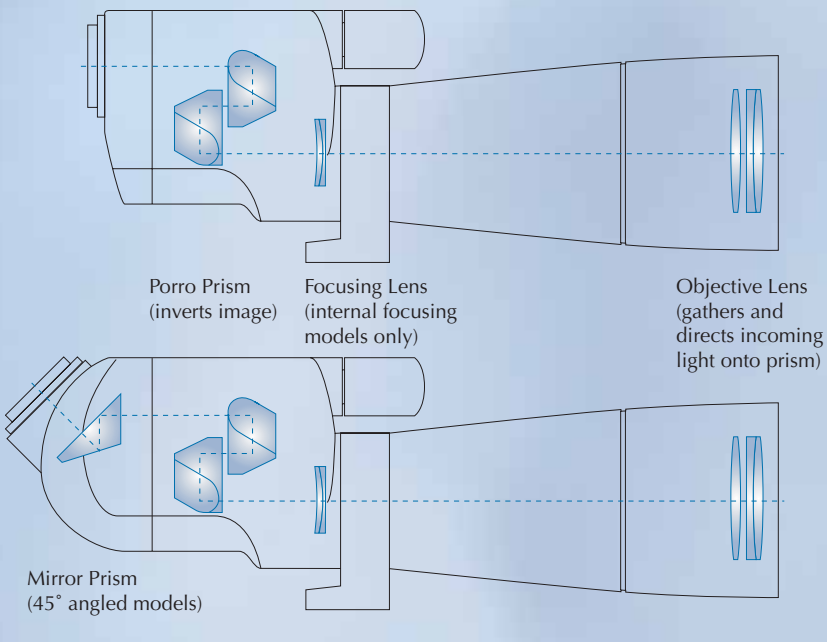
CHOOSING YOUR TELESCOPE

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 spottingscopes 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.

Naked eye

20x

30x

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 45. 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 (all models), HR; 40812, 40930, 40931, 40932 and 40933, IS; 40916 and 40918. 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 FIELDSCOPES

Designed and manufactured to deliver unbeatable optical performance and reliability, the High Resolution series represents the definitive choice for anyone serious about fieldscopes. Built to withstand extremes in temperature, to operate unaffected by rain or humidity the models can be used almost anywhere from the Sahara to Antarctica. The selection of body types, eyepieces and accessories are the result of understanding the needs of the professional, and as such are unparalleled in providing exactly what you want – when you need it.

All models feature a high definition 5 element ED objective lens system, BK 7 prisms and unique Opticron N-type multi-coating. This combination maximises colour contrast, clarity and definition especially at higher magnifications under a range of different light conditions.

The fieldscopes are fully nitrogen gas filled waterproof and are protected with a durable natural rubber armour.

Other features include: retractable rubber covered lens hood, rotating tripod sleeve on all 45˚ angled models, easy-to-use rubber covered focusing wheel, sighting bar and the assurance of a comprehensive 30 year guarantee.

HR 66 GA ED/45˚

The advantages of 'ED'

By using an ED or 'extra low dispersion' glass element in the primary objective system, these fieldscopes provide a higher degree of colour correction when compared to conventional glass 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 41110 Telephoto HDF conversion for SLR (1000mm - HR66 / 1350mm - HR80) 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 46-47.

HR 80 GA ED/45˚

Optional Extra: 2.5x UTA
(see page 48 for details)

SDL 40935 eyepiece Recommended for use with HR ED (see page 45 for details)

Telephoto lens conversion for SLR cameras (see page 46 for details)

Telephotography with compact digital cameras/camcorders featuring 40849 UDCA
(see page 47 for details)

HR 66 GA ED

Receiving the highest praise from independent surveys and industry alike, the HR 66 GA ED is firmly established as the preferred choice among fieldscope users everywhere. When used with the HDF T 20xWW, 28xWW and 38xWW 'flat field' eyepieces, plus SDL 18-54x image quality is both outstanding and very comfortable – essential when viewing for long periods.

HR 80 GA ED

With 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 for superb long range viewing, plus the option of 3 zoom eyepieces in the HR2 27-80x, HDF T 24-72x and SDL 24-72x.

Specifications	66ED	66ED/45	80ED	80ED/45
Product Code	40869	40870	40867	40868
OG Dia (mm)	66	66	80	80
Min Focus (m)	4.5	4.5	7.5	7.5
Length (mm)	290	315	360	395
Weight (g)	1200	1290	1800	1900

For more information on SDL, HDF and HR eyepieces see page 45

EYEPIECES		• SDL	• HDF								• HR/HR2				
Product Code		40935	40810	40872	40809	40858	40859	40860	40861	40862	40812	40930	40931	40932	40933
Magnification	HR 66	18-54x	20xWW	22xWW	28xWW	38xWW	44xWA	70xWA	88x	18-54x	20x	23xWA	30xWA	42x	20-60x
Magnification	HR 80	24-72x	27xWW	30xWW	38xWW	52xWW	60xWA	95xWA	120x	24-72x	27x	31xWA	41xWA	57x	27-80x
Field/1000m	HR 66	36/20	52	52	45	31	26	17.5	13	30/17	43	49	40	20	35/17.5
Field/1000m	HR 80	29/16	39	38	33.3	23	20	13	7	29/13	31	40	30	12	27/15

GS FIELDSCOPES

Introduced in response to growing demand for quality lightweight nitrogen waterproof telescopes and developed around a new optical system featuring objective lens sizes of 66.5mm and 81.5mm, GS fieldscopes set the standard for customers wanting to 'take-out' and 'walk-about' with their equipment whether pursuing birdwatching or general wildlife observation.

