

# Binoculars and spotting scopes from Carl Zeiss



Range Overview 2005



We make it visible.





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# Which binocular is right for the job?

A binocular reference reveals a lot about its optics system and, indirectly on the suitability of its implementation.

Two values are specified, for instance 7x42. The first, smaller number denotes the binocular magnification factor. The second value of type reference indicates the objective lens diameter of the binocular (exit pupil) in millimetres. Good all-round properties are offered by models with 7 to 10 x magnifications. Models with objective lens diameters of 20-35 mm are sufficient for daytime observation purposes. If a higher twilight performance is required, the objective lens diameter should be larger.

The following applies as a rule: the poorer the light conditions, the larger the objective lens diameter of the binocular should be. The smaller the magnification factor, the larger the field of view, depth of field and twilight capability will be for the same objective lens diameter.

A greater degree of magnification does not automatically mean that one will “see more” as with increased magnification, individual unsteadiness of the hand is also “magnified” and detail recognition declines. Experience has shown that the limit for hand held observing is set at 10x magnification. Binoculars featuring 12x magnification upwards should be supported or used with a tripod or an image-stabilised model implemented.

Which binocular is best suited to your requirements and personal preference may be tested individually at your dealer’s store. Further information is also supplied by our binocular ABC on the fold-out at the end of the brochure!



# Binoculars to suit all requirements.

## Benefits and implementation areas

Binocular type	Implementation area
Objective lens ø (mm)	
20–25	<p><b>Pocket binoculars</b></p> <p>Extremely lightweight, folding binoculars in an exceptionally compact design for daytime use. Ideal companions on walks, city tours, for sports events, concerts and visits to the opera</p>
30–35	<p><b>Compact, lightweight binoculars for nature observation</b></p> <p>In comparison to a standard binocular with a 40/42 mm objective lens diameter these are up to 300 g lighter. For people who rate lightness and compact design more highly than twilight performance.</p>
40–45	<p><b>The universal binocular for all implementation purposes</b></p> <p>Still light enough to be carried effortlessly even when covering longer distances. Due however to the larger objective lens diameter it may still be used even in the twilight hours.</p>
> 50	<p><b>Binoculars designed specially for use in poor light conditions</b></p> <p>Ideal for observation in late twilight hours and near darkness. Large, heavy binocular and thus will only have limited suitability for extended walks.</p>
65/85	<p><b>Spotting scopes</b></p> <p>High magnification models designed for long distance observation. Ideal with tripod and camera adapter for steady observation and convenient image recording.</p>

## What do all Carl Zeiss binoculars have in common?

They are characterised by exceptionally high quality, a long service life and are always reliable, even in rugged use, vouched for by long term guarantees and our after sales service. All models are nitrogen-filled to prevent internal lens misting in the case of major temperature fluctuations and climate-proof from -20 to +40 °C. With the exception of some models, they are water-tight.

Only the best high performance glass with ZEISS T\* multi-coating is used for lenses and prisms. The rubber armouring is extremely UV and acid-resistant and ensures good looks throughout a long service life. Seeing is believing: over 150 years of experience in the manufacture of superior binocular optics is incorporated in ZEISS binoculars.



## **ZEISS binoculars**

**Two product families for varying demands:**

### **Victory Series**



For people who do not want to make any compromises when it comes to optical performance, ergonomics and handling. The FL binoculars series, in particular – and also in the opinion of many trade journalists – offer optimum brilliance, colour fidelity, together with authentic image rendition due to the use of fluoride glass. Furthermore these products are characterised by maximum transmission values and minimum stray light levels so that on the Victory FL binoculars even models with a 32 mm objective lens diameter still feature sufficient twilight efficiency. Premium products made in Germany.

### **Conquest series**



Excellent products in the middle price range for keen users. These binoculars also rightfully bear the name ZEISS in terms of quality and value, in comparison to the premium products of the Victory series they offer an attractively priced, well balanced alternative made by Carl Zeiss.

# Clearly the leading edge.

## Victory FL binoculars

The best optical image quality of their class, minimum weight and optimum ergonomics and handling – these are the unbeatable benefits supplied by Victory FL binoculars and their special objective lenses with fluoride glass (FL).



reddot design award  
winner 2005

**New!**

**Victory 8 x 32 T\* FL and  
10 x 32 T\* FL**

Optimum performance in a minimum of space: the unbelievably light, compact and handy Victory 32T\* FL models. The Victory 8x32T\*FL offers an outstanding performance as a light-sensitive compact binocular for universal use. A close-up of the finest details at extended distances is supplied by the Victory 10x32 T\* FL.

| Protected against the elements.

| Deep ribs for an optimum grip.

| Eye cups may be locked in 4 settings.



