distortion - both left to right & top to bottom. The wide wheel swift-focus system brings infinity focus to 2m in half a turn with close focus rated at just 1.5m.

Other features include:

- Nitrogen waterproof construction
- PC phase corrected prisms integrated into a fully multi-coated optical system
- Multi-stage retractable eyecups
- 10 year guarantee

Specifications	8x42	10x42
Product Code	30020	30021
Field (m)	117	106
Min Focus (m)	1.5	1.5
Eyerelief (mm)	25	16
IPD (mm)	55~76	55~76
HxW (mm)	155x132	155x132
Weight (g)	757	743

Models supplied in soft case with rainguard and wide padded lanyard



8x42 DCF.GA
10x42 DCF.GA

Discovery WP PC

Roof Prism

Using an ultra-compact optical design, the Discovery WP PC series are among the smallest waterproof roof prism binoculars available on the market today. With a host of features including WA eyepieces; 7.5° (8x32), 7.5° (8x42) 6.0° (10x42) plus excellent close focus ability, each Discovery WP PC offers the value conscious customer a stylish user friendly field glass.

Features include:

- Nitrogen waterproof construction
- Lightweight magnesium bodies (8x42, 10x42 & 8x50)
- Super lightweight plastic body (8x32)
- Fully coated optics with PC phase corrected prisms
- Long eyerelief for spectacle wearers with twist type eyecups
- Click stop right dioptre adjustment
- Close focus to under 2m
- 5 year guarantee



8x42 DCF.GA
10x42 DCF.GA



8x32 DWCF.GA



8x50 DCF.GA

Specifications	8x32	8x42	10x42	8x50
Product Code	30452	30458	30459	30457
Field (m)	131	131	105	122
Min Focus (m)	1.2	1.5	1.5	1.5
Eyerelief (mm)	17	22	17	21
IPD (mm)	57~75	56~74	58~75	58~75
HxW (mm)	108x117	133x126	133x126	145x133
Weight (g)	391	703	696	797

Models supplied in soft case with rainguard and wide lanyard

Trailfinder® II

Roof Prism

With superior specification and optical quality over the Oregon LE WP, the Trailfinder II's combination of 7.2° 8x42 and 6.5° 10x42 fields of view, lightweight magnesium alloy body and positive focus system combine to create a range of entry level field glasses that are both comfortable and easy to use.

Features include;

- Fully multi-coated optical system including BAK prisms and PC phase correction coatings
- Nitrogen waterproof construction
- Long eyerelief, wide angle¹ eyepieces fitted with twist type retractable eyecups
- Internal focusing with close focus to 1.5m
- Choice of black or dark green durable textured rubber
- 5 year guarantee

¹10x42



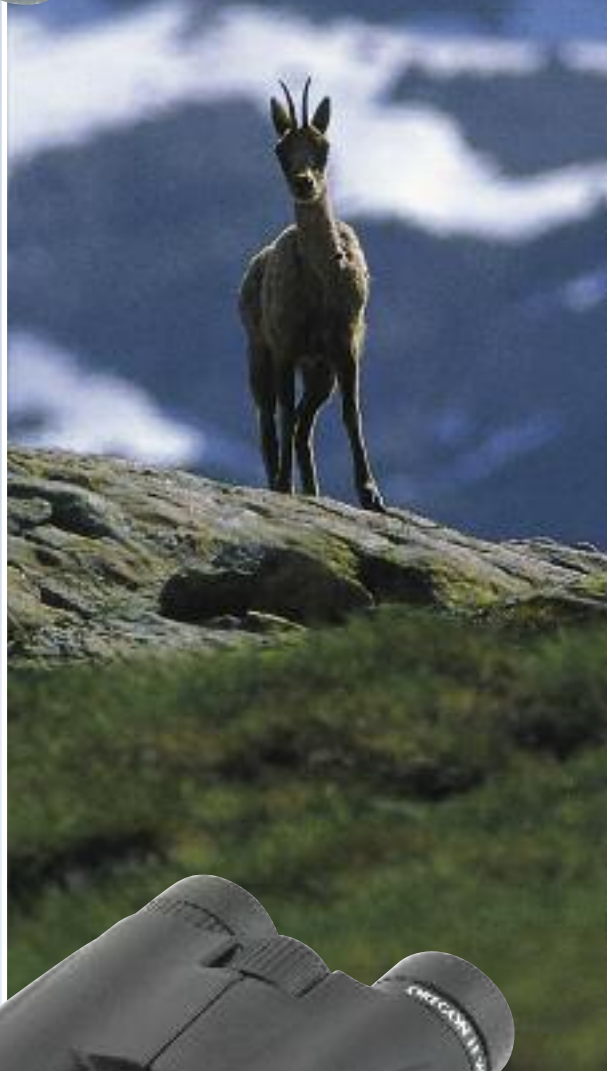
The Trailfinder II 8x42 carries an endorsement from David Lindo 'The Urban Birder'

Specifications	8x42	10x42
Product Code Bl	30035	30037
Product Code Gr	30036	30038
Field (m)	125	113
Min Focus (m)	1.5	1.5
Eyerelief (mm)	21	16
IPD (mm)	58~77	58~77
HxW (mm)	140x128	140x128
Weight (g)	748	737

Models supplied in soft case with rainguard and padded lanyard



8x42 DCF.GA
10x42 DWCF.GA



Oregon LE WP

Roof Prism

Budget nitrogen waterproof series delivering solid performance and good value for money for people wanting the advantages of roof prism design. Recently updated with high-contact focus wheel, textured eyecups and dioptre adjustment ring, features include:

- BAK 4 - fully multi-coated optical system
- Long eyerelief and twist type retractable eyecup assembly
- 'Sandblast' rubber armoured finish
- Wide wheel focusing
- Wide-angle 8x32 with 8° field of view
- Close focus to 1.8m (8x32), under 4m (8/10x42)
- 5 year guarantee



8x32 DWCF.GA

Specifications	8x32	8x42	10x42
Product Code	30447	30448	30449
Field (m)	141	114	101
Min Focus (m)	1.8	4	4
Eyerelief (mm)	15	22	19
IPD (mm)	58~73	56~74	56~74
HxW (mm)	109x118	150x125	150x125
Weight (g)	515	730	730

Models supplied in soft case with rainguard and wide lanyard



8x42 DCF.GA
10x42 DCF.GA

Aspheric WA

Porro Prism

An excellent 'starter' binocular for birdwatching and general wildlife observation, the Aspheric WA has been awarded Best Buy in both *Birdwatching* and *BBC Wildlife* magazines.

Features include:

- Super wide angle 8.2° FOV
 - Good eyerelief for some spectacle wearers
 - BAK4 prisms plus fully multi-coated optical system (all air/glass surfaces)
 - Twist type eyecups
 - Rubber armoured body
 - Wide band focusing
 - Close focus to under 3m
- 2.5x UTA option (see page 47 for details)
 - 5 year guarantee

Specifications	8x40
Product Code	30343
Field (m)	143
Min Focus (m)	2.9
Eyerelief (mm)	14
IPD (mm)	59-71
HxW (mm)	145x172
Weight (g)	700

Model supplied in soft case with wide lanyard



8x40 ZWCF.GA



Vega II

Porro Prism

100% made in Japan and featuring fully coated optics and wide wheel focusing choosing a VEGA II guarantees you good all round performance and value from the compact 8x30 to the highly competent 8x56 astronomical model.

Each model delivers excellent image quality for its price, while the extensive choice on offer means you won't be compromised in yours whether for holidays, sports or general wildlife observation.

Features and options include integral tripod adapter socket, 2.5x UTA (see page 47 for details) and 5 year guarantee.



8x30 ZWCF.GA



7x50 ZCF.GA

10x50 ZCF.GA

8x56 ZCF.GA



8x40 ZWCF.GA

10x40 ZCF.GA

Specifications	8x30	8x40	10x40	7x50	10x50	8x56
Product Code	30138	30137	30136	30135	30134	30214
Field (m)	149	149	123	123	123	113
Min Focus (m)	4.2	4.6	4.8	5.7	7	5
Eyerelief (mm)	11	12	11	21	12	17
IPD (mm)	60-72	60-72	60-72	60-72	60-72	60-72
HxW (mm)	110x170	134x180	134x180	170x184	170x184	170x184
Weight (g)	550	630	630	740	750	800

Models supplied in hard case with lanyard

Marine Binoculars

Porro Prism

Marine series binoculars exemplify our commitment to provide quality, innovation and choice.

Whichever model you choose, each instrument has been specifically designed and manufactured to meet the toughest performance criteria demanded by the enthusiast and professional user.

All three models have 7x50 specification, enlarged porro prisms and anti-reflective coatings. They are all fully waterproof & nitrogen gas filled to eliminate 'misting' – have long eye relief eyepieces, large depth of focus and are protected with thick rubber armouring.



Pro Series II
7x50 BIF.GA



Pro Series II
7x50 BIF.GA/C



Marine-3
7x50 BIF.GA



Marine Binoculars with Compass

Pro Series II 7x50 BIF.GA/C comes equipped with integrated compass and distance scale for use in the northern hemisphere marked 1 in the diagram below. Compasses for other world regions can be fitted to order.



Specifications	PSII 7x50 BIF.GA/C	PSII 7x50 BIF.GA	M3 7x50 BIF.GA
Product Code	30129	30128	30056
Field (m)	126	126	124
Eyereief (mm)	24	24	18
IPD (mm)	58-74	58-74	56-75
HxW (mm)	195x205	195x205	188x205
Weight (g)	1265	1241	1095

Pro Series II 7x50 BIF.GA and 7x50 BIF.GA/C are supplied in semi-rigid multi-purpose case with neoprene lanyard, rainguard & integral objective lens caps. 30 year guarantee.

Marine-3 7x50 BIF.GA are supplied in soft case with wide lanyard, rainguard & integral objective lens caps. 10 year guarantee.

WP Observation

A range of three high quality 80mm objective lens binoculars designed specifically for outdoor use, the WP Observation series are fully nitrogen waterproof and can be used in the rain or left unprotected on a tripod during showers without the worry of water penetration.

In addition to waterproofing, the binoculars are protected with durable natural rubber covering and have twist type retractable eyecups, wide wheel focusing and retractable lens hoods to eliminate problems of solar-glare or water falling onto the objective lenses.

Featuring a high specification fully multi-coated porro prism optical system, the clarity and field of view derived from the 16x80 makes it an excellent choice for astronomy, while the higher magnification 20x80 and 30x80 are geared more toward long range terrestrial observation and specialist outdoor applications such as aircraft observation.

All three models deliver full field of view with or without spectacles and are supplied with a 30 year guarantee.

Specifications	16x80	20x80	30x80
Product Code	30097	30098	30099
Field (m)	75	61	40
Eyepiece (mm)	17	16	18
IPD (mm)	55-72	55-72	55-72
HxW (mm)	316x220	316x220	316x220
Weight (g)	2390	2390	2390

Models supplied in hard carrying case with lanyard

16x80 BCF.GA
20x80 BCF.GA
30x80 BCF.GA



Observation

Available in 11x80 or 20x80 specification, the Observation series offer high quality, high magnification stereo viewing, delivering some of the best images of any 80mm binoculars available on the market today.

