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INTERCHANGEABLE LENSES FOR THE

ALPHA®-REFLEX

35 mm CAMERA

ALPHA
REFLEX
35 mm

PIGNONS S.A.

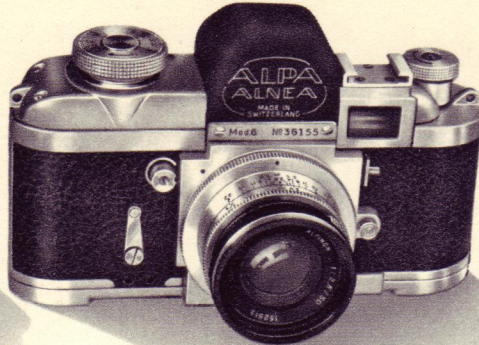
BALLAIGUES
SWITZERLAND



ALPA 7
and Kern Switar 50 mm f/1.8 APO-
CHROMAT with automatic diaphragm



ALPA 6
and ALPA Alfinon 50 mm f/2.8 with
preset diaphragm



ALPA 5
and ALPA Makro-Kilar 40 mm f/3.5



ALPA 5, 6 and 7 all have these same basic features:

Single-lens reflex system: Parallax free, through-the-lens focusing. Precision ground prism combined with finest grain groundglass rendering strikingly brilliant, reinverted image, in "lifesize", with all its natural colors. Absolutely critical control of focusing, framing and depth of field. Continuous focusing range from infinity down to ultra close-ups, which is also ideal for industrial and scientific Macrophotography and Microphotography. Natural 45° viewing angle, especially convenient for those who wear glasses. Vibration-free shutter with speeds from 1 sec. to 1/1000 working on Swiss precision watch movement. Especially smooth shutter release. Reflex-mirror which returns to viewing position instantly after exposure. Internal synchronization to flashbulbs and electronic speedlights. Rapid rewinding mechanism for exposed film. Complete range of easily interchangeable ALPA lenses, from 28 mm extreme wide-angle up to 3750 mm supertelephoto, unconditionally guaranteed for highest optical performance. Extremely rugged Swiss precision mechanism, custom-made by world-famous Swiss watchmakers.

Additional features of the:

ALPA 7

Separate superimposed Rangefinder coupling to all standard 50 mm lenses. Multifocal "sportstype" Viewfinder, matching 50 mm, 90 mm and 135 mm lenses. Selftimer with up to 15 seconds delayed action.

ALPA 6

Split-image Prism Rangefinder **built into** groundglass of single-lens reflex system for automatic pinpointing of focus with any lens. Selftimer with up to 15 seconds delayed action.

Alpa 7 and Alpa 6 offer you the unique conveniences of both parallax free through-the-lens focusing and instantaneous rangefinder focusing in one camera.

See also general ALPA catalog and special 48-page booklet on Macro- and Micro-photography with the ALPA (\$ 0.75).

INTERCHANGEABLE ALPA LENSES

The Swiss Watchmakers' Camera

Your ALPA ALL-IN-ONE Camera, the culminating result of many long years of consumer-conscious research in the field of 35 mm photography, is an incomparable Swiss masterpiece of watchlike precision, unparalleled versatility and supreme quality optics, ideal for scientific and industrial photography as well as for your personal use. A precision engineered instrument, made by Swiss Watchmakers, the ALPA offers you a complete range of interchangeable lenses for highest optical performance, designed to satisfy every conceivable need of the amateur and professional, as well as the technical photographer. The precision ground ALPA Reflex-Prism combined with the extremely fine-grain groundglass renders a reinverted, razorsharp "lifesize" image of striking brilliance up to the very corners, for utmost ease of composition and absolutely critical focusing—with any lens, at any distance, at any magnification—with no parallax ever.

With the versatility of your ALPA you can take extreme wide angles, medium range shots, very distant views, fast sequence shots, ultra close-ups, copywork and microscopic photographs, indoor and outdoor pictures, synchronized flash exposures or available light work . . . *any type of photograph.*

No Limit to lenses

Certainly no one would buy an airplane without wings. For, though it might function adequately on the ground, it could not soar to the heights

for which it was designed. This goes for your ALPA too. Its unlimited potential would be left unrealized with one single lens.

Your key to full command of every imaginable photographic situation lies in a complete set of interchangeable ALPA lenses, which range from 28 mm extreme wide angle up to 3750 mm super telephoto, all of finest optical quality—several of them APOCHROMATS. They allow your photographic talents to master any possible requirements of your hobby or your profession. Your ALL-IN-ONE ALPA will be complete.

How to use your interchangeable ALPA lenses

Your wide-angle lenses enable you to photograph the entire span of the George Washington Bridge, the skyline of New York City, a panoramic view of a mountain range, a factory assembly line or a complete wall and corner of your living-room. With your lenses of medium focal length you can take pictures of small subjects like flowers, insects, precious stones, as well as scientific or industrial close-ups, and switch quickly to fairly distant views and again to portraits of your family or friends. Your telephoto lenses allow you to capture even more distant subjects like the smooth stride of the racing thoroughbred, the stork's nest perched atop a belfry, the statue carved on the capital of a cathedral (p. 16), the drifting canoe (page 13) or the elusive wild beast feeding far away (page 15).

Composition of black and white versus color photographs

But interchangeable ALPA lenses solve yet another of your problems, now that color slides are becoming increasingly popular. A detail in a black and white photograph, taken at too great a distance, can still be made the major subject of your picture by a good, partial enlargement. However, today's wonderfully brilliant color transparencies projected on a wall screen do not offer you this remedy.