Victory 8x32 T\* FL  
order no. 52 32 20  
order no. green 52 32 22



Victory 10x32 T\* FL  
order no. 52 32 21  
order no. green 52 32 23



Victory 7x42 T\* FL  
order no. 52 45 20  
order no. green 52 45 30



Victory 8x42 T\* FL  
order no. 52 45 21  
order no. green 52 45 31



Victory 10x42 T\* FL  
order no. 52 45 22  
order no. green 52 45 32

**New!**

Included  
in delivery scope: eye piece and  
objective lens protective cap,  
carry belt, Cordura pouch.

See page 15 for technical data.

**Victory 7 x 42 T\* FL, 8 x 42 T\* FL  
and 10 x 42 T\* FL**

Top marks for image brilliance and ergonomics: the Victory 7x42 T\* FL is a special model with an unparalleled field of view. As a top-of-the-range universal binocular, the Victory 8x42 T\* FL offers impressive image quality and user benefits. Nature observers and ornithologists who value a high degree of detail recognition will opt for the Victory 10 x 42 T\* FL.





## Victory 8 x 56, 10 x 56 and 12 x 56 T\*

The large objective lens is not the only common denominator shared by these three models. Excellent qualities characterise these Victorys' uniting excellent image quality with still compact dimensions. The Victory 8x56 T\* is a „classical“ binocular for use in the dark morning or evening twilight hours. The Victory 10x56 T\* is a binocular of immense optical power that offers excellent detail recognition. The high power Victory 12x56 T\* permits wonderful viewing at great distances of even minutest details.

With new coating

## Victory Compact 8 x 20 T\* and 10 x 25 T\*

These pocket binoculars are standard-setters: Outstanding design is united with top technical performance. Now due to dielectrical mirror layers, transmission values could be increased further to produce even brighter images. Folded away quickly the Victory Compact 8x20 T\* fits into your breast pocket snugly and is immediately ready for use as required. The slightly larger Victory Compact 10x25 T\* is characterised by high magnification in brilliant quality, minimum dimensions and a lightweight design.



Victory 8x56 T\*  
order no. 52 56 60



Victory 10x56 T\*  
order no. 52 56 62



Victory 12x56 T\*  
order no. 52 56 63

Included in delivery scope:  
eye piece  
protective cap and  
neoprene carry straps.



Victory Compact 8x20 T\*  
order no. 52 20 35



Victory Compact 10x25 T\*  
order no. 52 20 36

Included in delivery scope:  
carry strap  
and Cordura pouch  
with belt loop.



See page 15 for technical data.



# Magnifies nature's diversity.

## Conquest binoculars



### Conquest 8 x 30 T\* and 10 x 30 T\*

Efficiency and ease, compactness and convenience - those are the benefits characterised by these models. Extremely handy to use with a feather weight of only 495 and 510 grams, the universal Conquest 8 x 30 and 10 x 30 T\* models may be swiftly stowed away in a rucksack or holdall to accompany you in the bird sanctuary, on hill walks, at sports events or on family outings.

| Water and dustproof, very rugged.



| Lockable slide/rotary eye cups.



| Including high quality Cordura pouch.



Conquest 8x30 T\*  
order no. 52 32 08



Conquest 10x30 T\*  
order no. 52 32 10



Conquest 8x40 T\*  
order no. 52 45 08



Conquest 10x40 T\*  
order no. 52 45 10

*Included in delivery scope: eye piece protective cap, carry strap and Cordura pouch with belt loop.*

See page 15 for technical data.

**New!**

### Conquest 8 x 40T\* and 10 x 40 T\*

The latest Conquest models continue the attractive price-performance ratio featured by this series, offering nature lovers and ornithologists alike excellent value for their money: highly varied implementation and a powerful performance spectrum. With a good twilight performance, the universal Conquest 8 x 40 T\* provides bright insights into nature. Equally powerful and rugged is the Conquest 10 x 40 T\* with improved detail recognition due to higher magnification.