100% Made in Japan, superior clarity, light gathering and field of view make the 11x80 a popular choice for astronomy while the higher magnification 20x80 is the preferred choice for tripod mounted terrestrial observation.

Both models are fully rubber armoured and feature an integral tripod adapter socket positioned at the base of the focusing shaft. The 11x80 offers full field of view with spectacles and both models feature multi-coated optics. Observation binoculars are guaranteed for 30 years.

Specifications	11x80	20x80
Product Code	30196	30184
Field (m)	73	47
Eyepiece (mm)	21	11
IPD (mm)	59-72	59-72
HxW (mm)	286x233	286x233
Weight (g)	2450	2450

Models supplied in hard carrying case
 For suitable large 'L' mount adapter see p51



11x80 BCF.GA
20x80 BCF.GA

Compact Pocket Binoculars

Advances in design and material technology mean modern compact pocket binoculars can offer a serious alternative to larger objective lens instruments. Widely available in either porro prism (Z) or roof prism (D) body types, the size and weight advantages make them a popular choice for general wildlife observation, taking to sporting events or travelling on holiday.

DBA® Oasis®

Setting the standard for affordable premium pocket binoculars, each DBA Oasis compact provides the discerning user with an unrivalled combination of optical specification and user orientated features.

Offering the highest overall performance of any Opticron compact, the design centres on creating a range of instruments that, for their individual specifications are capable of providing a high quality, comfortable and versatile viewing experience in a pocket sized format. In essence, binoculars that can be taken anywhere and used effortlessly in a wide range of different and even demanding field conditions.

General features and specifications include:

- Compact roof prism design. Model 8x21 folds up to just 105mm x 68mm
- The successful combination of a wide field of view with long eyerelief. Model 8x21 delivers a class leading 7.5° FOV combined with an eyerelief of 17mm allowing comfortable full field vision with or without spectacles
- Nitrogen gas waterproof construction to a depth of 3 metres
- The latest roof prism technology including PC phase correction, full Opticron N-type multi-coating and Oasis prism coating (For more information about Oasis coating see page 7)
- 19mm diameter eye lenses to maximise viewing comfort
- Fully rubber armoured body (including focus wheel) with ergonomic 'ribbed' design to deliver a positive feel with or without gloves
- 4 stage locking rotating retractable eyecup assembly to provide maximum control in the optimum positioning of the eye with respect to the eye lens



- Close focus to under 3 metres
- Integral lugs providing connection to a specially designed neoprene lanyard or other strap of your choice
- Comprehensive 30 year guarantee



Specifications	8x21	10x25
Product Code	30380	30381
Field (m)	131	105
Min Focus (m)	1.8	2.4
Eyerelief (mm)	17	17
IPD (mm)	37-72	37-72
HxW (mm)	105x106	119x106
Weight (g)	330	347

Models supplied in soft leather case with 31021 rainguard and 29010 neoprene lanyard

BGA T PC Oasis®



8x24



10x28



12x30

The definitive pocket binocular available in 8x, 10x or 12x magnifications, BGA T PC Oasis roof prism compacts feature high definition optics with PC phase correction and Oasis prism coating (see page 7).

The lightest binoculars in our range, the instruments are fully rubber covered and nitrogen-gas filled waterproof ensuring 100% reliability in the field. The 8x24 is the smallest Opticron roof prism, folding down to just 95x67mm.

All three models feature full 'B' specification eyepieces, rotating retractable eyecup assemblies, offer close focus to under 4 metres and come complete with a comprehensive 30 year guarantee.

Specifications	8x24	10x28	12x30
Product Code	30015	30016	30017
Field (m)	110	86	76
Min Focus (m)	2.5	3.9	4.5
Eyerelief (mm)	15	15	15
IPD (mm)	36~71	36~71	36~71
HxW (mm)	95x103	106x105	123x106
Weight (g)	240	260	290

Models supplied in soft leather case with 31000 lanyard

Verano® BGA PC

Distinctively stylish long eyerelief binoculars, the Verano BGA PC roof prism compacts are manufactured using a single hinge body structure allowing for easy one hand operation. Protected in natural rubber armour and featuring a high-contact aluminium focus wheel, main features include:

- Nitrogen gas filled waterproof construction (internal focusing)
- PC Phase corrected prisms with full multi-coating to all air/glass surfaces
- Twist type retractable eyecup assembly and long eyerelief eyepieces giving full field of view with spectacles
- Close focus to under 2m
- 30 year guarantee



8x25

10x25

12x25

Specifications	8x25	10x25	12x25
Product Code	30025	30026	30027
Field (m)	110	87	75
Min Focus (m)	2	2	2
Eyerelief (mm)	19	19	19
IPD (mm)	55~75	55~75	55~75
HxW (mm)	110x106	110x106	110x106
Weight (g)	320	322	326

Models supplied in soft case with 31000 lanyard

HR WP

Designed and engineered to provide class leading optical clarity and viewing comfort, these single hinge porro prisms feature 5 element long eyerelief eyepieces for viewing comfort and 26mm dia. objective lenses for maximum brightness. Features include:

- Long eyerelief eyepieces with durable alloy twist-type retractable eyecups
- Nitrogen waterproof to a depth of 3 metres
- Fully multi-coated optical system with Opticron F-type multi-coating to eyepieces and objective lenses
- Twin texture natural rubber covering and easy-grip focusing wheel
- 10 year guarantee



Specifications	8x26	10x26
Product Code	30094	30095
Field (m)	96	87
Min Focus (m)	3.5	3.5
Eyerelief (mm)	18	15
IPD (mm)	58~73	58~73
HxW (mm)	105x123	105x123
Weight (g)	396	399

Models supplied in soft case with 31000 lanyard



8x26
10x26

Aspheric LE WP

A classically designed range of roof prism compacts featuring Aspheric lens technology combined with long eyerelief eyepieces for spectacle wearers', twist-type eyecup assembly & PC Phase corrected coatings for maximum clarity. Other features include:

- Silver coated roof prisms to maximise light transmission through the prism
- Nitrogen waterproofing to protect against spray, damp or mist
- Full body rubber armouring
- Integral lanyard
- Close focus to 2 metres
- 10 year guarantee



Specifications	8x25	10x25
Product Code	30358	30359
Field (m)	91	87
Min Focus (m)	2	2
Eyerelief (mm)	16	16
IPD (mm)	32~74	32~74
HxW (mm)	111x104	111x104
Weight (g)	291	292

Models supplied in soft case



8x25
10x25

Taiga

The Taiga successfully combines a visually sophisticated outer design with excellent ergonomics and classing leading optical performance. The benefits of the 25mm objective lens, long eyerelief eyepieces and fully coated porro prism configuration cannot be overstated and the Japanese designed Taiga delivers the best performance to price ratio in its class.

Finished in twin textured soft black rubber covering, other features include twist-type eyecup assemblies, good close focus and 10 year guarantee.



Specifications	8x25	10x25	12x25
Product Code	30382	30383	30384
Field (m)	105	91	79
Min Focus (m)	3	3	3
Eyerelief (mm)	16	16	16
IPD (mm)	56~72	56~72	56~72
HxW (mm)	112x100	112x100	112x100
Weight (g)	299	304	304

Models supplied in neoprene case with lanyard



8x25
10x25
12x25

Savanna '54



8x23
10x23

A highly competent porro prism compact, the Savanna delivers bright and sharp images with a good depth of field in a lightweight and very compact body. The binoculars feature long eyerelief eyepieces, fully coated optics and good close focus.

Current models feature a specially reduced IPD (interpupillary distance) of just 54mm so children as young as 7 years can take advantage of the easy-to-use single hinge design. Clothed in 'soft touch' natural protective rubber armouring with additional objective lens protection to guard against knocks and bumps, each Savanna is supplied with comprehensive 10 year guarantee.

Specifications	8x23	10x23
Product Code	30373	30374
Field (m)	113	91
Min Focus (m)	2.5	2.5
Eyerelief (mm)	16	16
IPD (mm)	54-72	54-72
HxW (mm)	100x110	100x110
Weight (g)	295	297



Models supplied in neoprene case with lanyard

Imia

The Imia offers distinctive design in a lightweight roof prism body. Features include:

- Fully multi-coated internal optical assemblies with good eyerelief for viewing with or without spectacles
- ABS plastic body with rubberised paint finish
- Wide wheel focusing
- Close focus to under 2.5 metres (8x25)
- Twist-type retractable rubber eyecup assemblies
- 5 year guarantee



8x25
10x25

Specifications	8x25	10x25
Product Code	30408	30409
Field (m)	143	114
Min Focus (m)	2.5	3.5
Eyerelief (mm)	12	12
IPD (mm)	36-74	36-74
HxW (mm)	103x106	103x106
Weight (g)	300	300



Models supplied in soft case with lanyard

Vega

The compact Vega is an excellent choice if you are looking for an affordable, easy to use rubber armoured compact binocular with long eyerelief for viewing with glasses.

Great for all general applications and including a high magnification 12x25, they feature fully multi-coated lenses, good close focus and twist-type large diameter rubber eyecups for viewing comfort.

Supplied complete with 5 year guarantee.

8x25
10x25
12x25



Specifications	8x25	10x25	12x25
Product Code	30001	30002	30003
Field (m)	110	91	70
Min Focus (m)	2.2	2.2	2.7
Eyerelief (mm)	17	17	17
IPD (mm)	62-76	62-76	62-76
HxW (mm)	100x110	100x110	100x110
Weight (g)	328	330	327



Models supplied in soft case with lanyard



The Vega 8x25 carries an endorsement from David Lindo 'The Urban Birder'

Monoculars

Sometimes perceived as inferior to binoculars, monoculars can provide a superior viewing alternative to many compact or pocket size binoculars of similar price.

Opticron monoculars are designed for specialist applications such as entomology as well as being compact, quality field glasses for the space and weight conscious. They come in a variety of sizes and formats and include some useful accessories dedicated to both the macro study of wildlife and long range high magnification observation.

DBA Oasis[®] S-Coat

Simply the best monoculars of their type, DBA Oasis are designed for the professional wildlife enthusiast, offering the very highest performance and specification in a compact roof prism design.

Unique features include:

- Complex multi-element long eyerelief eyepieces with large diameter eye lenses that provide 7° (8x42) and 6° (10x42) FOV with total viewing comfort
- The highest quality phase corrected roof prisms with Oasis prism coating (see page 7)
- Unique S-type multi-coating designed specifically to the strengths of the optical system allowing both models to achieve extremely high clarity & colour contrast in all light conditions from early morning till dusk
- Internal focusing with close focus to under 3 metres
- Fully nitrogen gas filled waterproof construction to a depth of 5 metres
- Natural rubber armoured with contoured ribs on the main body focus wheel to maximise comfort and handling with or without gloves
- 3 stage locking rotating retractable eyecup assembly for spectacle wearers

DBA Oasis monoculars are supplied complete in soft leather case with neoprene monocular lanyard and 30 year guarantee.

BGA

Choosing a BGA monocular guarantees you one of the best field monoculars available on the market today. The combination of a large objective lens, high quality Morita roof prism plus a long eyerelief eyepiece means that unlike smaller monoculars, a BGA monocular delivers a viewing experience akin to a pair of average size roof prism binoculars in a pocket size instrument measuring only 43mm x 136mm.