The amateur who has only one lens is indeed "the sick man of photography". Once a color slide is taken, its composition cannot be corrected nor can any part of it be enlarged. Your transparency will appear exactly as it was originally composed. Looking back, who amongst us has not shed tears of rage at viewing with disappointment the results of not having the correct lens at the correct time. Your foresight in acquiring your own set of superb ALPA lenses in time permits you to seize those once-in-a-lifetime shots, so essential in sealing your reputation as a matured and resourceful photographer.

How to select your ALPA lenses

All ALPA lenses meet the highest standards of color correction and definition. The lenses of 50 mm standard focal length include the inexpensive but very sharp ALPA Alorax $f/3.5$, the faster ALPA Alfinon $f/2.8$, the famous ALPA Xenon 50 mm $f/1.9$ and the high-speed, automatic Switar $f/1.8$ APOCHROMAT, with absolutely unique color rendition, contrast and resolving power—at any aperture.

When choosing your interchangeable ALPA lenses, please bear the following relation in mind: the longer the focal length, the greater the magnification and the larger the subject. Your 50 mm lens captures almost any subject, but if it is distant or small it will most probably be lost in a mass of distracting surroundings. A telephoto lens brings your subject closer, i.e. makes it accordingly larger. The 100 mm lens reproduces a

subject twice the size of that taken with a standard 50 mm lens, while the 360 mm lens gives you more than $7\times$ magnification! But you must also realize that you have to hold your camera steadier with increasing magnification, as the slightest movement is multiplied by the degree of enlargement (see chart of magnifications in attached folder). This is why ALPA lens mounts are so exceptionally lightweight and well balanced, permitting handheld pictures even at slow speeds.

Most probably your first choice is a lens of medium focal length, ideal for portraiture, fairly distant subjects as well as close-up work. The Tele-Xenar 90 mm $f/3.5$ is such an ALL-purpose lens. It nearly doubles the size of your subject, yet is so compact as to fit into your ALPA ever-ready case. For higher speed you may select either the 100 mm $f/2$ APOCHROMAT, a lens of highest possible optical correction, or the very versatile Makro-Kilar 90 mm $f/2.8$ which has a continuous focusing range from infinity down to 8". More powerful are the fast and featherweight ALPA Argular 135 mm $f/3.2$ or the automatic Tele-Xenar 135 mm $f/3.5$.

Equally important in completing your selection is a wide-angle lens. You may choose either the "normal" 38 mm $f/3.5$ or the more extreme Retrofocus 28 mm $f/3.5$. Another wide-angle lens is the ALL-IN-ONE Makro-Kilar 40 mm $f/3.5$ which is also ideal for close-ups as well as general use. It has an amazing focusing range from infinity all the way down to 4" (model E) or 2" (model D).

The needlesharp Xenar 75 mm $f/3.5$ has been especially designed for close-up photography and copywork (see also special 48-page booklet "Macro- and Micro-photography with the ALPA"). The unbelievably lightweight and compact ALPA Alefar 180 mm $f/4.5$ and the extremely powerful, but still well balanced Tele-Xenar 360 mm $f/5.5$ are telephoto lenses of great magnification, suitable for distant views.

The following pages give you full technical details on all these superb ALPA lenses, conveniently arranged by focal length.

ALPA RETROFOCUS 28 mm f/3.5

(Angénieux, Paris) Code: pretrof

The unique design of the Retrofocus offers you the advantage of reflex focusing with an extreme wide angle. It is an inverted telephoto lens of remarkable optical quality, which achieves very short focal length without interfering with the reflex-mirror of the ALPA. Entirely free from distortion, it gives you excellent results, even at full aperture. But please remember the elementary rules of wide-angle photography: Do not tilt the camera upward, or downward, so as to eliminate an uninteresting foreground, as it will cause your verticals to converge. The Retrofocus is ideal for wide panoramic views, architectural and interior photographs, large groups etc. While other wide-angle lenses generally give unequal lighting, this first-class lens renders an evenly illuminated field up to the very corners. This is especially important for color pictures (skies etc.) for which an aperture of $f/5.6$ or smaller is recommended.

Berne Town Hall. The entire front of this building can only be photographed with a wide-angle lens. The picture at left was taken with a tilted camera which caused the converging verticals. It would have been perfect had it been taken from a balcony instead of from street level. Right: the same photograph, as corrected in an enlargement.

Angle of view by the diagonal of the 24×36 mm frame: 75° .

6 elements, no surfaces cemented.

Preset diaphragm: $f/3.5$ to $f/22$.

Focusing range: Infinity to $20''$.

Overall length of lens: 62 mm.

Diameter for filters: 60 mm, takes ALPA "filtrace" filters.

Weight: $11\frac{1}{2}$ oz.



ALPA ALFINAR 38 mm f/3.5 (Old Delft system, made in Switzerland) Code: alfiat

Angle of view by the diagonal of 24 × 36 mm frame : 58°.

4 elements in 3 groups.

Click-stop diaphragm : f/3.5 to f/16.

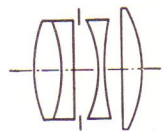
Focusing range : Infinity to 24"
Overall length of lens : 20 mm.

Diameter for lenshood and filters : 42 mm, takes ALPA "filtrana" filters.

Weight : 2½ oz.