### **Conquest 12 x 45 T\* and 15 x 45 T \***

These comparatively compact models with special ratings are ideal for professionals and keen amateurs alike. For, astonishingly lightweight as they are, both these binoculars offer an excellent performance - at an attractive price. Regardless whether you choose the Conquest 12 x 45 T\* or 15 x 45 T\*: both models are ideally suited for tricky observation tasks at long distance.



*Conquest 12x45 T\*  
order no. 52 45 12*



*Conquest 15x45 T\*  
order no. 52 45 15*

*Included in delivery scope: eye piece protective cap,  
carry strap and Cordura pouch with belt loop.*

### **Conquest Compact 8 x 20 T\* and 10 x 25 T\***

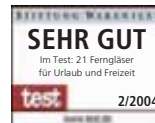
With their ingenious Z-fold, the ultra-light Conquest pocket binoculars fit into every breast pocket and at the same time surprise all with their good performance. On weekend rambles, outdoor trips, cultural and city tours or open air concerts: with a minimum weight of just 185 grams the Conquest Compact 8x20 T\* never gets left behind. Due to higher magnification at a weight of only 200 grams the Conquest Compact 10x25 T\* is highly popular with mountaineers and lovers of the great outdoors in particular.



*Conquest Compact 8x20 T\*  
order no. 52 20 33*



*Conquest Compact 10x25 T\*  
order no. 52 20 34*



*Included in delivery scope:  
carry cord and Cordura  
pouch with belt loop.*

*See page 15 for technical data.*



# Extraordinary, excellent.

## Special binoculars

### Nautical binocular

#### 7 x 50 GA T\* Marine

On the beach, at the harbour or on the high seas: The model with Porro prisms offers razor-sharp views down to the minutest detail. Even in turbulent seas, due to the spectacle-wearer eye pieces and large exit pupil, steady observation is possible.

#### 20 x 60 S with image stabilisation

20x magnification with a 60 mm objective lens: This superlative binocular permits user-friendly observation without a tripod! Noiseless and without batteries due to the unique mechanical image stabilisation feature.

## The classic

#### 8 x 56 GA T\* Dialyt

Classicism personified for over 40 years: The 8x56 GA T\* Dialyt – a further special premium product from Carl Zeiss. Extremely light-sensitive and a high twilight performer.



7x 50 GA T\* Marine  
order no. 52 55 05

*Included  
in delivery scope: eye piece,  
objective lens protective cap  
and neoprene carry straps.*



20x60 S  
order no. 52 60 00

*Included in delivery scope:  
wide carry strap, eye piece  
protective cap,  
aluminium case.*



8x56 GA T\* Dialyt  
order no. 52 56 58

*Included in delivery scope: eye  
piece protective  
cap and neoprene carry straps.*

See page 15 for technical data.

Extremely light-sensitive and featuring a high twilight performance, it has progressed to the status of standard equipment for many natural scientists and ornithologists.



# Nightscope

## Victory NV 5.6 x 62 T\*

Due to the technically sophisticated 20,000x intensification of the light you can recognise objects at a distance of 500 m with 5.6x magnification even in pitch darkness. You are supplied with a very large field of view of 146 m at 1000 m, at one of the shortest focusing distances of only 5 m. Due to its compact dimensions, weight of only 1100 g and modern, ergonomic contours, the Victory NV may be operated like a handy camcorder. Further benefits: Spectacle-wearer eye pieces, a user-friendly focusing ring and integrated LED for brightening one's immediate surroundings.



The Victory NV was awarded the Flint Innovation prizes 2003.



Victory NV 5.6x62 T\*  
order no. 52 30 07

Included in delivery scope: wide carry strap, objective lens and eye piece protective cap, Cordura pouch and batteries.



Torch mount  
Order no. 52 30 06-9006



Camera adapter:  
Order no. 52 30 06-9007



Adapter for Maglite  
Order no. 52 30 06-9008

See page 15 for technical data.

# Monos and MiniQuick®

A quick reach into your jacket pocket and distant objects are brought up close. Carl Zeiss monoculars are so light and handy they are carried around as a matter of course. At the theatre,

museum, on journeys, at sports events, the zoo, circus and outdoors: mono implementation options are practically limitless. The four smaller models may also be used as magnifying aids.