Produced in 8x42 and 10x42 formats with fully specified multi-coated internally focused optics and the added assurance of nitrogen waterproof construction to a depth of 3 metres, model features include:

- 'B' specification long eyerelief eyepieces for full field of view with or without spectacles
- Twist type retractable eyecup assembly
- Wide band focusing
- Close focus to around 2 metres
- 30 year guarantee

Models supplied in soft case with lanyard.

Pocket telescope conversion for DBA and BGA monoculars

A dedicated push fit conversion (product code 30442) which increases the magnification of each monocular by a factor of 2.5x creating a pocket telescope for long range observation. For more information on the 2.5x UTA and connectivity within the Opticron range see page 47.

Tripod mount for DBA and BGA monoculars

A bespoke sleeve mount providing a secure connection to any photo/video panhead with a 1/4" thread. Mount secures over objective lens housing. Size: 70x70mm Weight: 67g
Product codes: 30444 Tripod mount DBA, 30443 Tripod Mount BGA



Waterproof

Fully multi-coated compact models offering nitrogen gas filled waterproof construction and thick rubber covering with finger grooves for easy one hand operation, these are excellent all-purpose 'take-anywhere' field glasses. Models 5x30 and 8x32 LE feature a long eyerelief eyepiece giving full field of view with spectacles. Models 5x30 and 8x30 finished in dark green. Model 8x32 LE finished in black. All three models supplied in soft case with lanyard, integrated objective lens cover and 10 year guarantee.



5x30
8x30



8x32 LE

Gallery Scope

(Mis) named with the art enthusiast in mind, each Gallery scope is an excellent tool for macro study of wildlife as well as a quality field monocular that fits unnoticed into a shirt pocket.

Available in a range of different Mag/FOV specifications to suit different applications with close focus ranging from 30cm (8x20) to 20cm (4x12), each instrument has the option of conversion to a microscope using the 30259 Microstand with LED illuminator. This conversion increases basic monocular magnification by a factor of 3.



4x12 6x16 8x20

Other features include:

- Quality Japanese-made assembly with fully coated roof prism optical system
- Fold down rubber eyecup
- Anodised gloss black finish
- 30 year guarantee

Models supplied in soft case with lanyard.

30259 3x Microstand with LED illuminator

Base area 62x55mm. Height 88mm. Weight 68g



Choosing the right Gallery scope for you

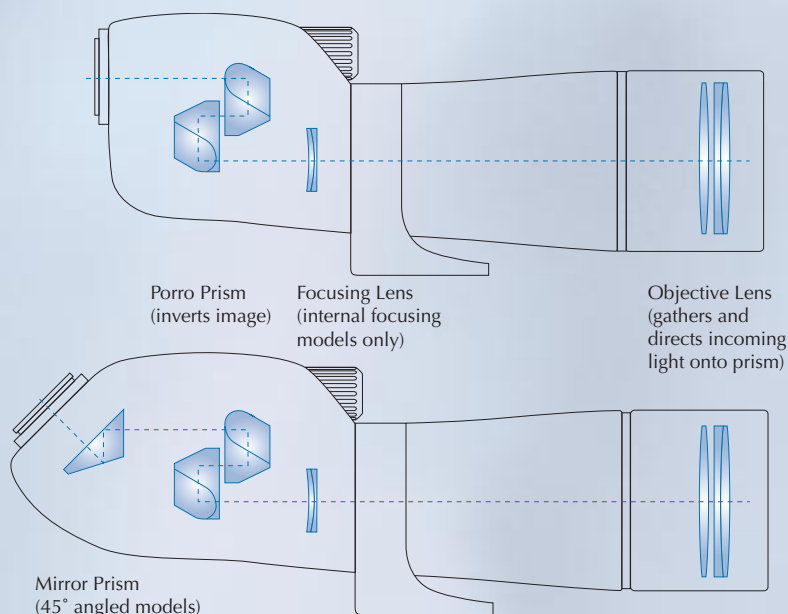
Chart showing field of view at different focusing distances with and without Microstand

Model	Field	Close focus	Field at 1.0m	Field at 0.3m	Field at 0.23m	Field at 0.2m	Max Field with 30259/65	Optimum Field with 30259/65
30172 4x12	12.5°	0.2m	21.9cm	6.6cm	5cm	4.4cm	16.5mm (12x)	80~90%
30173 6x16	9.3°	0.23m	16.3cm	4.9cm	3.7cm	n/a	13mm (18x)	70~80%
30165 8x20	6.8°	0.3m	11.9cm	3.5cm	n/a	n/a	10mm (24x)	50~60%

Specifications	8x42 DBA	10x42 DBA	8x42BGA	10x42BGA	5x30 WP	8x30WP	8x32LE WP	4x12G	6x16G	8x20G
Product Code	30445	30446	30440	30441	30344	30345	30348	30172	30173	30165
Field (m)	122	105	110	89	122	131	131	219	163	119
Min Focus (m)	2.5	2.75	2	2	4	5	5	0.2	0.23	0.3
Eyerelief (mm)	21	19	19	16	25	11	16	14	11	11
HxW (mm)	143x52	143x52	136x43	136x43	139x49	139x49	139x49	58x32	70x32	94x34
Weight (g)	343	349	285	285	252	252	274	49	56	105

Choosing your Telescope

The majority of terrestrial telescopes are prismatic and as such follow the basic design of a large monocular (half a binocular) usually between 50mm and 100mm in diameter, designed for use with a range of different magnification eyepieces. These prismatic telescopes are often called spotingscopes or fieldscopes.

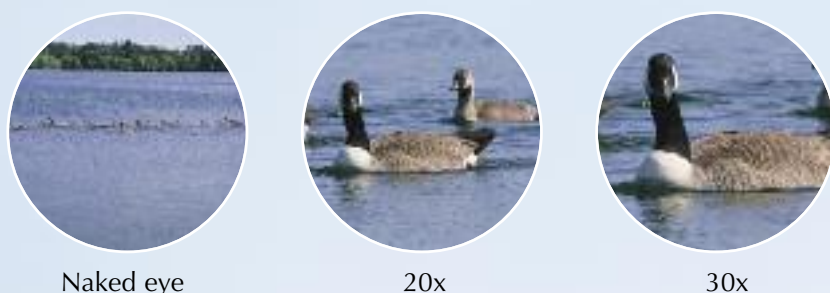


Specifications Opticron telescopes are generally supplied in 'body only' format e.g. MM2 52, HR 66, ES 80. These models have objective lens diameters of 52mm, 66mm and 80mm respectively, no built-in eyepiece and as such allow the choice of eyepiece to be made separately.

Eyepieces are denoted according to their magnification, whether they are wide angle (WW or WA) or variable zoom eg. 20-60x. A 20x eyepiece allows the object being viewed to appear 1/20th of its actual distance away when compared to the naked eye. Using this rule an object 500m distant appears to be only 25m away. A 30x eyepiece makes the object appear 16.7m distant while a zoom eyepiece set at 60x means the same object appears to be just over 8m away.

What magnification? Terrestrial telescopes are most commonly used for high magnification viewing over long distances in daylight. Image quality at different magnifications will depend on the optical system, the quality of glass used and the coatings applied to the surfaces of each lens. There are however a few general rules that can be applied in determining the right specification for your needs. Firstly, the relationship between magnification, objective lens dia. and the size of the eye pupil, and secondly the quality of the optics inside the 'scope.

In normal daylight, when the pupil is dilated to between 2 and 3mm, a 66 mm telescope will deliver optimum performance, (the balance between magnification and image brightness) between 22x and 35x magnification i.e. when the exit pupil diameter equals that of the iris. In low light when the pupil becomes larger, dilating to between 5 and 7mm depending on age, optimum performance can only be obtained by using a lower magnification eyepiece or using a larger objective lens telescope such as an 80mm or 100mm.





The higher the magnification, the greater the image and colour distortion. These effects can be dramatically reduced by using ED or Fluorite combination objective lenses that minimise chromatic aberration, but are expensive. At magnifications of 30x or lower, the benefits of these objective lenses are hardly noticeable when compared to conventional glass objectives.

Field of view is usually expressed as the width in metres of the image when viewing at a distance of 1000m and is directly related to the magnification. Generally the greater the magnification, the smaller the field of view. There are exceptions, namely wide-angle eyepieces which are designed specifically to provide greater fields of view. For more information on Opticron eyepieces see page 46. It is important to note that the objective lens, irrespective of diameter has no influence over the field of view.

Light transmission The best way to assess the actual brightness of any telescope and eyepiece combination when choosing for daytime terrestrial use, (assuming equal optical systems) is to calculate the exit pupil diameter in the same way as with a binocular and making a trade-off between image brightness and magnification desired. For general daytime terrestrial observations good compromise magnifications are between 20x and 30x for a 60mm, 25 to 35x for a 66mm and 25 to 40x for an 80mm.

Resolution As a general rule a good telescope should be able to resolve two black dots 1.5mm distance apart on a white surface, in bright daylight from a distance of 50m.

Eyerelief This is the distance between the eye lens and the point where the pupil is positioned for full field of view and varies from eyepiece to eyepiece. In some cases the eyerelief is shorter than that required by spectacle wearers to obtain the full field of view, especially at higher magnifications. If it is important that you obtain the full field of view with spectacles please choose any of the following eyepieces: SDL, HDF T, HDF, HR; 40812, 40930, 40931, 40932, 40933, IS; 40916, 40918, 40919, HR.MM2; 40909. Remember, rubber eyecups although fitted to many eyepieces are no guarantee that the full field of view is obtainable when set in the 'down' position and used with glasses.

Straight-through or 45° angled Common advantages of an angled telescope are that: i) the back, shoulders and neck are in a more relaxed position when looking through the 'scope, ii) the tripod can be set at a lower position making it easier for people of different heights to use and the equipment more stable in outdoor conditions. Straight-through telescopes are easier to use when following fast moving objects, using the instrument from the confined spaces of a hide or vehicle, or when hand-held.

Our advice Compare different models side-by-side at the same magnification if possible. Product reports are generally subjective and are no substitute for individual testing. If you are unable to test before you make a purchase, contact us for information and advice on the best model to suit your needs.

Lastly, suitable tripods for any given telescope will, on average, be around the same weight as the 'scope. Therefore if you are thinking of walking any distance with your chosen telescope, pick it up together with the tripod you are intending to support it with and take the combination for a 'test walk' to see how far you can comfortably carry it.

High Resolution ED Fieldsopes

Smaller, lighter and sharper the latest HR ED fieldsopes offer a host of improvements over preceding models and have been re-designed without compromise to deliver truly exceptional optical performance combined with sublime handling and complete reliability.

Aimed squarely at the serious fieldscope user, the models are built to withstand extremes in temperature, to operate unaffected by rain, cold or humidity and as such can be used anywhere from equatorial rainforests to the poles. The choice of body types, viewing eyepieces and dedicated accessories for observation and photography are unparalleled and combine to create the most versatile and complete range of fieldsopes we have ever produced.