All six models are designed and manufactured to meet the three main requirements demanded by today's active fieldscope user; 'high end' optical performance and value, usability and reliability.

'High end' optical performance and value

The GS series takes the two size model range concept on a stage by increasing the 65mm OG model to a 66.5mm and the 80mm OG model to an 81.5mm without any noticeable gain in size or weight.

As a direct result, the GS 815 GA gains 4% surface area over a standard 80mm OG and GS 665 GA 5% over a 65mm OG. The increase in the amount of light entering the instruments coupled with the new optical configuration, new prism units and revised multi-coating results in significantly higher levels of optical clarity over preceding models. Images are extremely bright whilst retaining excellent colour saturation so important for accurate identification.

For optimum size & weight to performance ratios, the GS 665 GA warrants serious consideration for users choosing either zoom or fixed magnification eyepiece options. The GS 815 GA models are the preferred choice for those wishing to maximise light transmission at magnifications between 35x and 60x with either one of the three zoom eyepiece options available.

The GS 665 GA ED affords the size and weight conscious user extra light gathering capability, improved definition at magnifications over 35x when compared to the standard model, plus higher colour fidelity especially noticeable in extreme light conditions. A natural choice for those wanting to experience the 40935 SDL zoom eyepiece, the GS 665 GA ED will perform against the very best.

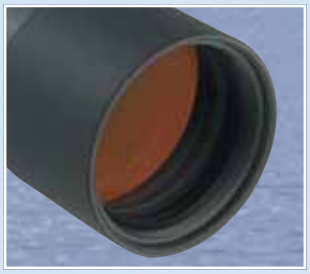
Usability

'Ease of use' and 'functionality' are all important when using an instrument in the field and the GS series is designed to provide class winning optical performance seamlessly in an array of different outdoor conditions.

As telescopes need to be used with a solid tripod for image stability, any weight saving is crucially important. Constructed using lightweight materials where at all possible, the GS 665 weighs under 1100g, and the GS 815 under 1300g, even though the models are still protected by 'full body' natural rubber armour. The centrally positioned focusing wheel allows easy access for both right and left handed users and is rubber covered - delivering a positive touch with or without gloves.

Twin focus wheel including 9:1 ratio accurate focusing adjustment

Tripod adapter sleeve (footprint 19cm²) with +/- 90° click-stop rotation



Fully multi-coated optical system

Telephoto lens conversion for SLR cameras (see page 46 for details)

The focusing system is designed to allow adjustment from infinity to 50 metres in just a 270˚ rotation. Housed within the same mechanism is a 9:1 ratio accurate focus adjuster for use when viewing at high magnification.

Having access to a full range of different magnification eyepieces is also important. As with many Opticron fieldscopes, the GS series are fully compatible with existing Opticron eyepieces including the 40862G HDF T zoom, 40809G HDF T 25xWW (665), 32xWW (815) and 40935G SDL zoom.

Designed to enable rotation around the main axis of the instrument for use on a bipod or in a hide with a high window, GS fieldscopes feature a solid die-cast tripod sleeve with -/+ 90 degrees each-way action with 45˚ incremental 'stops.'

To avoid the problem of reflected light on the objective lens in bright sunlight all models are fitted with a retractable lens hood extending 28mm (665) and 40mm (815).

Reliability

Extensively tested for continuous trouble free use in varying temperatures, the models are fully nitrogen gas filled waterproof and come with the assurance of a 30 year guarantee.

Specifications	665	665/45	665ED	665ED/45	815	815/45
Product Code	40960	40961	40962	40963	40965	40966
OG Dia (mm)	66.5	66.5	66.5	66.5	81.5	81.5
Min Focus (m)	3.8	3.8	3.8	3.8	5.8	5.8
Length (mm)	326	326	326	326	362	362
Weight (g)	976	980	1049	1053	1280	1280

For more information on SDL, HDF and HR eyepieces see page 45

EYEPIECES		• SDL	• HDF							• HR/HR2					
Product Code		40935G[1]	40810G	40872G	40809G	40858G	40859G	40860G	40861G	40862G	40812G	40930G	40931G	40932G	40933G[1]
Magnification	GS 665	16-48x	18xWW	20xWW	25xWW	35xWW	40xWA	60xWA	80x	16-48x	18x	21xWA	27xWA	38x	18-54x
Magnification	GS 815	20-60x	23xWW	25xWW	32xWW	44xWW	50xWA	80xWA	100x	20-60x	23x	27xWA	34xWA	50x	23-69x
Field/1000m	GS 665	40/22	50	49	47	35	29	19.5	12.5	42/20	46	49	39	18	38/20
Field/1000m	GS 815	32/18	43	42	36	26	24	16	8	35/17	38	39	33	15	30/15

[1]40934 eyepiece adapter required

ES FIELDSCOPES

Designed and manufactured to deliver 'best in class' optical performance combined with rugged dependability and real user comfort, the ES 80 SD and high performance ED models set new standards in quality and value.

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

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.

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 45 for details).