The large depth of field of the ALPA Alfinar is invaluable for pictures of landscapes, where perfect sharpness of the lens mount allows very fine adjustment from infinity down to 2 ft. The comparatively large-sized front element appreciably improves the distribution of light over the entire field and gives superb color photographs without any loss of light towards the corners at f/5.6, or smaller stops. Greatest degree of sharpness is reached at f/8. The large depth of field of the ALPA Alfinar is invaluable for pictures of landscapes, where perfect sharpness of both fore- and background is required, as well as in rapid action shots, where exact focusing is not always possible. Because of its compactness this short focus lens may also be used in conjunction with optical instruments such as endoscopes.

Native witch-doctor in a fetish hut in Central Nigeria. Photo by Dr. E. Leuzinger of the Ethnographical Institute of Zurich University, taken with Alfinar medium wide-angle lens and synchronized flash.



ALPA MAKRO-KILAR 40 mm f/3.5 (Kamerabau-Anstalt, Vaduz)

Mod. E code: malken
Mod. D code: maldan

The fundamental advantage of this supremely versatile lens is its continuous focusing range from infinity down to ultra close-ups. It is the ALL-IN-ONE lens for the ALPA ALL-IN-ONE Camera. At infinity the Makro-Kilar has all the merits of a normal wide-angle lens. At medium range you may use it for family pictures and general snapshots. More extended, it becomes a close-up lens, yet requires no additional accessories. Its graduated setting ring shows you the reproduction scale and the exposure factor at a glance. The Makro-Kilar is supplied in two different mounts: Model E (single movement) focuses down to 4 inches from the front of the lens, which gives a half-size reproduction 1:2. Model D (double movement) focuses down to 2 inches from the front of the lens. This gives you practically life-size reproduction! (1:1.1) The lenshood is incorporated in the lens mount and takes ALPA ecrana or series V filters.

Waterfall: the 40 mm focal length of the Makro-Kilar is just right for framing the entire waterfall despite the short distance.



Angle of view by the diagonal of 24 × 36 mm frame: 55°.

4 elements in 3 groups.

Diaphragm: f/3.5 to f/22.

Focusing range: Mod. E: Infinity to 8" (4" from the front of the lens)
Mod. D: Infinity to 7" (2" from the front of the lens)

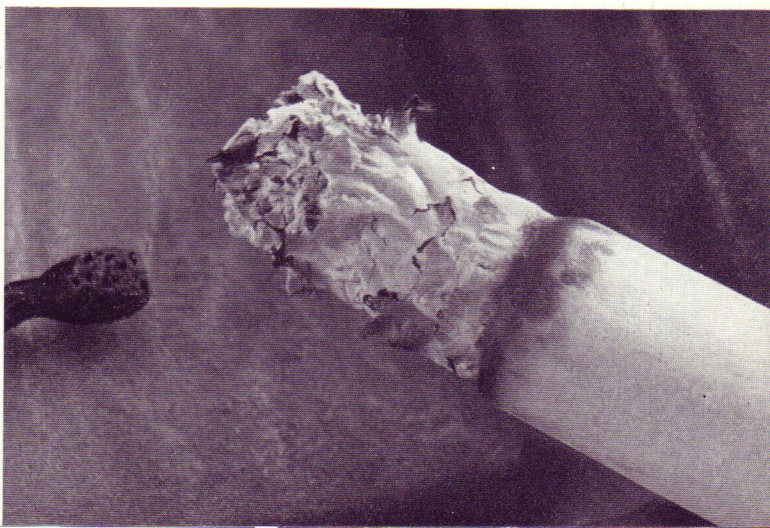
Overall length of lens: 48 mm.

Frontal diameter: 58 mm.

Built-in lenshood, takes ALPA ø 30 mm "ecrana" filters (and Series V).

Weight: 5½ oz.

Cigarette: the image on the negative is life-size, taken with the same Makro-Kilar model D at f/22.



ALPA ALFINON 50 mm f/2.8

(Old Delft system, made in Switzerland) Code: finstof

Angle of view by the diagonal of 24×36 mm frame : 45°
4 elements in 3 groups.

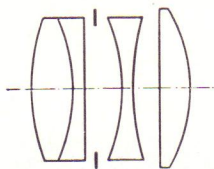
Preset diaphragm : f/2.8 to f/22.

Focusing range : Infinity to $20''$.

Overall length of lens : 34 mm.

Diameter for lenshood and filters : 42 mm; takes ALPA "filtrana" filters.

Weight : $3 \frac{3}{4}$ oz.



ALPA ALORAR 50 mm f/3.5

(Spectros, Basle) Code: aloraf

ALPA Alfinon and ALPA Alorar are two attractively priced standard lenses of remarkably high resolving power. A lens element of the finest optical Lanthan glass gives them excellent optical correction, while the four-element system is maintained. Even at full aperture sharpness and contrast are very good, with the best results obtainable at f/8. The ALPA Alfinon is supplied with a preset diaphragm. Distance calibrations below $3 \frac{1}{4}$ feet are given in fractions showing the scale of reproduction (see detailed explanations on page 8 under Kern Switar). The Alpa Alorar has a retractable lens mount with click-stop diaphragm.

Angle of view by the diagonal of 24×36 mm frame : 45° .

4 elements in 3 groups.

Click-stop diaphragm : f/3.5 to f/22.

Focusing range : Infinity to $3 \frac{1}{4}$ feet.

Overall length of lens : 34 mm.

Diameter for lenshood and filters : 42 mm, takes ALPA "filtrana" filters.

Weight : 3 oz.