The reconfigured optical systems deliver the highest resolution of any Opticron telescope and are matched directly to the SDL zoom eyepiece for constant focus across the magnification range 18-54x (66)/24-72x (80). Both the 66mm and 80mm feature a high definition 5 element apochromat objective lens system with 2 separate ED elements, and the entire system utilises Opticron N-type multi-coating. This combination maximises resolution and colour contrast especially at higher magnifications under a range of different light conditions.

Mechanically the HR ED feature a new lightweight magnesium body complete with large footprint tripod adapter with +/- 90 degree rotation. Fully nitrogen gas filled waterproof and hermetically sealed against penetration from dust and moisture, the models are protected with a textured and highly durable natural rubber armouring. Other features include a centrally positioned rubber armoured focusing wheel for optimum accessibility plus a new retractable rubber covered lens hood with integrated rubber objective lens cap. HR ED fieldsopes are supplied with a comprehensive 30 year guarantee.

The advantages of 'ED'

By using two ED 'extra low dispersion' glass elements in the primary objective system, these fieldsopes provide a higher degree of colour correction compared to conventional glass and standard ED objectives.

More apparent at higher magnifications and under certain light conditions (e.g. when looking over water on a bright warm day) the image appears sharper and colours remain truer to life across the magnification range. The

ability to bring into clear and sharp focus indistinct objects such as coloured identification rings or shades of plumage in poor light over long distances are the hallmarks of an HR ED fieldscope. This extra optical clarity combined with all the features and exceptional build quality make them the definitive choice for the professional ornithologist.



In addition to improved viewing capability at higher magnifications, the benefits of using an HR ED fieldscope for telephotography with either compact digital or SLR cameras cannot be overstated. The 40215 Telephoto conversion for SLR cameras is designed to meet the demands of the amateur wildlife photographer and when used in conjunction with an HR ED fieldscope ensures the very best definition and colour reproduction. For more information on telephotography see pages 44-45.



HR 66 GA ED/45°
shown with SDL 18-54x

HR 80 GA ED/45°
shown with SDL 24-72x



Telephoto lens conversion for
SLR cameras (see page 44 for details)



Telephotography with compact
digital cameras/camcorders
featuring 40849 UDCA
(see page 45 for details)



HR 66 GA ED
shown with SDL 18-54x

HR 66 GA ED

Weighing just over 1200g and 290mm in length, the HR 66 GA ED really lives up to its reputation delivering arguably the highest resolution of any comparable compact prismatic fieldscope on the market today.

It's not just the resolution that makes this 'scope really special. When fitted with the HDF T 20xWW, 28xWW, 38xWW 'flat field' or the SDL 18-54x eyepieces, viewing comfort is unparalleled - an essential quality when viewing for long periods or in poor light.

HR 80 GA ED

With a 570mm focal length objective and outstanding low light performance, the HR 80 GA ED comfortably maintains superb colour contrast even in the poorest field conditions. The long focal objective lens provides the unique opportunity of using long eyerelief, high power, wide angle HDF T 27xWW, 38xWW & 52xWW eyepieces plus the stunning SDL 24-72x for superb long range viewing.

HR 80 GA ED
shown with SDL 24-72x

Specifications	66ED	66ED/45	80ED	80ED/45
Product Code	41002	41003	41006	41007
OG Dia (mm)	66	66	80	80
Min Focus (m)	5	5	8	8
Length (mm)	290	330	370	405
Weight (g)	1210	1278	1635	1703

For more information on SDL, HDF and HR eyepieces see page 46

EYEPIECES	• SDL/SDLv2	• HDF	• HR/HR2											
Product Code	40935	40936	40810	40809	40858	40859	40860	40861	40862	40812	40930	40931	40932	40933
Magnification HR 66	18-54x	18-54x	20xWW	28xWW	38xWW	44xWA	70xWA	88x	18-54x	20x	23xWA	30xWA	42x	20-60x
Magnification HR 80	24-72x	24-72x	27xWW	38xWW	52xWW	60xWA	95xWA	120x	24-72x	27x	31xWA	41xWA	57x	27-80x
Field/1000m HR 66	36/20	37/23	52	45	31	26	17.5	13	30/17	43	49	40	20	35/17.5
Field/1000m HR 80	29/16	30/18	39	33.3	23	20	13	7	29/13	31	40	30	12	27/15

ES v3 Fieldscopes

Featuring an upgraded optical system for improved colour contrast and apparent resolution, current ES v3 fieldscopes are designed and manufactured to deliver 'best in class' optical performance combined with rugged dependability and real user comfort.

Available in three variants; 80mm SD, 80mm ED and 100mm ED the instruments excel in the most important area for the majority of users: image quality. The reduction of almost all visible chromatic aberration at 60x magnification with the 80 SD sets the standard for both definition and tonal quality further improved upon with the 80 ED and 100 ED.

Main features include:

- Tri-element high definition objective lens (SD or ED) with Opticron F-type multi-coating that visibly increases both colour contrast and clarity over standard multi-coatings
- Magnesium, aluminium and polycarbonate body protected in textured rubber armour
- Nitrogen waterproofing to eliminate condensation

Weight is kept to a minimum and the 'scopes are well balanced for effective use on a tripod. Other features include a retractable lens hood, integrated rubber objective lens cover, conveniently positioned wide band focusing wheel and rotating tripod sleeve to enable maximum versatility in hides or viewing from a sitting or prone position. Fully compatible with SDL, HDF and HR eyepieces the models offer an exciting array of viewing options of 20x to 100x (80mm) and 30x to 134x (100).

For even greater magnification a 2.5x Tele-adapter is available for SDL, HDF and HR eyepieces (see page 47 for details).

ES models can be converted for use with SLR cameras for telephotography and are supplied complete with a 30 year guarantee.

ES 80 GA SD/45°

The suffix SD for standard belies the quality of this tri-element F500 viewing platform. Utilising Opticron F-type high refractive index multi-coating, the ES 80 GA SD/45° demands serious consideration for anybody interested in an 80mm fieldscope. Image texture is slightly softer than sister ED model but the instrument deals competently with a range of interspersed colours in varying light conditions up to 60x magnification, combined with accurate focusing and a welcome lack of colour distortion.

ES 80 GA ED/45°

The latest optical upgrades, superior RI F-type multi-coating system and ED objective lens that virtually eliminates the distorting effects of chromatic aberration over 35x magnification all combine to further enhance the performance of this our most popular 80mm model. Images are vibrant and 'true to life' and what's more - reproduced consistently across the magnification range.



ES 80 GA SD/45°
shown with SDL 20-60x

ES 80 GA ED/45°
shown with SDL 20-60x



Telephotography with ES

Stonechat photographed using Opticron-Samsung i6 with ES 80 GA ED and 40810E HDF T 23xWW. Distance c. 20m (image has been cropped)
Camera magnification 1x
Combined magnification 23x



Telephoto lens conversion for SLR cameras (see page 44 for details)



Telephotography with compact digital cameras/camcorders featuring 40849 UDCA (see page 45 for details)



ES 100 GA ED/45°

The advantages of a 100mm diameter objective lens become clear when viewing at magnifications over 50x. Having a surface area 1.5x that of an 80mm OG fieldscope, the ES 100 is easily able to outperform similarly specified 80mm (ED and Fluorite models) delivering brighter images with a higher resolving power.

For terrestrial use, better definition and higher colour contrast mean more accurate and more enjoyable long range viewing. Preferred eyepieces include the HDF 42xWW, 27-80x and SDL 27-80x.

For Astronomy the ES 100's versatility as a compact F650mm 4" refractor with erected image viewing should also be considered. Magnification options for this application include HDF 6mm and 5mm long eyerelief eyepieces delivering 107x and 134x respectively.

ES 100 GA ED/45°
shown with SDL 27-80x

Specifications	80 SD/45	80 ED/45	100 ED/45
Product Code	40895	40890	40893
OG Dia (mm)	80	80	100
Min Focus (m)	6	6	10
Length (mm)	390	390	497
Weight (g)	1484	1591	2800

For more information on SDL, HDF and HR eyepieces see page 46

EYEPIECES	• SDL/DSLv2		• HDF				• HR/HR2								
Product Code		40935E	40936E	40810E	40809E	40858E	40859E	40860E	40861E	40862E	40812E	40930E	40931E	40932E	40933E
Magnification	ES 80	20-60x	20-60x	23xWW	32xWW	44xWW	50xWA	80xWA	100x	20-60x	23x	27xWA	34xWA	50x	23-69x
Magnification	ES 100	27-80x	27-80x	30xWW	42xWW	58xWW	67xWA	107xWA	134x	27-80x	30x	36xWA	46xWA	65x	30-90x
Field/1000m	ES 80	32/18	33/20	45	36	28	23	16	10	35/16	38	41	33	18	29/15
Field/1000m	ES 100	25/14	26/16	33	27	20	16	12	7	29/12	28	32	25	10	23/11

GS Fieldsopes

Introduced in response to increasing demand for quality lightweight telescopes of all sizes, GS series fieldscopes set the standard for users wanting to takeout and walkabout with their equipment - whether for birdwatching or general wildlife observation.

Designed to deliver class leading performance combined with superior functionality and ease of use, features include:

- Superior light transmission derived from Ø52mm, Ø66.5mm and Ø81.5mm objectives
 - High quality fully multi-coated optical systems with the option of standard¹ or ED 'extra low dispersion glass' element objective lenses
 - Lightweight construction: GS 665 from 976g, GS 815 from 1280g
 - Nitrogen gas filled construction for 100% waterproofing
 - Full body natural rubber armouring with integrated rubber objective lens cap
 - Centrally positioned rubber covered focusing wheel to allow easy access for both right and left handed users
 - 9:1 ratio fine focus adjustment for greater focusing accuracy at higher magnification settings
 - Large footprint tripod sleeve with $\pm 90^\circ$ each-way rotation and 45° incremental 'stops'
 - Retractable lens hood (665 and 815 only)
 - Full compatibility with Opticron SDL, HDF & HR Eyepieces and Telephotoadapters
 - 30 year guarantee
- ¹ 665 & 815 only

GS 52 GA ED

Setting new standards for light transmission, resolution and colour contrast, the GS 52 GA ED offers a practical and versatile alternative to larger heavier telescopes in situations where size and weight are an issue. Fitted with the HDF T 12-36x eyepiece set between 12x and 18x, images are exceptionally bright with a large depth of field - perfect for either hand held or tripod mounted observation at close range. Unlike other telescopes of similar size, the full size prism units allow the instrument to retain its performance right up to 36x, delivering superior colour fidelity for longer range viewing even in comparatively low light.

Images are not just brighter they are sharper too and the GS 52 GA ED compares well with the GS 665 GA for resolution at magnifications up to 30x. Field of view is also enhanced with certain eyepieces; +30% against the smaller MM2 52 ED with the HDF T 13xWW, and +20% with the HDF T 18xWW. For garden birdwatching and photography close focus is just 2.5m.