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

ES 100 GA ED/45°

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 out perform 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 80 GA ED/45°

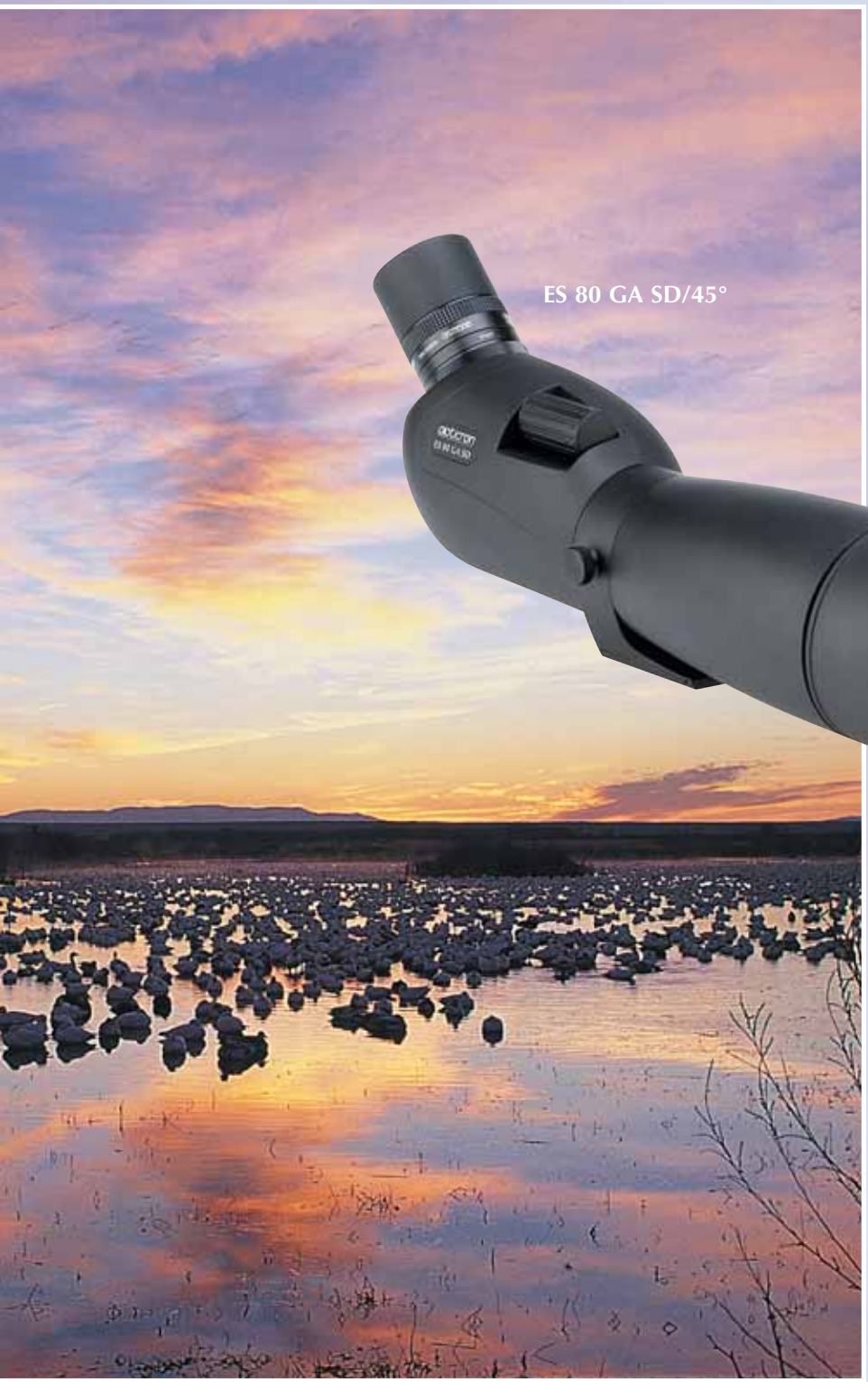
ES 80 GA ED/45°

The ES 80 GA ED/45° advances the tradition of quality and value begun with the MKI ED with a new multi-coating system integrated into an all-new magnesium polycarbonate and aluminium body. Now 100% nitrogen waterproof, the fully rubber armoured body houses a high-grade ED (extra low dispersion glass) element within the objective lens system that virtually eliminates the distorting effects of chromatic aberration at magnifications over 35x. As a result, images are vibrant and 'true to life' and what's more - reproduced consistently across the magnification range.

Telephotography with ES

Stonechat

Kit: 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



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 complete with BK 7 prisms 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.

Telephoto lens conversion for SLR cameras
(see page 46 for details)

Telephotography with compact digital cameras/camcorders featuring 40849 UDCA (see page 47 for details)

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 45

EYEPIECES		• SDL	• HDF								• HR/HR2					
Product Code		40935E	40810E	40872E	40809E	40858E	40859E	40860E	40861E	40862E	40812E	40930E	40931E	40932E	40933E
Magnification	ES 80	20-60x	23xWW	25xWW	32xWW	44xWW	50xWA	80xWA	100x	20-60x	23x	27xWA	34xWA	50x	23-69x
Magnification	ES 100	27-80x	30xWW	33xWW	42xWW	58xWW	67xWA	107xWA	134x	27-80x	30x	36xWA	46xWA	65x	30-90x
Field/1000m	ES 80	32/18	45	41	36	28	23	16	10	35/16	38	41	33	18	29/15
Field/1000m	ES 100	25/14	33	29	27	20	16	12	7	29/12	28	32	25	10	23/11

IS FIELDSCOPES

IS series fieldscopes are designed to provide high levels of performance & versatility in extremely compact & lightweight bodies. Available in three objective sizes; 50mm, 60mm and 70mm with the option of straight-through and 45° angled viewing, these modern interchangeable eyepiece fieldscopes are produced using lightweight compound materials and all six models feature high performance 4 element fully multi-coated objective lenses, BK7 fully multi-coated prisms and internal focusing.