Karamojong goatherds (Uganda). Photo by Dr. H. Carol of the Geographical Institute of Zurich University, taken at full aperture f/2.8 on hypersensitive film, in very early morning light.



ALPA XENON 50 mm f/1.9 (Schneider, Kreuznach)

The Xenon is a fine and well-known general purpose lens of the Gauss type. In spite of its high speed it has excellent correction. Even at full aperture $f/1.9$ it renders critical sharpness and perfect contrast, without any trace of softness. Since subjects taken at full aperture are usually badly lit, it is essential that the negatives have sufficient contrast for good enlargements. Sharpness and contrast increase rapidly and evenly over the entire field, the lens giving its best results between $f/5.6$ and $f/8$. The ALPA Xenon's chromatic correction fulfils modern requirements in all respects, both for color or black and white photography.

Preset diaphragm Code: anxenof
Automatic lens Code: autxenof

Angle of view by the diagonal of 24×36 mm frame : 45° .

6 elements in 4 groups.

Automatic or preset diaphragm : $f/1.9$ to $f/16$.

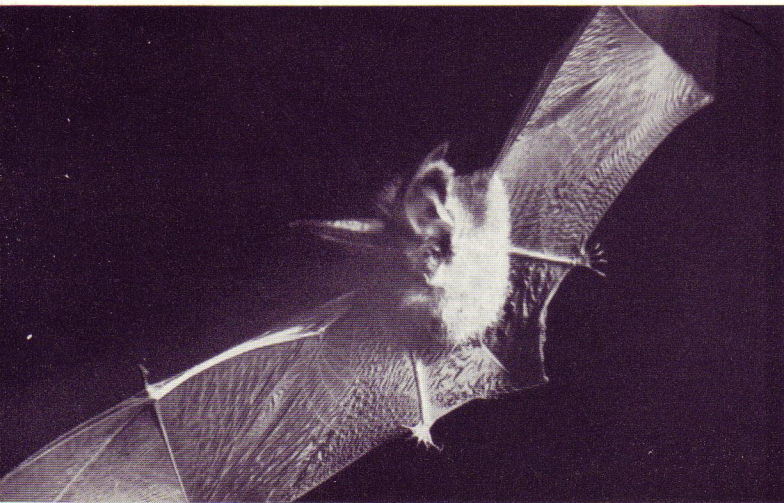
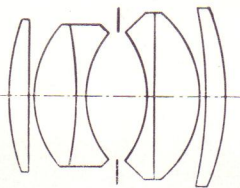
Focusing range of automatic lens : Infinity to $31\frac{1}{2}$ "
preset lens : Infinity to 20"

Overall length of automatic lens : 54 mm.
preset lens : 42 mm.

Diameter for lenshood and filters of:
automatic lens : 52 mm, takes ALPA
"filtrabe" filters.
preset lens : 42 mm, takes ALPA
"filtrana" filters.

Weight of automatic lens : 7 oz.
preset lens : $5\frac{1}{4}$ oz.

Long-eared bat. Photo by E. P. Bille (Sierre) indoors with artificial light, 1/100 sec. at $f/8$.



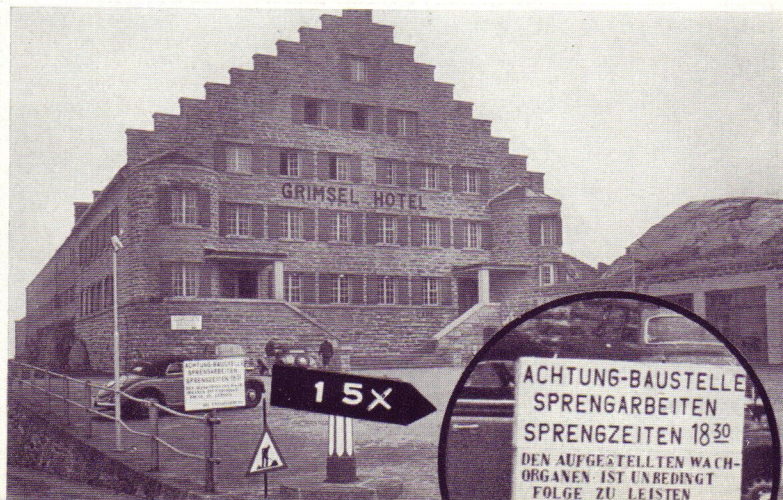
KERN SWITAR 50 mm f/1.8 APOCHROMAT (Kern, Aarau) Code: autswitarf

The world-famous Kern Switar is the first APOCHROMAT in 35 mm photography, an absolutely unique lens of highest optical correction and unequalled resolving power. The Switar's exclusive apochromatic color correction is important not only for color photographs, but also for black and white pictures taken with strongly tinted filters. It is the only lens which corrects all primary colors, rendering strikingly brilliant, razorsharp pictures of highest contrast, with a deep, satiny black, even at full aperture f/1.8. Please note that at this aperture the Switar's luminosity is 24 % greater than that of competitive lenses at f/2. This unusually strong and evenly distributed luminosity at full aperture f/1.8 permits photography under poorest available light conditions. Even at medium apertures the Switar's design gives far superior light distribution to that of lenses of smaller aperture. The helical mount of the Switar allows continuous focusing down to 17". Distances of less than 3¼ feet are not calibrated in feet, but in fractions showing the scale of reproduction. For example the fraction 1/9 marked in red means that an object in focus at this distance is reproduced on the film 9 times smaller than its actual size. Made of the new high refraction Lanthan glass the Switar APOCHROMAT has 7 precision ground elements. It is equipped with an *automatic diaphragm* which has an exceptionally smooth shutter release requiring minimum pressure (see also special leaflet on the Kern Switar 50 mm f/1.8 APOCHROMAT).