GS 52 GA ED
shown with HDF T 12-36x



Telephotography with GS

Cormorant and Mute Swan photographed using GS 665 GA ED and 41110 HDF telephotoadapter connected to a Nikon D200 body. Distance c. 15m (images have been cropped). Combined magnification 27x (1350mm)



GS 52 GA ED/45°
shown with HDF T 12-36x



Telephoto lens conversion for SLR cameras
(see page 44 for details)



**GS 665 GA/45°
GS 665 GA ED/45°
shown with HR2 18-54x**

GS 665 GA & GS 665 GA ED

The GS 665 GA is designed for people who desire the optimum balance between size/weight and optical performance. With finished weights around 1000g they are light by any standard, but the larger objective lens compared to an ordinary 65mm 'scope means images are comparatively brighter and sharper. Relatively low focal length to aperture ratios mean the GS 665 GA are an excellent choice for digitising too. Recommended eyepieces are the HDF T 18xWW, 25xWW or 16-48x zoom.

The GS 665 GA ED offers higher resolution and contrast compared to the standard model at magnifications over 30x, resolving finer detail on both high contrast and subtly shaded targets.



**GS 665 GA
GS 665 GA ED
shown with HR2 18-54x**

GS 815 GA ED

The preferred option for maximum light transmission between 30x and 60x, the GS 815 GA ED offers the size and weight conscious user extra light-gathering and definition for a modest increase in size and weight over the 665 ED. Delivering the brightest and sharpest images at the highest magnifications and distances, the GS 815 GA ED is the perfect proposition for the anyone wanting those 'extra few minutes' viewing at the end of the day.



**GS 815 GA ED
shown with HR2 23-69x**

Specifications	52ED	52ED/45	665	665/45	665ED	665ED/45	815ED	815ED/45
Product Code	40956	40957	40960	40961	40962	40963	40967	40968
OG Dia (mm)	52	52	66.5	66.5	66.5	66.5	81.5	81.5
Min Focus (m)	2.5	2.5	3.8	3.8	3.8	3.8	5.8	5.8
Length (mm)	200	200	326	326	326	326	362	362
Weight (g)	754	759	976	980	1049	1053	1349	1353

For more information on SDL, HDF and HR eyepieces see page 46

EYEPIECES	• SDL/SDLv2			• HDF				• HR/HR2						
Product Code	40935G ¹	40936G ¹	40810G	40809G	40858G	40859G	40860G	40861G	40862G	40812G	40930G	40931G	40932G	40933G ¹
Magnification	GS 52	12-36x	12-36x	13xWW	18xWW	24xWW	28xWA	45xWA	57x	12-36x	13x	15xWA	20xWA	28x
Magnification	GS 665	16-48x	16-48x	18xWW	25xWW	35xWW	40xWA	60xWA	80x	16-48x	18x	21xWA	27xWA	38x
Magnification	GS 815	20-60x	20-60x	23xWW	32xWW	44xWW	50xWA	80xWA	100x	20-60x	23x	27xWA	34xWA	50x
Field/1000m	GS 52	58/32	60/36	75	66	49	43	30	20	62/29	n/a	74	59	29
Field/1000m	GS 665	40/22	41/25	50	47	35	29	19.5	12.5	42/20	46	49	39	18
Field/1000m	GS 815	32/18	33/20	43	36	26	24	16	8	35/17	38	39	33	15

¹40934 eyepiece adapter required

IS WP Fieldsopes

IS WP fieldscopes are designed for the first-time user, frequent traveller and those on a budget. Available in 60mm and 60mm ED objectives with the option of straight-through and 45° angled viewing, these interchangeable eyepiece spottingscopes deliver excellent value for money offering high levels of performance and versatility in a compact, lightweight body.

Features and options include; nitrogen waterproof construction, 4 element fully multi-coated optical system with internal focusing, rotating tripod sleeve for use with photo/video tripods and bipods, retractable lens hood to protect against glare, accessories for SLR telephotography plus a comprehensive 10 year guarantee.

IS 60 WP

An excellent all-rounder delivering good resolution and depth of field, the IS 60 WP is easy to use and transport either on a lightweight tripod or bipod. Matched to one of the three dedicated IS long eyerelief eyepieces, (40916S 25xWA, 40918S 18-54x and 40919S IS Pro 15-45x), the model is an excellent choice for the first-time birdwatcher moving up from 'binocular-only' bird watching as well as the shooter or archer looking for accuracy at distances around 100m.



IS 60
shown with HR2 16-48x



IS 60/45°
shown with HR2 16-48x



Telephoto lens conversion for SLR cameras (see page 44 for details)



Telephotography with compact digital cameras/camcorders featuring 40849 UDCA (see page 45 for details)

IS WP Fieldscopes for Target Archery & Shooting



The IS 60 WP delivers sharper, brighter images in a smaller, lighter body compared to a traditional 22x60 spottingscope and is the perfect choice for accurate target observation up to 100m.

Fitted with either of the IS zoom eyepieces or 40933 HR2 16-48x for even higher resolution, the 'scope connects to the 40314 bipod via the tripod sleeve and can be rotated round its central axis for precise positioning. For even greater positional flexibility the 40316 ball and socket panhead is available as an optional extra (See page 50).





IS 60 ED/45°
shown with HR2 16-48x

IS 60 ED WP

The IS 60 ED WP offers the opportunity to upgrade to significantly brighter and sharper images while retaining the core features of the IS 60 WP. Featuring a heavily modified optical system with new components and a more rigorous QC system, this mini-60mm ED fieldscope is optically matched to the HR2 16-48x zoom eyepiece for premium performance in a very portable package.



IS 60 ED
shown with HR2 16-48x

Additional recommended eyepieces include IS 25xWA, HDF T 23xWW¹ and HDF T 15-45x¹ and IS 16-48x¹.

¹Eyepiece adapters required. See Table

Specifications	60	60/45	60ED	60ED/45
Product Code	40982	40983	40986	40987
OG Dia (mm)	60	60	60	60
Min Focus (m) ²	7	8	7	7
Length (mm)	250	265	250	265
Weight (g)	689	705	750	789

EYEPIECES	• IS		
Product Code	40916S	40918S	40919S
Magnification	25xWA	18-54x	15-45x
Field/1000m	46	31/15	41/26

For more information on SDL, HDF, HR and IS eyepieces see page 46

²40916S eyepiece

EYEPIECES	• SDL/SDLv2		• HDF						• HR/HR2					
Product Code	40935S	40936S	40810S	40809S	40858S	40859S	40860S	40861S	40862S	40812S	40930S	40931S	40932S	40933S
Magnification	15-45x	15-45x	17xWW	23xWW	32xWW	36xWA	58xWA	72x	15-45x	17x	20xWA	25xWA	35x	16-48x
Adapter required	40927S	40927S	40925S	40925S	40925S	40925S	40925S	40925S	40927S	40925S	40925S	40925S	40925S	40928S
Field/1000m	43/24	44/27	64	52	38	32	20	14	46/21	52	58	47	20	45/23

MM2 v2 Mighty Midget Travlescopes

A revolutionary spotting scope created to optimise the balance between optical performance and size, the MM2 Mighty Midget is an ideal choice for the space and weight conscious user.

Designated a 'Travelscope', and available in either standard glass or high performance ED glass formats, the design utilises an extendable objective lens system that allows the unit to be retracted to just under 18cm¹ for optimum portability. Fully extended the body measures just under 22cm.¹

¹excluding eyepiece

Available in straight-through and 45° angled bodies, construction is a mix of tough plastics, alloys and rubber, creating finished weights under 480g - lighter than many 32mm binoculars.



MM2 52/45° Extended
shown with HR MM2 13-39x

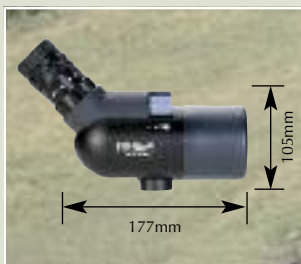


MM2 52 Extended
shown with HR MM2 13-39x

Close focus is an impressive 3.5 metres - perfect for high magnification detailed observation at close range.

Eyepiece options include the MM2 25x and HR MM2 13-39x. The models also accept the full range of HR, HDF and SDL eyepieces allowing Opticron fieldscope owners to use their existing eyepieces with a new MM2 body.

Current v2 models incorporate a 'click-stop' on the draw tube for easier use with the impressive 40862M HDF 12-36x zoom, one of the recommended eyepieces when choosing an ED model.



Travelscope for existing Opticron users. Model shown 52/45 with 40909M zoom



Telephoto lens conversion for SLR cameras (see page 44 for details)



Water resistant multi-layer padded case



Model 52 with 40906 Grippa Strap



Other features and options include:

- 52mm objective & fully multi-coated optical system
- Eyepiece cavity store for MM2 eyepiece (rear) not illustrated
- Retractable lens hood
- 1/4" thread connection to photo/video tripod, clamp or monopod
- 10 year guarantee
- Telephotoadapter option
- Choice of protective water resistant cases or grippa strap

MM2 52 ED/45° Extended
shown with HDF T 12-36x



MM2 52 ED Extended
shown with HDF T 12-36x

Specifications	52	52/45	52 ED	52 ED/45
Product Code	40900	40901	40907	40908
OG Dia (mm)	52	52	52	52
Min Focus (m) ¹	3.5	3.5	3	3.5
Length (mm) OPEN	217	217	217	217
CLOSED	177	177	177	177
Weight (g)	460	450	478	468

EYEPIECES	•HR MM2	• MM2
Product Code	40909M	40902M
Magnification	13-39x	25x
Field/1000m	49/30	38

For more information on SDL, HDF, HR and MM2 eyepieces see page 46

¹MM2 25x eyepiece

EYEPIECES	• SDL/SDLv2		• HDF				• HR/HR2							
Product Code	40935M ²	40936M ²	40810M	40809M	40858M	40859M	40860M	40861M	40862M	40812M	40930M	40931M	40932M	40933M ²
Magnification	12-36x	12-36x	13xWW	18xWW	24xWW	28xWA	45xWA	57x	12-36x	13x	15xWA	20xWA	28x	13-39x
Field/1000m	58/32	60/36	60	60	49	43	30	20	60/29	58	60	58	29	49/30