Other features and options include a rotating tripod sleeve for use with standard photo/video tripods and bipods with 1/4" thread connection, retractable lens hood to protect against glare, telephotoadapter option and comprehensive 10 year guarantee.

IS 50 T-SCOPE

At just 20cm long and weighing 528g[1], the IS50 re-defines the 'compact telescope'. Designed and engineered to be both a competent fieldscope in its own right as well as a brilliant travelscope for the space conscious birdwatcher, shooter or archer, the quality of both optical and mechanical components ensures the IS50 will outperform many of today's current crop of 60mm spottingscopes of similar price.

[1]IS50S

IS 50

IS 60 F-SCOPE

Specifically designed to offer improved levels of optical resolution compared to preceding Opticron 60mm models in a smaller, lighter chassis, the IS 60 is a highly competent spottingscope that is both 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 new 40919S IS Pro 15-45x), the model is an excellent choice for the first-time birdwatcher moving up from 'binoculars-only' bird watching as well as the shooter or archer looking for accuracy at distances around 100m.

IS 60

4 element multi-coated objective lens
Retractable lens hood

Telephoto lens conversion for SLR cameras
(see page 46 for details)

Telephotography with compact digital cameras/camcorders featuring 40849 UDCA (see page 47 for details)

IS 70 F-SCOPE

This Japanese designed IS 70 weighs in at just under 950g and offers remarkable performance for its sub £200 price tag. Featuring an F400mm, 4 element objective with a surface area 35% greater than the IS 60, both straight-through and 45˚ angled viewing models deliver remarkably bright and sharp images with good colour contrast across a wide range of magnifications.

Recommended eyepieces include 40916S 26xWA, 40919S 16-48x and the models are fully compatible with HR2[2] and HDF [2] eyepieces.

[2]Eyepiece adapters required. See Table

IS Pro zoom eyepiece

A 7-element long eyerelief zoom eyepiece with twist-type eyecup assembly. Edge to edge definition is superior to the standard IS zoom eyepiece and in combination with any of the IS model guarantees class winning performance whatever the application.

For more information on SDL, HDF, HR and IS eyepieces see page 45

Specifications	50	50/45	60	60/45	70	70/45
Product Code	40910	40911	40912	40913	40914	40915
OG Dia (mm)	50	50	60	60	70	70
Min Focus (m)[3]	8.5	6.9	8.9	7.9	9.5	9.5
Length (mm)	200	205	245	250	293	298
Weight (g)	528	534	627	633	933	941

[3]40916S eyepiece

EYEPIECES		IS		
Product Code		40916S	40918S	40919S
Magnification	IS 50	20xWA	15-45x	12-36x
Magnification	IS 60	25xWA	18-54x	15-45x
Magnification	IS 70	28xWA	20-60x	16-48x
Field/1000m	IS 50	58	37/17	49/31
Field/1000m	IS 60	46	31/15	41/26
Field/1000m	IS 70	41	28/13	36/23

EYEPIECES		• SDL	• HDF							• HR/HR2					
Product Code		40935S	40810S	40872S	40809S	40858S	40859S	40860S	40861S	40862S	40812S	40930S	40931S	40932S	40933S
Magnification	IS 50	12-36x	14xWW	15xWW	20xWW	26xWW	30xWA	48xWA	60x	12-36x	14x	16xWA	21xWA	29x	14-42x
Magnification	IS 60	15-45x	17xWW	18xWW	23xWW	32xWW	36xWA	58xWA	72x	15-45x	17x	20xWA	25xWA	35x	16-48x
Magnification	IS 70	16-48x	18xWW	20xWW	25xWW	35xWW	40xWA	60xWA	80x	16-48x	18x	21xWA	27xWA	38x	18-54x
Adapter required		40927S	40925S	40927S	40925S	40925S	40925S	40925S	40925S	40927S	40925S	40925S	40925S	40925S	40928S
Field/1000m	IS 50	54/30	77	73	64	47	38	26	15	58/26	64	67	55	27	49/28
Field/1000m	IS 60	43/24	64	58	52	38	32	20	14	46/21	52	58	47	20	45/23
Field/1000m	IS 70	38/22	45	42	42	33	27	19	11	41/19	44	45	41	19	40/11

MM2 V2 MIGHTY MIDGET TRAVELSCOPE

A revolutionary spottingscope 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 glasss or high performance ED glass formats, the design utilises an extendable objective lens system that allows the unit to be retracted to just under 18cm[1] for optimum portability. Fully extended the body measures just under 22cm.[1]

[1]excluding eyepiece

Available in straight-through and 45 degree bodies, construction is a mix of tough plastics, alloys and rubber, creating finished weights of under 480g - lighter than almost any 32mm binocular.

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

Eyepiece options include two dedicated MM2 eyepieces; a 25x and 15-40x zoom. For users requiring long eyerelief to obtain full field of view wearing spectacles, all MM2 bodies connect to the full range of Opticron SDL, HDF and HR eyepieces. This level of adaptability also allows current Opticron Fieldscope owners to use their existing eyepieces with a new MM2 body.

Latest V2 models incorporate a 'click-stop' on the draw tube for easier use with the impressive 40862M HDF 12-36x zoom, the recommended eyepiece when choosing an ED model.