Paris by night : 1/50 sec. at full aperture f/1.8.



Grimselpass (Swiss Alps). Aperture f/5.6. The billboard in the foreground is enlarged 15 x in the insert.



Angle of view by the diagonal of 24 x 36 mm frame : 45°.

7 elements in 5 groups.

Automatic diaphragm : f/1.8 to f/22.

Focusing range : Infinity to 20".
Overall length of lens : 43 mm.
Diameter for lenshood and filters : 42 mm, takes ALPA "filtrana" filters.

Weight : 6 oz.

ALPA XENAR 75 mm f/3.5 (Schneider, Kreuznach) Code: xenaf

The Xenar is a lens of highest resolving power, designed especially for close-up (macro-) photography and copywork. Most critical sharpness is obtained at $f/8$, but the lens may be stopped down to $f/32$, in order to reach maximum depth of field for close-ups of 3-dimensional subjects. Its ALPA Extensan mount has an extreme extension range permitting continuous focusing from infinity to 18 inches, i.e. giving a maximum reproduction scale of 1 : 3.8 without extension tubes or bellows. Distortion is virtually non-existent, so that the most difficult types of copywork can be tackled with confidence. The reasonable price of this lens makes it particularly attractive for the close-up specialist.

Angle of view by the diagonal of
24 × 36 mm frame : 32°.

4 elements in 3 groups.

Click-stop diaphragm : $f/3.5$ to $f/32$.

Focusing range : Infinity to 18".

Overall length of lens : 60 mm.

Diameter for lenshood and filters :
42 mm, takes ALPA "filtrana" filters.

Weight : 5½ oz.



← African carving (Jos Museum). Photo by Dr. E. Leuzinger of the Ethnographical Institute of Zurich University. 1/100 sec. at $f/5.6$.

Anemone narcissiflora. Ultra fine grain film, at $f/32$ for maximum depth of field.



ALPA TELE-XENAR 90 mm f/3.5 (Schneider, Kreuznach) Code: texenaf

Angle of view by the diagonal of 24×36 mm frame : 27° .
4 elements, no surfaces cemented.
Click-stop diaphragm : f/3.5 to f/22.
Focusing range : Infinity to 2 feet.
Overall length of lens : 51 mm.
Diameter for lenshood and filters : 52 mm, takes ALPA "filtrabe" filters.
Weight : $7 \frac{3}{4}$ oz.



← Sudanese girl, near Khartoum.
Photo by Dr. H. Carol, Zurich.

A first choice in completing your ALPA equipment is the compact 90 mm Tele-Xenar, a multi-purpose telephoto lens which is ideal for action shots, street scenes, child photography and portraiture as well as technical close-up work. The image at full aperture is purposely soft, which is most desirable in portrait work. At f/4 sharpness and contrast become excellent, reaching their peak at about f/8. The Tele-Xenar combines finest optical correction with extreme compactness, so that it easily fits into your standard ALPA ever-ready case. This is a distinct advantage for the tourist or mountaineer who is constantly tempted by subjects too distant for lenses of normal focal length. The nearly $2 \times$ magnification is of great value, especially for color photography which does not allow future corrections in composition. Focusing ranges from infinity all the way down to $24''$ or a reproduction scale of $1 : 4.5$, without accessories.

Monster iceberg in King Oscar Fjord, Greenland. Photo by O. H. Schaffner, Zurich, taken in evening light. 1/50 sec. at f/4.



ALPA MAKRO-KILAR 90 mm f/2.8 (Kilfitt, Munich) Code: malnof

The ALPA Makro-Kilar 90 mm f/2.8 is a fast and highly versatile lens with an extreme extension range, permitting continuous focusing from infinity down to 8" (reproduction scale 1:1.7) without any accessories. At full aperture its performance is outstanding, the best values of sharpness and contrast being reached at about f/5.6. The helical mount of the ALPA Makro-Kilar turns when extended, so that a polarizing filter should be adjusted to its most effective position *after* focusing. Designed primarily for the specialist in macrophotography this is another superb ALL-IN-ONE lens which gives you optimum results at any distance.

Angle of view by the diagonal of 24 × 36 mm frame : 27°.

4 elements in 3 groups.

Preset diaphragm from : f/2.8 to f/32.

Focusing range : Infinity to 15 3/4" (8" from front of the lens).