²40934 eyepiece adapter required

Telephotography with Opticron Telescopes

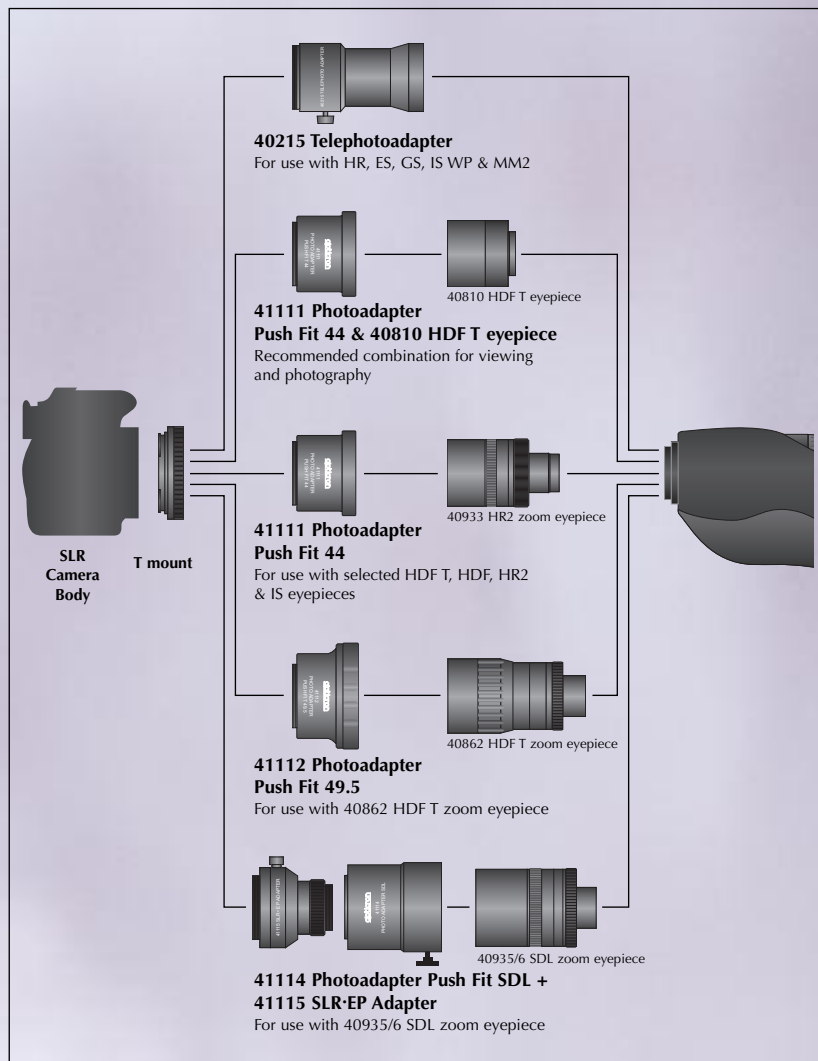
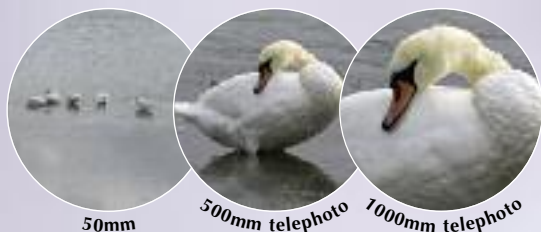
Telephotography or digi-scoping is easier than ever to enjoy using Opticron telescopes in conjunction with either SLR cameras (digital or film), or digital compact cameras and camcorders. In addition to wildlife observation, images can be taken, edited, printed and stored with relative ease, enabling the creation of a unique personal library to be shared in print or electronically.

The two main options open to the prospective telephotographer are to

- combine a telescope with an SLR or D-SLR camera
- use a telescope together with a compact digital camera or camcorder.

Telephotography with SLR and D-SLR Cameras

In this system the camera lens is substituted for the telescope and coupled directly to the SLR camera body using either a telephotoadapter or an eyepiece+photoadapter combination. T mounts, available for nearly all makes of SLR cameras are also needed to connect the scope assembly to the camera body. The chart opposite shows the current range of telephotoadapters and photoadapters available to enable you to convert your Opticron telescope into a long focal length telephoto lens.



40215 TELEPHOTOADAPTER

Equivalent focal lengths⁽¹⁾

- HR 66** 800mm/f.12
- HR 80** 900mm/f.11.3
- ES 80** 950mm/f.11.9
- ES 100** 1250mm/f.12.5
- GS 52** 530mm/f.10
- GS 665** 750mm/f.11.3
- GS 815** 950mm/f.11.7
- IS 60 WP** 700mm/f.11.7⁽²⁾
- MM2 52** 530mm/f.10

⁽¹⁾ Optional 409275 close focus adapter

⁽¹⁾ These are approximate figures based on 35mm SLR cameras. D-SLR cameras use different size image sensors compared to 35mm and so an equivalent conversion figure must be calculated separately.

41111 PHOTOADAPTER PUSH FIT 44

Equivalent focal lengths with HR, ES & GS scopes fitted with either HDF T 40810 eyepiece or HR2 40933 eyepiece at lowest magnification setting and using a 35mm SLR camera⁽¹⁾

- HR 66** 1000mm/f.15
- HR 80** 1350mm/f.16.8
- ES 80** 1150mm/f.14.4
- ES 100** 1500mm/f.15
- GS 52** 650mm/f.12.5
- GS 665** 900mm/f.13.5
- GS 815** 1150mm/f.14.1

Fitting smaller dia. eyepieces

The 41111 Photoadapter push fit 44 can be used with smaller dia. eyepieces by replacing the inner sleeve supplied with one of the following reducer sleeves;

- 41117 reducer 44~40 enabling connection to HR2 40930, 40931 & IS 40916S, 40918S eyepieces.
- 41118 reducer 44~37 enabling connection to fold down rubber eyecup versions of HDF eyepieces 40810 and 40809.

Using smaller dia. HR (MK1) eyepieces

For customers wishing to use HR 40812, 40813 and 40815 eyepieces we offer the 41111 Photoadapter push fit 44 short with 41119 reducer 44~33. Please email or phone for further information.

41112 PHOTOADAPTER PUSH FIT 49.5

Equivalent focal lengths with HR, ES & GS scopes fitted with HDF T 40862 zoom eyepiece at lowest magnification setting and using a 35mm SLR camera⁽¹⁾

- HR 66** 900mm/f.13.7
- HR 80** 1200mm/f.15
- ES 80** 1000mm/f.12.5
- ES 100** 1350mm/f.13.5
- GS 52** 600mm/f.11.5
- GS 665** 800mm/f.12
- GS 815** 1000mm/f.12.3

41114 PHOTOADAPTER PUSH FIT SDL + 41115 SLR-EP ADAPTER

(Magnification factor 1.37x)

Equivalent focal lengths with HR, ES & GS scopes fitted with SDL zoom eyepiece at lowest magnification setting and using a 35mm SLR camera⁽¹⁾

- HR 66** 1230mm/f.13.7
- HR 80** 1640mm/f.15
- ES 80** 1370mm/f.12.5
- ES 100** 1850mm/f.13.5
- GS 52** 820mm/f.15.8
- GS 665** 1100mm/f.12
- GS 815** 1370mm/f.12.3

T MOUNTS

Needed to connect telephoto & photoadapters to SLR camera bodies

- 40601 Olympus OM**
- 40602 Pentax / Praktica** - 42mm screw
- 40603 Pentax K** - bayonet fitting
- 40604 Minolta MD** - manual focus
- 40605 Minolta AF / Sony α** - auto focus
- 40606 Canon FD** - manual focus
- 40607 Canon EOS** - auto focus
- 40608 Nikon**
- 40609 Four Thirds**
- 40610 Micro Four Thirds**

Notes. Focusing is facilitated on the telescope. Camera may need to be operated in manual mode with shutter locks disengaged where necessary.

The high magnification to aperture ratios result in slower shutter speeds compared with conventional telephoto lenses so ISO 400+ settings are suggested when using D-SLRs. For 35mm SLRs 400/800 ASA film is recommended.

If possible use a cable release or remote control to reduce camera shake when operating the shutter.



Telephotography with Digital Compact Cameras and Camcorders

The nature of image capture with digital cameras allows Opticron telescopes to be used as long focal length telephoto lenses for wildlife photography. There are some limitations to this application however as viewing eyepieces are not designed for taking photographs with digital cameras. As a result it is often difficult for a viewing eyepiece to project a large enough diameter path of light into the camera lens and onto the CCD within. This results in a partial image being created in the camera and a condition known as vignetting or circular image within the available rectangular image frame. Vignetting can be 'cropped out' of the final image using photo editing software, but the resulting image will be equivalent to using a very narrow field eyepiece.

To get the best results:

1. Choose a camera with a small lens diameter. The smaller the lens diameter the more of its surface area will be covered by light exiting from the eyepiece. Commonly camera lenses of diameter less than 20mm give best results and camera lenses over 30mm in diameter will require you to use the optical zoom to attain anything close to a 'full frame' image.
2. Use the optical zoom function on the camera/camcorder to effectively reduce the aperture of the lens to 'match up' with light exiting from the eyepiece. Remember the higher the optical zoom setting, the higher the magnification of the final image. E.g. 20x eyepiece plus 3x optical zoom = 60x* magnification *assuming 1x setting on camera = 1x magnification.

As a general rule, the following eyepieces provide the best overall images with a wide range of different compact digital cameras. To help they have been graded according to particular requirement.

1. Overall image quality: **HDF T 40810** or **HR 40812**
2. Flexibility across the widest range of different magnifications: **SDL 40935 zoom** or **HDF T 40862 zoom**
3. Taking pictures at lower magnifications: **HDF T 40937** or **DTL 40929**

Note. In addition to eyepiece magnification and camera lens diameter, variables such as eyepiece eyerelief and field of view together with individual camera zoom lens mechanisms all play an important role in achieving the best overall 'set-up' for this type of telephotography. There is therefore no substitute for individual testing.

Taking pictures at lower magnifications: HDF T 40937 or DTL 40929

These eyepieces are designed to maximise the diameter of the path of light exiting the telescope and being projected into the camera lens. As such they allow full frame photographs to be taken on more types of cameras at their lowest zoom setting. The eyepieces screw directly onto HR, GS and ES bodies.

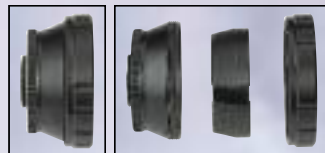
MODEL	40937	40929
HR 66	16x	10.5x
HR 80	22x	14x
GS 665	15x	9.5x
GS 815	19x	12.5x
ES 80	19x	12.5x
ES 100	25x	16.25x

Digital Compact Camera Adapters

(50065 DCC adapter & 50064 SDL DCC adapter)



The DCC adapter is designed to provide a secure connection between selected Opticron eyepieces and digital compact cameras that feature screw threads normally associated with fitting teleconverters or lens hoods.



Each DCC adapter is a 2 piece aluminium assembly fitted with a flexible delrin insert or set of inserts that pushes over and locks down onto the eyepiece. Connection to any given camera is via a 28mm external thread, a suitable tube for which should be sourced separately.

40849 Universal Digital Camera Adapter

The Universal Digital Camera Adapter is designed to allow you take high magnification photographs using Opticron telescopes and eyepieces in conjunction with most digital compact cameras and some digital camcorders using eyepiece projection.



Many digital compact cameras do not have screw threads on the lens housing to allow for direct coupling, so the UDCA is designed as a three-way adjustable balance plate that fixes directly to the telescope eyepiece. The camera is fixed onto the UDCA and can be adjusted on three planes to enable correct positioning with respect to the eyepiece.

The vertical position of the balance plate can be 'fixed' using the Vertical Locking Ring (VLR) accessory. This enables the camera + balance plate to be swung in and out of position allowing you to alternate between taking pictures and viewing through the eyepiece in the normal way.

Note. Mounting the UDCA requires an eyepiece dia. less than or equal to 56mm and fixed (non rotating) eyepiece tube length of 15mm.

For more information on current camera kits, DCC adapters and the UDCA please contact us by telephone or visit www.opticron.co.uk and look for TELEPHOTOGRAPHY.

Eyepieces

A wide range of eyepieces are available for use with Opticron HR, GS, ES, IS and MM2 fieldscopes. Choosing the best eyepiece is often confusing but making the right choice will depend on price and application. It is important to remember that the eyepiece is an integral part of the whole set up and opting for a lower quality lens will affect overall image quality. Eyepieces are listed with their generic code. For magnification with individual telescope bodies please refer to the tables on each telescope page.