MM2 52 ED/45˚
EXTENDED
(shown with 40862M eyepiece)

MM2 52/45˚
EXTENDED
(shown with 40903M eyepiece)

Twin zip padded case

Travelscope for existing Opticron users
Model shown 52A with 40903M zoom

Model 52S with 40906 Grippa Strap

Other features and options include:

- 52mm objective & fully multi-coated optical system
- Eyepiece cavity store for MM2 eyepieces [rear] not illustrated
- Retractable lens hood
- 1/4″ thread connection to photo/video tripod, clamp or monopod
- 10 year guarantee

- Telephotoadapter option
- Choice of padded 'twin zip' or grippa strap cases

MM2 52
EXTENDED
(shown with 40902M eyepiece)

Telephoto lens conversion for SLR cameras
(see page 35 for details)

Telephotography with compact digital cameras/camcorders featuring 40849 UDCA **(see page 35 for details)**

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

[1]MM2 25x eyepiece

EYEPIECES	MM2	
Product Code	40902M	40903M V2 model*
Magnification	25x	15-40x
Field/1000m	38	40/24

* V2 bodies will only accept V2 versions of the 40903M zoom eyepiece

For more information on SDL, HDF, HR and MM2 eyepieces see page 47

EYEPIECES	• SDL	• HDF							• HR/HR2					
Product Code	40935M	40810M	40872M	40809M	40858M	40859M	40860M	40861M	40862M	40812M	40930M	40931M	40932M	40933M
Magnification	12-36x[2]	13xWW	14xWW	18xWW	24xWW	28xWA	45xWA	57x	12-36x	13x	15xWA	20xWA	28x	13-39x[2]
Field/1000m	58/32	60	60	60	49	43	30	20	60/29	58	60	58	29	49/30

[2]40934 eyepiece adapter required

SPOTTINGSCOPE 22x60/45˚

An ever popular model for full and small bore rifle competition and target archery, this traditional eyepiece focus spottingscope combines high quality optics with a long eyerelief 22x eyepiece for accurate and comfortable observation.

The 45˚ eyepiece configuration combined with the option of a tripod adapter sleeve maximises ease of use on the range. Guaranteed for 30 years.

BIPOD (see page 50 for details)

Specifications	22x60
Code	40302
OG Dia (mm)	60
Min Focus (m)	10
Length (mm)	420
Weight (g)	780

ADDITIONAL EYEPIECES				
Product Code	40303	40304	40305	40313
Magnification	22x	30x	40x	60x
Field/1000m	36	28	18	12
Eyerelief (mm)	17	11	9	6

OREGON 12-36x50/45˚

COMPACT SPOTTINGSCOPE KIT

The Oregon Compact is a lightweight porro prism spottingscope, giving good all round performance and full field of view with spectacles.

The 12-36x magnification range and fully multi-coated optics allow for pin sharp wide field observation at lower magnifications with above average 'up close' viewing at distances - ideal for target archery and target shooting.

The model is fully rubber armoured and fitted with a rotating tripod sleeve to enable the viewing position to be adjusted when using on a tripod or hide clamp.

Supplied complete with padded case, table tripod and 5 year guarantee.

Table Tripod (not illustrated)
Height: 222mm Weight: 366g

Specifications	12-36x50 / 45
Product Code	40144
OG Dia (mm)	50
Min Focus (m)	7
Length (mm)	295
Weight (g)	819
Field / 1000m	44 / 21
Eyerelief (mm)	34-19

EYEPIECES

A wide range of eyepieces are available for use with Opticron HR, GS, ES, MM2 and IS 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 make a difference to the overall image quality derived from the instrument. Eyepieces are listed with their generic code. For magnification with individual telescope bodies please refer to the tables on each telescope page.

SDL Eyepiece

An F24 - F8, 5-group 8-element 'super' zoom, the 40935 SDL is designed to maximise the performance gains inherent in Opticron ED objective lens fieldscopes at higher magnifications. Offering an optimum ratio between field of view and resolution, the main viewing characteristics of the eyepiece are superior cross-field definition at all magnifications coupled with exceptional viewing comfort. Mechanically the eyepiece is waterproof, uses the M41.5 collar thread attachment, features a 90˚ rotation between high and low magnification settings plus a rotating eyecup that can be positioned to match individual needs. Supplied in soft padded case.

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

HDF Eyepieces

The preferred choice for image quality, HDF eyepieces have large diameter eye lenses and offer 'walk-in' field of vision. The eyepieces feature long eyerelief to enable the full field of view to be obtained with or without spectacles and fixed magnification models are wide angle. Five of the eight 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

40872
Eyerelief (mm) 19
Eyelens dia (mm) 24
Length (mm) 48
Weight (g) 138

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 requiring long eyerelief.

HR eyepiece 40812 can be used as both a viewing lens as well as being an option in providing the eyepiece part of the 41109 Photoadapter+eyepiece combination option for SLR telephotography.

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

Low Magnification

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

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

MM2 Eyepieces

Dedicated eyepieces for MM2 bodies and the most popular choice as a first eyepiece unless long eyerelief for use with spectacles is required.