	Monos					
	3 x 12	MiniQuick® 5 x 10 T*	4 x 12 T*	6 x 18 T*	8 x 20 T*	10 x 25 T*
Magnification	3 x	5 x	4 x	6 x	8 x	10 x
Objective lens diameter (mm)	12	10	12	18	20	25
Exit pupil (mm)	4	2	3	3	2.5	2.5
Twilight performance	6	7	6.9	10.4	15.8	15.8
Shortest focusing distance (m) / (yds.)	0.2 / 0.22	approx. 4 / 4.37	0.45 / 0.49	0.3 / 0.33	4.5 / 4.92	4.5 / 4.92
Field of view (m/1,000 m) / (ft./1,000 yds.)	220 / 660	100 / 300	180 / 540	120 / 360	88 / 264	88 / 264
Weight (g) / (oz.)	54 / 1.90	23 / 0.81	45 / 1.59	58 / 2.05	88 / 3.10	88 / 3.10
Height (with extended eye cup) (mm) / (inch)	58 / 2.28	113 / 4.45	70 / 2.76	94 / 3.70	118 / 4.65	118 / 4.65
Order numbers	52 20 12	52 20 10	52 20 50	52 20 51	52 20 53	52 20 53
T* = ZEISS multi-coating						

Zeiss, ZEISS T\* and MiniQuick are registered trademarks of Carl Zeiss.



# Superlative sights.

## Victory Diascope



### Diascope 65 and 85 T\* FL

Detail description that defies description, excellent contrast and image qualities:

The Diascope spotting scopes are impressive in every respect.

The compact and lightweight Diascope

65 T\* FL models are perfect for areas involving long walk-ins. The Victory Diascope 85 T\* FL models are deluxe spotting scopes tailored for observers with high standards. All models are available in silver or green variants.

### Three eye pieces for both models



Two wide-angle fixed magnification and one zoom eye piece is available for the spotting scopes. The immense field of view may also be fully appreciated by spectacle-wearers.



Victory Diascope 65 T\* FL straight viewing  
order no. 52 80 02  
order no. green 52 80 04



Victory Diascope 65 T\* FL 45° angled viewing  
order no. 52 80 12  
order no. green 52 80 14



Victory Diascope 85 T\* FL straight viewing  
order no. 52 80 03  
order no. green 52 80 05



Victory Diascope 85 T\* FL 45° angled viewing  
order no. 52 80 13  
order no. green 52 80 15

Included in delivery scope: protective cap, excl. eye pieces.

See below for technical data.

Victory spotting scopes and eye pieces						
	Diascope 65 T* FL Straight viewing		Diascope 65 T* FL Angled viewing	Diascope 85 T* FL Straight viewing		Diascope 85 T* FL Angled viewing
Weight (g) / (oz.)	1,100 / 38.80			1,450 / 51.15		
Length (mm) / (inch)	300 / 11.81			345 / 13.58		
Height (mm) / (inch)	105 / 4.13			105 / 4.13		
Width (mm) / (inch)	80 / 3.15			97 / 3.82		
Objective lens diameter (mm)	65			85		
Shortest focusing distance (m) / (yds.)	4 / 4.37			5 / 5.47		
Order numbers	52 80 02		52 80 12	52 80 03		52 80 13
Order numbers green	52 80 04		52 80 14	52 80 05		52 80 15
	Eye piece 23 x	Eye piece 30 x	Zoom eye piece	Eye piece 30 x	Eye piece 40 x	Zoom eye piece
Magnification	23x	30x	15–45x	30x	40x	20–60x
Focal length f (mm)	16.7	12.8	25.1–8.4	16.7	12.8	25.1–8.4
Field of view (m/1,000 m) / (ft./1,000 yds.)	52 / 156	40 / 120	56–26 / 168–78	40 / 120	30 / 90	43–20 / 129–60
Twilight performance	38.7	44.2	31.2–54	50.5	58.3	41.2–71.4
Order numbers	52 80 18	52 80 19	52 80 20	52 80 18	52 80 19	52 80 20
T* = ZEISS multi-coating      FL = Fluoride glass						



# Exceptionally practical:

## ZEISS accessories

### Quick camera adapter for digital cameras

The swivel quick camera adapter combines spotting scopes with digital cameras and video cameras, therefore transforming them into super-teles.

### Camera adapter

The camera adapter is screwed onto the spotting scope instead of the eye piece, transforming it into a super tele with a focal length of up to 1,000 mm and 1:12 relative aperture, therefore replacing an expensive high power tele objective.