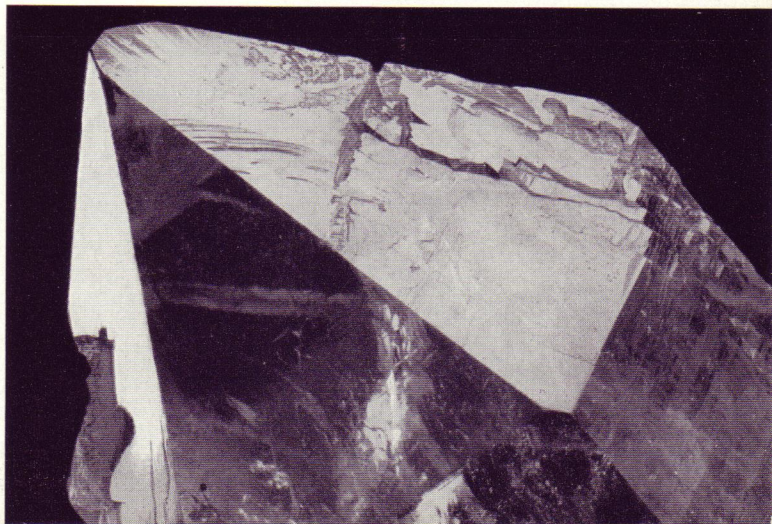
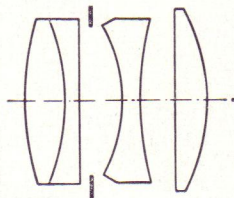
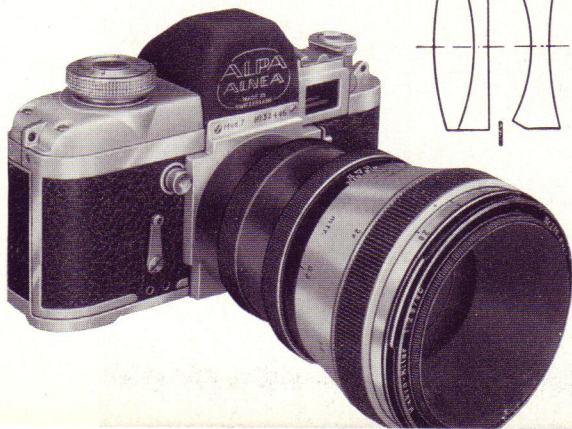
Overall length of lens : 108 mm.

Frontal diameter : 75 mm.

Built-in lenshood takes ALPA "filtrana" filters.

Weight : 21 1/2 oz.

Rock-crystal. Taken with Makro-Kilar 90 mm f/2.8 lens fully extended, giving a reproduction scale of 1:1.7 on the negative. The crystal's depth required the smallest stop f/32.



ALPA 100 mm f/2 APOCHROMAT (Kinoptik, Paris) Code: kinof

Angle of view by the diagonal of 24×36 mm frame : 24° .

6 elements in 4 groups.

Preset diaphragm : f/2 to f/22.
Focusing range : Infinity to $27\frac{1}{2}''$.

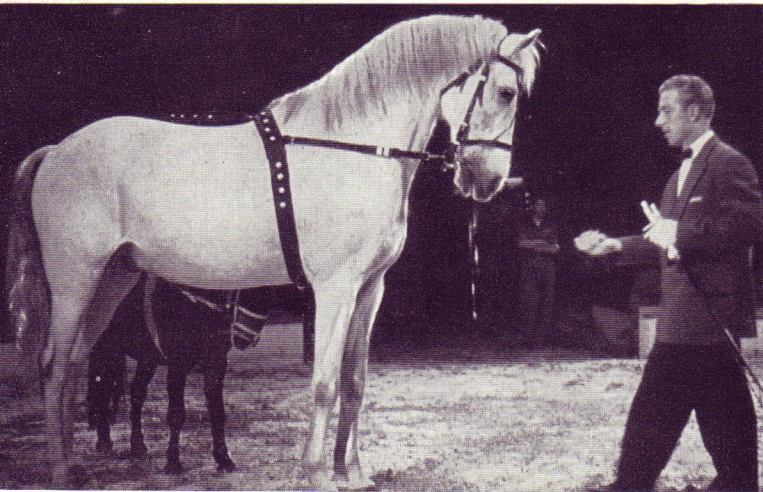
Overall length of lens : 110 mm.

Diameter for lenshood and filters : 62 mm, takes ALPA "filtrace" filters.

Weight : $20\frac{3}{4}$ oz.

This magnificent APOCHROMAT's claim to fame is derived from its unique success in "available light" photography, i.e., normal lighting in theatres, night clubs, living-rooms, factories etc. The ALPA 100 mm f/2 APOCHROMAT is a top quality lens of long focal length with multiple merits, offering the most perfect color rendition, highest speed, as well as extremely fine definition, even at full aperture f/2. The picture is razor sharp, of optimum contrast and as color-true as present film emulsions permit. Peak effectiveness is reached at f/2.8 ! Utmost ease of focusing on the groundglass is conclusive proof of its perfect apochromatic correction. These exclusive qualities make the ALPA APOCHROMAT an ideal working partner. Equipped with a preset diaphragm it has click-stops for both full and half stop values.

Circus Pilatus. The foaming horse gets his reward. 1/50 sec. at f/2 on normal film.



The Rainmaker. Play by W. Richard Nash at the Atelier Theatre in Berne. 1/50 sec. at f/2 on highly sensitive film.



ALPA ALGULAR 135 mm f/3.2

(Old Delft system,
made in Switzerland)
Code: algulaf

Exclusively made for the ALPA—extremely lightweight and compact—this powerful telephoto lens gives you outstanding picture results. Its great speed is, in fact, double that of the next focal length (180 mm) and is specifically intended for action studies in sport, news coverage, nature photography etc. Even at full aperture the image is sharp and contrasty. For portrait shots it is advisable to use a diffusion disc, so as to soften the picture. For landscapes and architectural photography ideal results are obtained at $f/5.6$ or smaller stops. The luminosity of the ALPA Algular allows you to use the faster shutter speeds especially important for colorwork, while its well-balanced weight permits hand-held pictures at the slower speeds of $1/50$ and even $1/25$.

Angle of view by the diagonal of 24×36 mm frame :
 18° .

5 elements in 3 groups.

Preset diaphragm : $f/3.2$ to $f/32$.