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

40903M
Eyerelief (mm) 13-11
Eyelens dia (mm) 16
Length (mm) 51
Weight (g) 80

IS Eyepieces

Dedicated long eyerelief eyepieces for IS 50, 60 and 70mm bodies 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

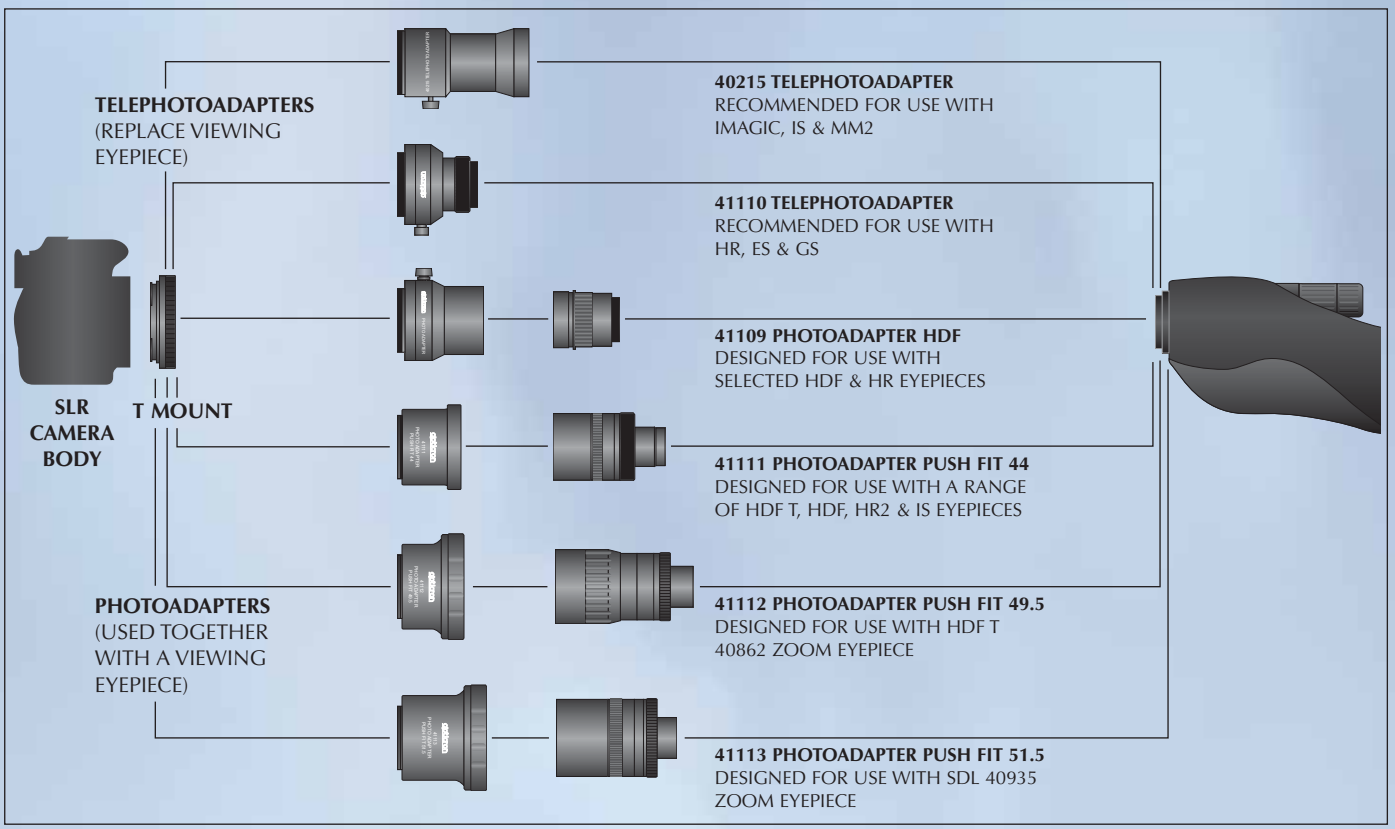
40919S
Eyerelief (mm) 27-16
Eyelens dia (mm) 20
Length (mm) 82
Weight (g) 241

TELEPHOTOGRAPHY WITH OPTICRON TELESCOPES

Telephotography (taking high magnification photographs) is now 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 via a PC. The two main options open to the prospective telephotographer are to **a.** combine a telescope with an SLR or D-SLR camera **b.** 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 below 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]

IMAGIC 65	**IS 50**
780mm/f.12	585mm/f.11.7[2]
IMAGIC 80	**IS 60**
985mm/f.12.3	700mm/f.11.7[2]
MM2 52	**IS 70**
530mm/f.10	780mm/f.11.1[2]

[2] Optional 40927S close focus adapter

41110 TELEPHOTOADAPTER
Equivalent focal lengths[1]

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

41109 PHOTOADAPTER HDF
Equivalent focal lengths with HR, ES & GS scopes fitted with either HDF 40810(F) or HR 40812 eyepieces and using a 35mm SLR camera[1]

HR66	**ES100**
1000mm/f.15	1500mm/f.15
HR 80	**GS 665**
1350mm/f.16.8	900mm/f.13.5
ES 80	**GS 815**
1150mm/f.14.4	1150mm/f.14.1

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	**ES 100**
1000mm/f.15	1500mm/f.15
HR 80	**GS 665**
1350mm/f.16.8	900mm/f.13.5
ES 80	**GS 815**
1150mm/f.14.4	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;
a. 41117 reducer 44~40 enabling connection to HR2 40930, 40931 & IS 40916S, 40918S eyepieces.
b. 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 and using a 35mm SLR camera[1]

HR66	**ES100**
900mm/f.13.7	1350mm/f.13.5
HR 80	**GS 665**
1200mm/f.15	800mm/f.12
ES 80	**GS 815**
1000mm/f.12.5	1000mm/f.12.3

41113 PHOTOADAPTER PUSH FIT 51.5
Equivalent focal lengths with HR, ES & GS scopes fitted with SDL 40935 zoom eyepiece and using a 35mm SLR camera[1]

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

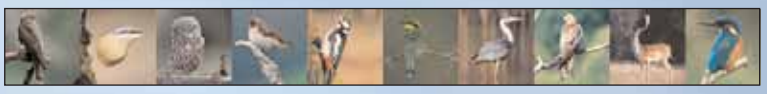
[1] This is an approximate figure based on 35mm SLR cameras. D-SLR cameras use different size image sensors compared to 35mm and so an equivalent conversion figure must be calculated separately.