SDL Eyepieces

F24 - F8, 5-group 8-element 'super' zooms, SDL eyepieces maximise the performance gains inherent in Opticron ED objective lens fieldscopes at higher powers while maintaining superior cross-field definition at all magnifications coupled with exceptional viewing comfort.

With an unrivalled combination of resolution and field of view, the 40936 delivers the highest resolution of any Opticron zoom eyepiece while the 40935 offers exceptional eyerelief.

Mechanically the eyepieces are waterproof and feature a rotating eyecup that can be positioned to match individual needs. Models supplied in soft padded case.



40935
Eyerelief (mm) 27-22
Eyelens dia (mm) 26
Length (mm) 68
Weight (g) 246



40936
Eyerelief (mm) 20-18
Eyelens dia (mm) 26
Length (mm) 77
Weight (g) 270

HDF Eyepieces

The preferred choice for image quality, HDF eyepieces have large diameter eye lenses and offer 'walk-in' field of vision. The eyepieces are long eyerelief to enable the full field of view to be obtained with or without spectacles and fixed magnification models are wide angle. Four of the seven eyepieces also feature a twist type retractable eyecup assembly that enables individual eye to eyepiece distance adjustment.



40810
Eyerelief (mm) 22
Eyelens dia (mm) 25
Length (mm) 40
Weight (g) 151



40809
Eyerelief (mm) 18
Eyelens dia (mm) 23
Length (mm) 51
Weight (g) 173



40858
Eyerelief (mm) 17
Eyelens dia (mm) 23
Length (mm) 61
Weight (g) 212



40859
Eyerelief (mm) 15
Eyelens dia (mm) 21
Length (mm) 49
Weight (g) 77



40860
Eyerelief (mm) 15
Eyelens dia (mm) 18
Length (mm) 61
Weight (g) 87



40861
Eyerelief (mm) 16
Eyelens dia (mm) 17
Length (mm) 66
Weight (g) 84



40862
Eyerelief (mm) 22-17
Eyelens dia (mm) 24
Length (mm) 76
Weight (g) 206

HR Eyepieces

A good choice as either a supplementary eyepiece in combination with HDF or single eyepiece for the more value conscious user requiring long eyerelief for use with glasses.



40812
Eyerelief (mm) 18
Eyelens dia (mm) 19
Length (mm) 45
Weight (g) 61



40930
Eyerelief (mm) 18
Eyelens dia (mm) 21
Length (mm) 38
Weight (g) 83



40931
Eyerelief (mm) 17
Eyelens dia (mm) 21
Length (mm) 39
Weight (g) 92



40932
Eyerelief (mm) 20
Eyelens dia (mm) 24
Length (mm) 61
Weight (g) 158



40933
Eyerelief (mm) 18-14
Eyelens dia (mm) 18
Length (mm) 55
Weight (g) 149



HDF 40937
Eyerelief (mm) 25
Eyelens dia (mm) 28
Length (mm) 45
Weight (g) 115



DTL 40929
Eyerelief (mm) 38
Eyelens dia (mm) 31
Length (mm) 45
Weight (g) 122

Low Magnification

Optional low magnification lenses for digital telephotography using compact cameras/camcorders. Best suited for use with HR, GS and ES models.

MM2 • HR MM2 Eyepieces

Dedicated eyepieces for MM2 bodies and the most popular choice as a first eyepiece.



40902M
Eyerelief (mm) 10
Eyelens dia (mm) 14
Length (mm) 23
Weight (g) 34



40909M
Eyerelief (mm) 18-14
Eyelens dia (mm) 18
Length (mm) 65
Weight (g) 148

IS Eyepieces

Dedicated long eyerelief eyepieces for IS WP models and best overall choice as a first eyepiece.



40916S
Eyerelief (mm) 18
Eyelens dia (mm) 21
Length (mm) 48
Weight (g) 102



40918S
Eyerelief (mm) 34-18
Eyelens dia (mm) 20
Length (mm) 75
Weight (g) 143



40919S
Eyerelief (mm) 27-16
Eyelens dia (mm) 20
Length (mm) 82
Weight (g) 241

Universal Tele-Adapter (UTA)

2.5x for Binoculars & Telescopes



The Opticron Universal Tele-Adapter enables you to increase the magnification of your Opticron binocular or telescope+eyepiece combination by a factor of 2.5x. Easily fitted to a binocular, the UTA converts one half of the instrument into a higher powered long eyerelief monocular. The UTA also connects to Opticron SDL, HDF, HR, IS and MM2 eyepieces.



Naked eye

8x Binocular

8x Binocular with 2.5x Tele-Adapter giving 20x magnification

Featuring a long eyerelief eyepiece for use with or without spectacles and fitted with a twist type retractable eyecup, the UTA can be used with a wide range of binoculars with different eyepiece diameters as it is supplied as two separate components:

- i. 2.5x adapter complete with optical assembly
- ii. connection ring to fit over the eyepiece

See Table below for connectivity within the Opticron range.

UTA fitted with 40947 connector: Height 76mm. Diameter 46mm. Weight 110g (varies slightly for other connection rings)



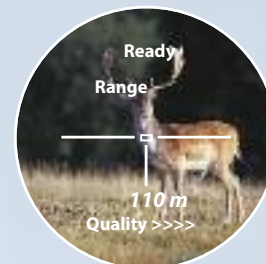
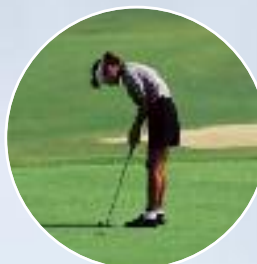
Code	40941	40942	40943 cont.	40944	40945	40947P	40948
Internal dia. (mm)	42.5-41.3	42-41.3	44.3	40	34.6	Push Fit	50-49.5
Connection rings to fit 40940 UTA to Opticron Binoculars, Monoculars and Telescope eyepieces	Aurora BGA DBA Oasis BGA Classic Oregon LE WP Observation ¹	C/Man BGA T PC Imagic TGA WP Mono 8x30 Mono 8x32LE Oregon 15x70	Verano BGA PC Oasis Discovery WP PC (42mm) Trailfinder II Aspheric WA HDF T 40809 HDF T 40858 HDF T 40810 HR2 40933	HR WP Traveller Vega II Oregon 20x80 ² Oregon LER ³ IS 40916S IS 40918S HR2 40930 HR2 40931 HR2 40932	SR.GA (Fixed magnification)	(40940+40947 coded as 30442) DBA Mono BGA Mono	HDF T 40862 IS 40919S+ R/E 40862T
		40943 44.3			40946 33.3		40949 52.5-51.26
		Imagic BGA SE Explorer BGA			HDF 40859 HDF 40860 HDF 40861 HR 40812 MM 40903M		SDL 40935

1. POST 2002 MODELS ONLY 2. PHONE FOR DETAILS 3. USE WITH EYECUP IN FOLD DOWN POSITION
For information on suitable connection rings for other Opticron binoculars and telescope eyepieces please contact us on 01582 726522.

Tracker 660



The Tracker 660 is a high quality, easy-to-use eye safe Laser Rangefinder designed for a range of outdoor activities such as golf, hunting, site surveying, walking and rambling. A precision instrument it provides accurate measurements of speed and distance up to a range of 700 metres. The unit also doubles as a 6x23 monocular with a 7° field of view.



Designed for easy one hand operation, the lightweight body (185g) is shaped to fit comfortably into the palm and is covered in a protective gloss black finish.

Model supplied in a soft carry case with neck & shoulder strap, CR2 Lithium battery, lens cloth and 2 year limited warranty.

CMOS Wireless Telecam



Fitted directly to the telescope in place of a conventional viewing eyepiece, the CMOS Wireless Telecam transmits high magnification real-time images from HR, ES & GS 'scopes directly to a TV or PC Notebook fitted with an analogue TV card. As such it provides the opportunity to show real-time footage to groups in public spaces as well as offering the visually impaired an easier way of viewing through a telescope.

The unit features cable or wireless connection for flexibility in the positioning of the telescope in a hide or viewing area. Images relayed to a TV can be recorded directly to video while images relayed to a PC can be recorded if the TV card supports this option. Please contact us for more information.



Tripods & Accessories

42625 Traveller Carbon Fibre v3

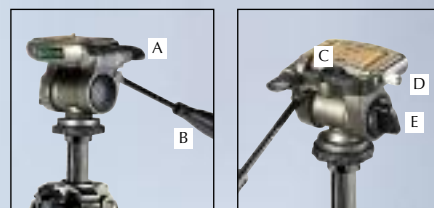
Compact and lightweight carbon fibre tripod designed for use with fieldscopes to 80mm OG, photo and video equipment. Model comes complete with lightweight 42800 magnesium panhead and 42607 tripod strap connector. Main features include:

- 3 section carbon fibre tubular legs giving a usable height without raising centre column of 1365mm (53 3/4")¹ for maximum panning stability
- 42800 3-way magnesium panhead with 360° panning and +90° to -60° tilt plus 90° side tilt for use with telescopes not fitted with rotating tripod sleeves. Panhead also features QR plate side locking screw for extra rigidity
- Integral quick release plate (1/4" thread) with locating pin
- 300mm sliding c/column with collar lock
- Twist-type leg locks and rubber/spiked feet
- Level indicator on canopy
- Leg angles: 25°, 60°, 85°
- Height extended: 1665mm (65 1/2")¹
- Height retracted: 25° - 640mm (25 1/4")¹, 60° - 520mm (20 1/2")¹, 85° - 405mm (16")¹
- Weight: 1834g
- 5 year guarantee

¹inch conversions are approximate

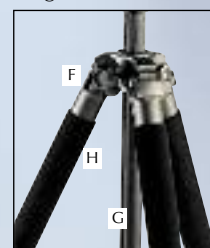


42800 Magnesium Panhead (inc)²



- A Locking screw for 90° side tilt
- B Vertical movement locking handle
- C Integral quick release plate (1/4") with locating pin (removable)
- D QR plate side locking screw
- E Locking screw for horizontal panning
- F Centre column locking screw
- G 300mm sliding centre column
- H Foam hand grip

² This panhead is also available separately



42636 Traveller Carbon Fibre Pro v3

As 42625 but fitted with 42637 Manfrotto 701HDV 2-way composite fluid panhead. Recommended for use with ES 80/100 and HR 80 telescopes.