Quick camera adapter  
order no. 52 86 10



Camera adapter  
order no. 52 80 30

### Astro adapter

The astro adapter for commercially available astro eye pieces transform your spotting scope into a „mobile observatory“. With the astro adapter for astronomical telescopes zoom and fixed eye pieces from the Diascope series may be mounted on astronomical telescopes.



Far left: commercially available astro eye piece mounted in centring ring. Left: coupling ring for securing purposes. (eye piece not included in delivery scope) order no. 52 83 84  
Right: 1 1/4" astro adapter, order no. 52 83 85  
Far right: 2" astro adapter, order no. 52 83 86

### The Carl Zeiss tripod

Exceptional stability with a lightweight design: The tripod is not only an ideal prop for spotting scopes. All binoculars may be mounted on it with a suitable adapter, also appropriate cameras or video cameras.



Tripod: order no. 1206.889



Binofix tripod adapter: order no. 52 83 87



Left: Mono 3x12, order no. 52 20 12  
Right: adapter ring, suitable for practically all ZEISS binoculars

# The ZEISS binocular range at a glance

	Binoculars																	Special scopes				
	Victory							Victory Compact			Conquest					Conquest Compact		Nautical binocular	with image stabilisation	Dialyt	Night scope	
	8 x 32 T* FL	10 x 32 T* FL	7 x 42 T* FL	8 x 42 T* FL	10 x 42 T* FL	8 x 56 T*	10 x 56 T*	12 x 56 T*	8 x 20 T*	10 x 25 T*	8 x 30 T*	10 x 30 T*	8 x 40 T*	10 x 40 T*	12 x 45 T*	15 x 45 T*	8 x 20 T*	10 x 25 T*	7 x 50 GA T* Marine	20 x 60 S	8 x 56 GA T*	NV 5,6 x 62 T*
	<b>New!</b>	<b>New!</b>										<b>New!</b>	<b>New!</b>									
Magnification	8 x	10 x	7 x	8 x	10 x	8 x	10 x	12 x	8 x	10 x	8 x	10 x	8 x	10 x	12 x	15 x	8 x	10 x	7 x	20 x	8 x	5.6 x
Objective lens diameter (mm)	32	32	42	42	42	56	56	56	20	25	30	30	40	40	45	45	20	25	50	60	56	62
Exit pupil (mm)	4	3.2	6	5.25	4.2	7	5.6	4.67	2.5	2.5	3.75	3	5	4	3.75	3	2.5	2.5	7.1	3	7	-
Twilight performance	16	17.9	17.1	18.3	20.5	21.2	23.7	25.9	12.6	15.8	15.5	17.3	17.9	20	23.2	26	12.6	15.8	18.7	34.6	21.2	-
Shortest focusing distance (m) / (yds.)	2 / 2.19	2 / 2.19	2 / 2.19	2 / 2.19	2 / 2.19	5 / 5.47	5 / 5.47	5.5 / 6.01	2.6 / 2.84	4 / 4.37	3 / 3.28	3 / 3.28	3 / 3.28	3 / 3.28	5 / 5.47	5 / 5.47	3.3 / 3.61	5.5 / 6.01	6.5 / 7.11	14 / 15.31	7 / 7.66	5 / 5.47
Field of view (m/1,000 m) / (ft/1,000 yds.)	Wa 140 / 420	Wa 120 / 360	Wa 150 / 450	Wa 135 / 405	Wa 110 / 330	Wa 132 / 396	Wa 110 / 330	Wa 90 / 270	118 / 354	95 / 285	120 / 360	96 / 288	120 / 360	105 / 315	80 / 240	64 / 192	110 / 330	88 / 264	130 / 390	52 / 156	110 / 330	146 / 438
Weight (g) / (oz.)	560 / 19.75	560 / 19.75	740 / 26.10	755 / 26.63	765 / 26.98	1,160 / 40.92	1,200 / 42.33	1,300 / 45.86	225 / 7.94	250 / 8.82	495 / 17.46	510 / 17.99	820 / 28.92	820 / 28.92	605 / 21.34	620 / 21.87	185 / 6.53	200 / 7.05	1,200 / 42.33	1,660 / 58.55	1,010 / 35.63	1,100 / 38.80
Height <sup>1)</sup> (mm) / (inch)	129 / 5.08	129 / 5.08	164 / 6.46	173 / 6.81	173 / 6.81	200 / 7.87	200 / 7.87	210 / 8.27	102 / 4.02	120 / 4.72	142 / 5.59	142 / 5.59	165 / 6.50	165 / 6.50	173 / 6.81	173 / 6.81	102 / 4.02	119 / 4.69	144 / 5.67	275 / 10.83	238 / 9.37	233 / 9.17
Width <sup>2)</sup> (mm) / (inch)	116 / 4.57	116 / 4.57	128 / 5.04	128 / 5.04	128 / 5.04	144 / 5.67	144 / 5.67	145 / 5.71	97 / 3.82	97 / 3.82	115 / 4.53	115 / 4.53	128 / 5.04	128 / 5.04	119 / 4.69	119 / 4.69	93 / 3.66	97 / 3.82	215 / 8.46	161 / 6.34	143 / 5.63	70 / 2.76
Order numbers	52 32 20	52 32 21	52 45 20	52 45 21	52 45 22	52 56 60	52 56 62	52 56 63	52 20 35	52 20 36	52 32 08	52 32 10	52 45 08	52 45 10	52 45 12	52 45 15	52 20 33	52 20 34	52 55 05	52 60 00	52 56 58	52 30 07
Order numbers green	52 32 22	52 32 23	52 45 30	52 45 31	52 45 32																	
Page	8	8	8	8	8	9	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	13