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

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 (Eyepiece Projection)

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 dia. 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.

Samsung NV3 camera kit fitted to an ES 80 GA ED + 40810 HDF T 23xWW eyepiece using 50065 DCC Adapter + 50067 insert.

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.

Note. In addition to eyepiece magnification and camera lens diameter, variables such as eyepiece eyerelief and F.O.V 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.

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

Taking pictures at lower magnifications: HDF 40937 or DTL 40929

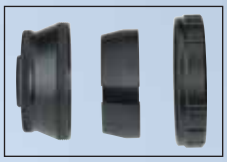
These eyepieces are designed to maximise the diameter of the path of light exiting the telescope and being projected into the camera lens. As such they allow full frame photographs to be taken on more types of cameras at their lowest zoom setting. The eyepieces screw directly into HR, GS and ES bodies.

MODEL	40937	40929
HR 66/60	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 tele-converters or lens hoods.



Each DCC adapter is an aluminium 2 piece locking ring 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 (not illustrated). 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 the 40849 UDCA, DCC adapters and current camera kits please contact us by telephone or visit www.opticron.co.uk and look for TELEPHOTOGRAPHY.

TRIPODS

Traveller Carbon Fibre 42625

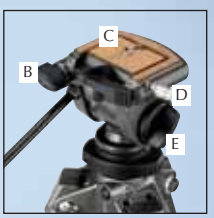
Compact and lightweight carbon fibre tripod designed for use with fieldscopes to 80mm OG, photo and video equipment. Model comes complete with 42700Q panhead and 42607 tripod strap connector.
Main features include;

- 3 section carbon fibre tubular legs giving a useable height without raising centre column of 1360mm (53 1/2″)[1] for maximum panning stability
- 42700Q 3-way 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
- 210mm sliding c/column with collar lock
- Twist-type leg locks and rubber feet
- Compass and level indicator on canopy
- Leg angles; 25˚, 60˚, 85˚
- Height extended: 1570mm (61 3/4″)[1]
- Height retracted: 25˚ - 620mm (24 1/2″)[1], 60˚ - 410mm (16 1/4″)[1]
- Weight 2058g
- 5 year guarantee

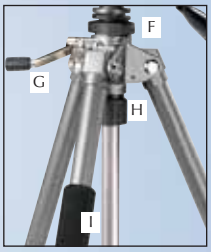
42607 Tripod Strap Connector (included)
designed for use with 40505 & 40506 Tripod Straps

[1] inch conversions are approximate

42700Q Panhead (included)[2]



A Vertical movement locking handle
B Locking screw for 90º side tilt
C Integral quick release plate (1/4″) with locating pin
D QR plate side locking screw
E Locking screw for horizontal panning
F Centre column vertical movement locking ring
G Winding handle (Model 42703)
H Centre column stability ring
I Foam hand grip



[2] This panhead is also available separately

Birdwatchers' 42703 and 42704

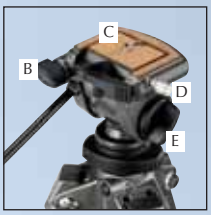
Lightweight, rigid tripods designed for use with fieldscopes, photo & video equipment. Model 42703 comes with winding centre column for accurate vertical adjustment. Model 42704 comes with sliding removable centre column for simple conversion to a hide mount using 42611 clamp (see page 50).
Features include:

- Extended 3 section tubular legs giving a usable height without raising centre column of 1410mm (55″)[1] for panning stability at high magnifications
- 42700Q 3-way panhead with 360º panning and +90º to -60º tilt plus 90º 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], retracted 650mm (26″)[1]
- Weight 2340g
- 5 year guarantee

[1] inch conversions are approximate

42607 Tripod Strap Connector (included)
designed for use with 40505 & 40506 Tripod Straps

42700Q Panhead (included)[2]



A Vertical movement locking handle
B Locking screw for 90º side tilt
C Integral quick release plate (1/4″) with locating pin
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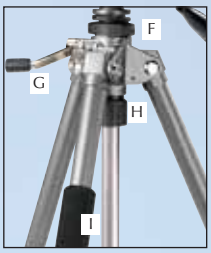
E Locking screw for horizontal panning
F Centre column vertical movement locking ring
G Winding handle (Model 42703)
H Centre column stability ring
I Foam hand grip



[2] This panhead is also available separately

Tripod Straps

40505
40mm nylon with loop fasteners

40506
55mm neoprene with loop fasteners and 25mm webbing

QR Plate & Shoe

42606
Quick Release Plate & Shoe
Screws directly onto panhead. 1/4″ thread
Weight 177g

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.