Specifications and features include:

- Maximum load rating 4kg
- +15mm to -15mm sliding top plate for accurate balancing of equipment
- Integral quick release plate (1/4" & 3/8" fittings) included
- Usable height without raising centre column 1375mm (54")
- Height extended: 1675mm (66")¹
- Height retracted: 25° - 650mm (25 1/2")¹, 60° - 530mm (21")¹, 85° - 415mm (16 1/2")¹
- Weight: 2142g
- 5 year guarantee

¹inch conversions are approximate



42637 701HDV Composite Panhead (inc)²



- A Panhandle
- B Sliding QR plate locking screw
- C Vertical movement locking screw
- D Sliding QR plate (1/4", 3/8") with locating pin (removable)
- E QR plate release button
- F Horizontal panning locking screw
- G Centre column locking screw
- H 300mm sliding centre column
- I Foam hand grip

² This panhead is also available separately



42626 Traveller Carbon Fibre v3 (Canopy, legs and centre column only)



As 42625 but w/o panhead

- Height extended: 1580mm (62 1/4")¹
- Height retracted: 25° - 555mm (21 3/4")¹, 60° - 435mm (17")¹, 85° - 320mm (12 1/2")¹
- Weight: 1310g

¹inch conversions are approximate



Tripod Harness



40507 Simple design in nylon and leather c/w 3 loop fasteners and belt clip. Doubles as a standard carry strap.

Tripods & Accessories

42804 Birdwatcher's

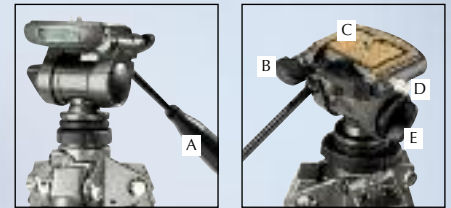
Lightweight, rigid tripod designed for use with fieldscopes, photo & video equipment. Model comes with sliding removable centre column for simple conversion to a hide mount using 42611 clamp (see page 50). Supplied with 42800 magnesium panhead and 42607 tripod strap connector. Main features include:

- Extended 3 section tubular legs giving a usable height without raising centre column of 1410mm (55 1/2")¹ for panning stability at high magnifications
- 42800 3-way magnesium panhead with 360° panning and +90° to -60° tilt plus 90° side tilt for use with telescopes not fitted with rotating tripod sleeves. Panhead also features QR plate side locking screw for extra rigidity
- Integral quick release plate (1/4" thread) with locating pin
- 300mm centre column
- Clip-type leg locks and rubber feet
- Height extended: 1710mm (67 1/4")¹
- Height retracted: 650mm (25 1/2")¹
- Weight: 2180g
- 5 year guarantee

¹inch conversions are approximate

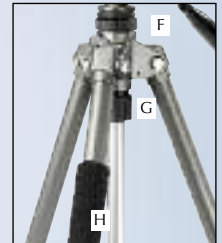


42800 Magnesium Panhead (inc)²



- A Vertical movement locking handle
- B Locking screw for 90° side tilt
- C Integral quick release plate (1/4" thread) with locating pin (removable)
- D QR plate side locking screw
- E Locking screw for horizontal panning
- F Centre column collar lock
- G 300mm sliding centre column with stability ring
- H Foam hand grip

² This panhead is also available separately



42831 Birdwatcher's Pro

As 42804 but fitted with 42637 Manfrotto 701HDV 2-way composite fluid panhead. Recommended for use with ES 80/100 and HR 80 telescopes.

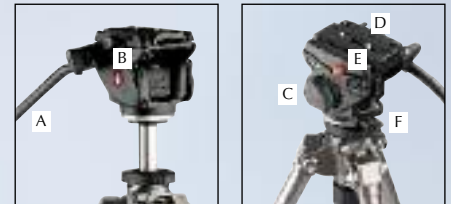
Specifications and features include:

- Maximum load rating 4kg
- +15mm to -15mm sliding top plate for accurate balancing of equipment
- Integral quick release plate (1/4" & 3/8" fittings) included
- Usable height without raising centre column 1420mm (56")
- Height extended: 1720mm (67 3/4")¹
- Height retracted: 660mm (26")¹
- Weight: 2488g

¹inch conversions are approximate

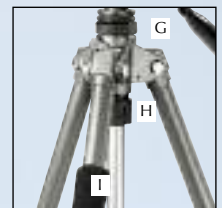


42637 701HDV Composite Panhead (inc)²



- A Panhandle
- B Sliding QR plate locking screw
- C Vertical movement locking screw
- D Sliding QR plate (1/4", 3/8") with locating pin (removable)
- E QR plate release button
- F Horizontal panning locking screw
- G Centre column collar lock
- H 300mm sliding centre column with stability ring
- I Foam hand grip

² This panhead is also available separately



Tripod Straps



40505
40mm nylon with loop fasteners



40506
55mm neoprene with loop fasteners and 25mm webbing

42604L Birdwatcher's (Canopy, legs and centre column only)

- As 42804 but w/o panhead
- Height extended 1625mm (64")¹
 - Height retracted 565mm (22 1/4")¹
 - Weight 1656g

¹inch conversions are approximate



Bipod, Monopods & Mounts

BC-2 Clamping System

5 year guarantee

42605 BC-2 Hide Clamp

Lightweight & rigid bench clamp support specially designed for use with fieldscopes, photo & video equipment.

Features include:

- 42800 3-way magnesium panhead with 360° panning and +90° to -60° tilt plus 90° side tilt for use with telescopes not fitted with rotating tripod sleeves
- Integral QR plate with 1/4" thread and removable locking pin
- QR plate side locking screw for extra rigidity
- 500mm sliding centre column adjustment
- Maximum jaw width 45mm
- Maximum height extended 510mm (20")¹
- Minimum height retracted 90mm (3 1/2")¹
- Weight 960g

¹inch conversions are approximate



42610 BC-2 Clamp & 500mm centre column

(as 42605 but w/o panhead)
Combines with 42800 panhead to convert to a hide clamp.
Weight 436g



42611 BC-2 Clamp

Fits directly onto tripod centre column to convert to a hide clamp. Supplied complete with Ø21/22mm, 23/24mm and Ø25/26mm reducer sleeves. Weight 267g



Monopods & Mounts

5 year guarantee

Monopods

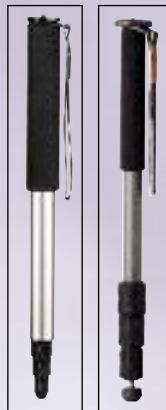
For use with lightweight fieldscopes, photo & video equipment. 4-section legs with twisting lock system, hand grip & wrist strap.

42100 Monopod (left)

- Height extended 1470mm (58")
- Height retracted 470mm (18 1/2")
- Integral 1/4" thread p/head connection
- Metal foot
- Weight 695g

42623 Traveller Carbon Fibre Monopod (right)

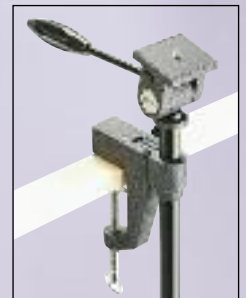
- Height extended 1580mm (62")
- Height retracted 525mm (20 1/2")
- 3/8" & 1/4" reversible p/head connection
- Rubber/spiked foot
- Weight 426g



40503 Universal II - Hide Mount

Lightweight bench clamp with 400mm extension pole.

- 2-way one lever operated panhead with integral 1/4" thread
- Maximum panning height 450mm
- Maximum jaw width 45mm
- Optional quick release plate & shoe
- Dim (mm) 450x60x95
- Weight 845g



40501 Universal Mount

Designed to clamp horizontally or vertically onto a wide range of objects.

- 2-way one lever operated panhead with integral 1/4" thread
- Maximum panning height 80mm
- Maximum jaw width 45mm
- Optional quick release plate & shoe
- Dim (mm) 210x60x70
- Weight 597g



40502 Car Window Mount

- 2-way one lever operated panhead with integral 1/4" thread
- Maximum panning height 80mm
- Protective rubber jaw pads
- Optional quick release plate & shoe
- Dim (mm) 205x60x85
- Weight 555g



42606 Quick release plate & shoe

Screws directly onto panhead. 1/4" thread. Weight 177g

42608 Quick release plate only Weight 79g



40314 Bipod & Carry Ball

5 year guarantee

Lightweight rigid bipod manufactured in aluminium and finished in matt black.

Main assembly folds out rigid without any need for locking to a height of 225mm (8 3/4") and collapses back quickly and easily. Centre column allows for height adjustments between ground level and 470mm (18 1/2"). 1/4" screw thread connection to either a telescope tripod mount, cradle or ball and socket panhead.

With a footprint 30cmx30cmx43cm, the bipod is equally at home on a table or bench where the 270mm extension pole extends maximum height to 740mm (29"). Additional extension poles available. Weight c/w extension pole 1502g



40316 Ball & Socket Panhead

For use with 40314 bipod and spottingscopes without rotating tripod sleeves. Height 76mm Weight 107g



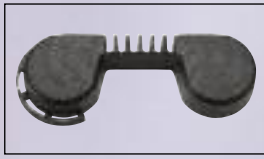
Note. 40314 Bipod & Carry ball + 40316 Ball & socket head are available as a kit. Product code 40315

Accessories

Binocular Rainguards



Binoculars Plastic
31025 Int \varnothing to 37mm
31020 Int \varnothing to 43mm
31028 Int \varnothing to 45.5mm



Compact Binoculars Plastic
31021 Int \varnothing to 34mm

Binocular Objective Lens Covers



Manufactured from natural rubber and available in the following sizes:

- 31031** 32mm OG fits outer dias. 40mm~42.5mm
(Please note these covers do not fit Imagic BGA SE 8x32, Verano BGA 8x32 or Oregon LE WP 8x32)
- 31023** 42mm OG fits outer dias. 48mm~52mm
- 31042** 42mm XL OG fits outer dias. 53mm~55mm
- 31024** 50mm OG fits outer dias. 56mm~62mm

Binocular Tripod Mounts



- L Mounts**
A 31026 Compacts to 30mm OG
B 31004 Small Porro 32~50mm OG
C 31022 Roof Prism 32~50mm OG
D 31005 Large Porro +50mm OG



31012
Roof Prism
 32~50mm OG

Binocular Cases



Soft leather in various sizes to fit most binoculars. Quote model when ordering

Cleaning Cloth



30277 20cm² Micro fibre suitable for cleaning external lenses. Supplied in protective pouch.

Binocular & Monocular Lanyards



Fully adjustable with loop fasteners. Models from top down:

- 31000** 16mm nylon (compacts)
- 29009** 14mm neoprene (monoculars)
- 29010** 16mm neoprene (compacts)
- 31001** 30mm acrylic (binoculars)
- 29023** 30mm neoprene with quick release (binoculars)
- 29025** 40mm neoprene bungee with quick release (binoculars)
- 29022** Spare Connector Set for 29023/25/26
- 29026** 50mm flotation with quick release (binoculars)

Binocular Harness



- 31018** Leather and nylon c/w quick release
- 31038** Spare Connector Set

Telescope Cases



Stay-on-the-Scope Waterproof in Black

Water resistant multi-layer padded cases individually designed to fit and protect each model whilst connected to a tripod/clamp and in use. All models include removable end caps and adjustable padded carry strap.

Available for: ES 80, GS, IS WP and MM2 models.

Stay-on-the-Scope Waterproof in Khaki Green

As Black models but featuring a zippered prism housing section providing easier access when changing eyepieces, focus flap retention stud allowing better access to the focus wheel plus deluxe neoprene carry strap for extra comfort.

Available for HR ED, ES and GS angled models.



Traveller

Semi rigid padded case manufactured from water resistant material with central zip fastener, adjustable straps and loop attachments to carry a tripod.

Two sizes;

- 40847** 60-70mm OG.
 Int. dim: 420x150~100x60mm
- 40848** 75-80mm OG.
 Int. dim: 470x190~110x80mm



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All equipment and specifications listed are subject to change without prior notification.



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