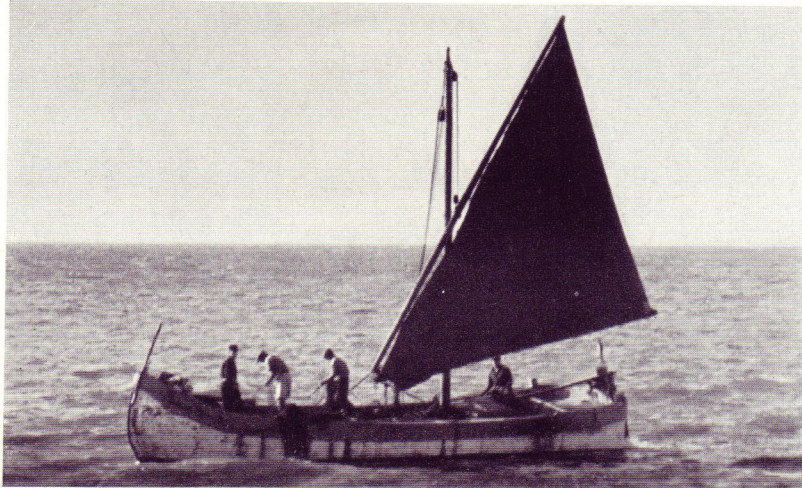
Focusing range : Infinity to $3\frac{1}{2}$ feet.

Overall length of lens : 83 mm.

Diameter for lenshood and filters : 52 mm, takes
ALPA "filtrabe" filters.

Weight : $9\frac{1}{2}$ oz.

Fishermen hauling in their nets (Adriatic Sea).
Photo taken by early morning light from the bridge
of a ship. $1/250$ sec. at $f/4$.



A new
ALPA
TELE-XENAR
135 mm $f/3.5$ with
automatic dia-
phragm, made by
Schneider, Ger-
many, will be avail-
able soon.

Kate. Synchronized elec-
tronic flash, $1/50$ sec.



ALPA ALEFAR 180 mm f/4.5

(Old Delft system,
made in Switzerland)
Code: alefaf

The ALPA Alefar 180 mm f/4.5 is a still more extreme telephoto lens. Despite the fact that its focal length is nearly the same as that of the usually bulky and heavy 200 mm lenses of other makes, this excellent lens is unbelievably handy in size and light in weight. Noted for its optical performance, the ALPA Alefar is perfectly suited for distant views, landscapes, wild beasts and birds. It is also the ideal lens for beach photography, larger-scale action studies and sporting events. Maximum sharpness is obtained from f/5.6 down. At shutter speeds of 1/100 sec. and faster, hand-held pictures are still possible. The ALPA Alefar is an exciting combination of minimum size and weight with maximum performance.

Gulls on Bird Rock in the Lofoten Islands. Photo by René Gardi.



Parachute. Yellow filter, 1/1000 sec. →
at full aperture f/4.5.

Angle of view by the diagonal of 24 × 36 mm frame :
13°.

4 elements in 3 groups.

Preset diaphragm : f/4.5 to f/32.

Focusing range : Infinity to 7 feet.

Overall length of lens : 114 mm.

Diameter for lenshood and filters : 52 mm, takes
ALPA "filtrabe" filters.

Weight : 11 oz.



ALPA TELE-XENAR 360 mm f/5.5 (Schneider, Kreuznach) Code : telexar

The Tele-Xenar 360 mm f/5.5 is a very powerful, radically new telephoto lens, especially designed for 35 mm photography. Excellent contrast and sharpness are obtainable at full aperture f/5.5. For photographs at infinity, the sharpness at full aperture is as good as that obtained by stopping down, even with film emulsions of highest resolving power. The 360 mm focal length (just double that of the 180 mm ALPA Alefar) is primarily intended for the specialist. Nevertheless, the size and weight of the lens are well within reasonable limits. In exceptional cases even this lens may be used without a tripod at fast shutter speeds. The wonderful wild life photographs shown below are the best proof of the outstanding optical qualities of this remarkable ALPA lens.

Lioness with cubs at drinking place. Evening light. Photo taken by Dr. H. Carol, Zurich, in the National Park near Nairobi, Kenya, without tripod. The lens was supported by the car window.



Angle of view by the diagonal of 24 × 36 mm frame : 7°.

4 elements in 2 groups.

Preset diaphragm : f/5.5 to f/32.

Focusing range : Infinity to 15 feet.

Overall length of lens without lenshood : 260 mm.
with lenshood mounted : 330 mm.