<sup>1)</sup> Height with extended eye cup <sup>2)</sup> Width with 65 mm interpupillary distance The right is reserved to modify design and delivery scope serving the interests of further technical development without prior notice.

Zeiss, ZEISS T\* and Dialyt are registered trademarks of Carl Zeiss.



# Binocular ABC

Which binocular is suitable for which purpose? What are your personal expectations? The following explanations are designed as a guide for your assistance.

## Close-up range

The shortest possible focusing distance. This setting opens up completely new dimensions to the observer. For instance, only 2.6 m you may observe butterflies or other insects at very close range.

## Dioptrre compensation

The compensation of various eye powers.

## Exit pupil

The exit pupil (visible as a small light disc in the eye piece) is of significance for twilight viewing, amongst others, the image brightness perceived by the naked eye depends on its size. It is calculated by dividing the objective lens diameter by the magnification. A 8x56 binocular features an exit pupil of 7 mm or the equivalent of the maximum pupil aperture of the human eye.

## Eye pieces

- **Spectacle-wearer eye pieces** supply the full field of view with and without spectacles. Due to the Carl Zeiss optics design, the exit pupil is located at least 15 mm behind the eye piece. With special eye cups featuring a slide/rotary or push/pull mechanism, spectacle-wearers may also fully appreciate the entire field of view.

- **Wide angle eye pieces:** Eye pieces that permit a particularly large field of view ( $\geq 60^\circ$ ).

## Field of view

This value specifies how many metres of terrain width may be viewed through the binocular at a distance of 1,000 m. The higher the magnification, the smaller, in general, the field of view. Here, special wide angle eye pieces permit an increase in the case of binoculars.

## FL fluoride glass

Lenses made of glass containing fluoride that lend the objective lenses superachromatic properties,

i. e. reduction of colour fringes and colour fidelity with natural rendition of the finest nuances.

## Magnification

The first of the ratings, e.g. 8, stands for magnification. The object observed thus seems 8x closer, this at a distance of 100 m means that you would see it with the naked eye from a distance of 12.5 m.

## Nitrogen filling

Optical devices are filled with dry nitrogen ( $N_2$ ) in order to prevent moisture penetration and thus misting of the optics from the inside.

## Objective lens diameter

The second figure in the ratings of a binocular, e.g. 56, denotes the objective lens diameter in millimetres. It is a unit of measurement for the quantity of light that can penetrate the binocular.

## Prisms

- **Roof prisms:** image reversal systems for a slimline somewhat longer design (here, in most cases, Carl Zeiss uses superior Abbe König prisms, for image reversal practically without loss of light).

- **Porro prisms:** permit a short design and image reversal systems promoting three dimensional viewing.

## T\* Multi-coating

Practically all Carl Zeiss binoculars feature T\* multi-coating whereby maximum light penetration (transmission) and contrast rendition across the entire spectral range is achieved.

## Twilight factor or performance

For performance in poor light conditions, comparative values are supplied by the twilight factor. It is calculated on the basis of the equation "square root of the magnification times the objective lens diameter". Please note: The twilight factor serves only as a reference and does not give an indication of the twilight efficiency of a binocular. This is determined by high transmission in the correct spectral range, low stray light component, high contrast and resolution.