Designed with a 'B' specification eyepiece for use with or without spectacles and using a twist type retractable eyecup assembly, 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 lens assembly
ii. connection ring that fits 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)

Naked eye

Naked eye

8x Binocular

8x Binocular

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

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

Code Internal dia. (mm)	40941 42.5~41.3	40942 42~41.3	40943 44.3	40944 40	40945 34.6	40947	40948 50~49.5
Connection rings to fit 40940 UTA to Opticron Binoculars, Monoculars and Telescope eyepieces	DBA Oasis BGA Classic Verano BGA PC Oasis Discovery WP PC Oregon LE WP Observation[1]	C/Man BGA T PC Imagic TGA WP Mono 8x30 + Mono 8x32LE Oregon 15x70	Imagic BGA SE C/Man MC T Aspheric WA HDF T 40809 HDF T 40858 HDF T 40872 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) **40946** **33.3** HDF 40859 HDF 40860 HDF 40861 HR 40812 MM 40903M	(40940+40947 coded as 30442) DBA Mono BGA Mono	HDF T 40862 IS 40919S+ R/E 40862T **40949** **52.5~51.26** 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.

CMOS WIRELESS TELECAM

The 40950 CMOS Wireless Telecam is designed to transmit high magnification real time images from a select number of Opticron telescopes directly to a television. This provides the opportunity to show real-time images to groups of people in a public area or to aid the visually impaired to get greater enjoyment from the view through an Opticron telescope.

The CMOS Wireless Telecam is fitted directly onto the telescope body in place of a conventional viewing eyepiece.

The unit features two connection options, cable or wireless and as such provides the user with greater flexibility in the positioning of the telescope within a hide or viewing area. In addition it offers the option to transmit a signal to a portable TV when out in the field. Images can be also be recorded directly onto video for future reference. Please contact us for more information.

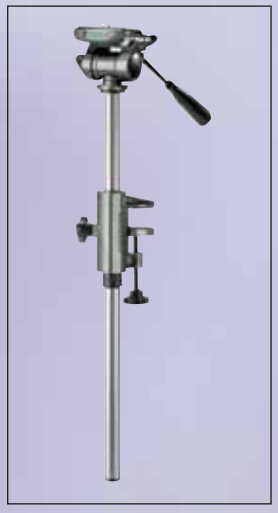
MOUNTS

BC-2 Clamping System

42605 BC-2 Clamp complete
Lightweight & rigid bench clamp support specially designed for use with fieldscopes, photo & video equipment.
Features include:

- 42700 3-way panhead with 360º panning and +90º to -60º tilt plus 90º 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 (3.5″)[1]
- Weight 1120g
- 5 year guarantee

[1] inch conversions are approximate



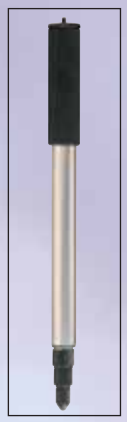
42610 BC-2 Clamp & 500mm centre column
(as 42605 but w/o panhead)
Combines with 42700 panhead to convert to a hide clamp.
Weight 436g
5 year guarantee

42611 BC-2 Clamp
Fits directly onto centre column to convert to a hide clamp.
Supplied complete with Ø21/22mm, 23/24mm and Ø25/26mm reducer sleeves. Weight 267g
5 year guarantee

Mounts

42100 Monopod
All purpose monopod support for use with lightweight fieldscopes, photo & video equipment.
4 section extendable with leg lock system

- Height extended: 1470mm (58″)
- Height retracted: 470mm (18 1/2″)
- Integral 1/4″ thread allowing connection to 42700 panhead or a panhead of your choice
- Durable foam hand grip
- Rubber foot
- Weight: 695g
- 5 year guarantee



40503 Universal II - Hide Mount
Lightweight bench clamp with 400mm extension pole.

- 2 way one lever operated panhead
- Integral 1/4″ thread
- Maximum panning height: 450mm
- Maximum jaw width: 45mm
- Optional quick release plate & shoe
- Dim (mm): 450x60x95
- Weight: 845g
- 5 year guarantee

40502 Car Window Mount

- 2 way one lever operated panhead
- Integral 1/4″ thread
- Maximum panning height: 80mm
- Protective rubber jaw pads
- Optional quick release plate & shoe
- Dim (mm): 205x60x85
- Weight: 555g
- 5 year guarantee

40501 Universal Mount
Designed to clamp horizontally or vertically onto a wide range of objects.

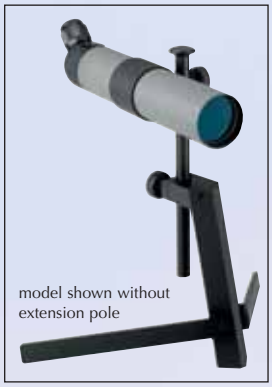
- 2 way one lever operated panhead
- Integral 1/4″ thread
- Maximum panning height: 80mm
- Maximum jaw width: 45mm
- Optional quick release plate & shoe
- Dim (mm): 210x60x70
- Weight: 597g
- 5 year guarantee

40314 Bipod & Carry ball

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

Main frame 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″) with 1/4″ screw thread connection to either a telescope tripod mount, cradle or ball and socket panhead.

With a footprint measuring just 30cmx30cmx43cm, the bipod is equally at home on a table or bench where the 270mm extension pole extends maximum height to 740mm (29″). Guarantee 5 years. Weight c/w extension pole 1502g



model shown without extension pole

40316 Ball & socket panhead
Designed 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.