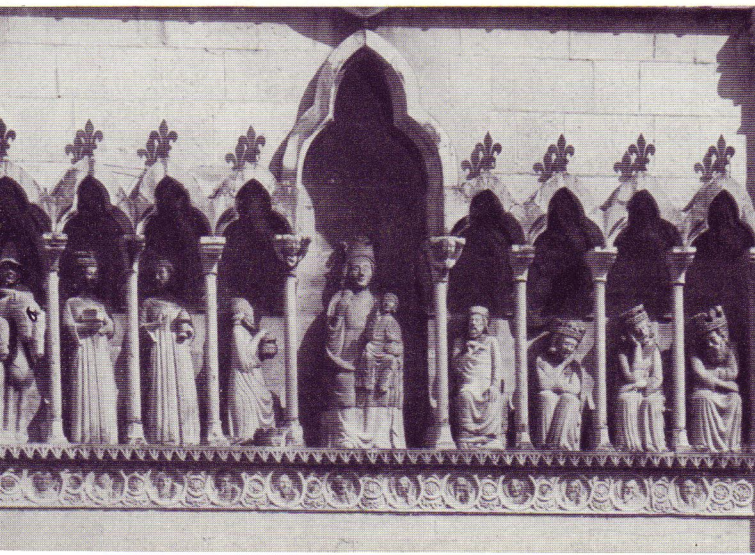
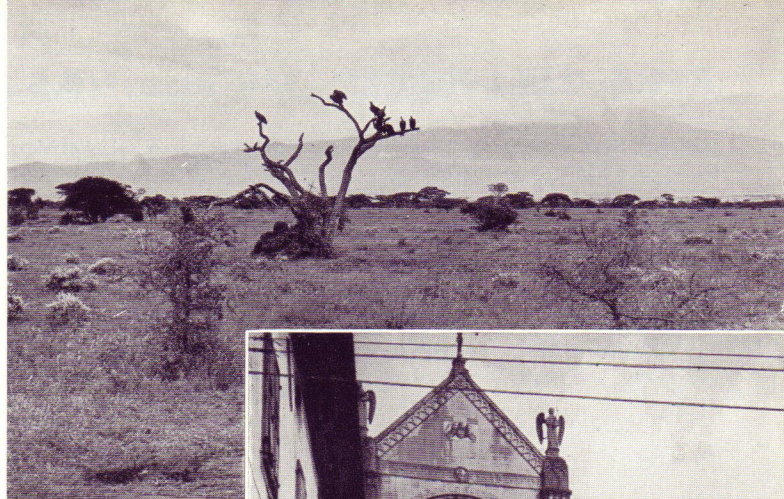
Frontal diameter : 75 mm.

Diameter for lenshood and filters : 70 mm, takes ALPA "xfiltran" filters.

Weight : 3 lb.

Impala deer in the Albert National Park, Belgian Congo. Photo by Dr. H. Carol, Zurich.





Vultures in the Tsaro National Park, Kenya.

Left : with Tele-Xenar 360 mm f/5.5.

Right : with standard 50 mm lens.

(Both photos taken from the same point.)

Church at Gemona (Friuli).

Left : Detail taken with Alefar 180 mm f/4.5.

Right : General view taken with Makro-Kilar 40 mm f/3.5.

(Both photos taken from the same point and without tripod !)



Lenses of more than 360 mm focal length

There is no limit to the focal length of lenses that may be used with the ALPA single-lens reflex camera. The opening of the frontal plate corresponds with the diagonal of the 24×36 mm frame, so that light rays can enter freely, even when parallel. Nevertheless, there are certain physical limitations to be considered :

a) *Camera vibration*

Magnification of your subject increases with increasing focal length, so that the least vibration, the slightest wind pressure on the long tube of such a lens can have an effect on sharpness.

b) *Air currents*

Increased focal length also increases the danger resulting from harmful air currents. The air between the subject and the lens is not homogeneous. Ascending warm air currents emanating from rocks, railroad tracks, metallic bridges etc., cause disturbances revealed in air undulations and create hazardous conditions unless very fast shutter speeds are used. Moreover, the air between subject and lens is not always clear : fog, dust, soot etc., may diminish contrast of distant objects. This can be

improved in colorwork with a haze filter, in black and white photography through the use of red or deep yellow filters which increase contrast.

c) *Temperature*

Expansion of lens mount and lens elements, due to heat, may cause focus changes in lenses of extreme focal length. Some lens manufacturers take this into consideration by eliminating a fixed infinity mark.

Although this brochure does not give any detailed information on ALPA lenses of 500, 600, 800, 1000, 2000 and 3750 mm focal length, they are available on special request.

Close-up and copy equipment

The technical description of each lens also includes its focusing range *without accessories*. Most ALPA lenses take full advantage of the parallax free single-lens reflex system of the ALPA camera, by offering you more than twice the extension range of competitive lenses, permitting continuous focusing from infinity to closest distances. By using TUBAN extension tubes or the KAVO bellows attachment ALPA lenses (except the 28 mm Retrofocus wide angle) may be focused down still further, for ultra close-ups. (See also special 48-page booklet "Macro- and Micro-photography with the ALPA".)

Technical data

Resolving power

Unfortunately no internationally recognized standards have been established to date for gauging the quality of a lens. The resolving power—generally expressed in the number of lines per mm—depends not only on the quality of the lens, but also on the emulsion of the film used, which is not a valid criterion for comparing one picture with another or the lens of one manufacturer with that of another. Moreover, the top quality ALPA lenses invariably render a resolving power in the center of their field which is superior to that possible with any commercial film emulsion, so that their performance cannot even be “measured” photographically. Accordingly, we have refrained from publishing figures in this brochure that would have no practical value.

Only the very best lenses have been selected for the ALPA, offering you the optimum in resolving power, contrast and color correction. All free surfaces of these lenses are coated by the latest process, for most perfect light transmission.

Unconditional guarantee

Every single ALPA lens is subjected to 2 scrupulous quality tests—by the lens manufacturer and in the ALPA factory—and carries an unconditional guarantee for highest optical performance.

Air bubbles

All ALPA lenses are made of finest optical glass, the manufacture of which is a very delicate process. Occasionally a lens element may contain

air bubbles or even minute specks. *This has no influence on the sharpness of the image whatsoever*, as the loss of light is only a tiny fraction of a percent.

Distances and reproduction scales

On most ALPA lenses distances below a certain minimum are no longer calibrated in feet, but indicated as simple fractions showing the scale of reproduction ($1/10$, $1/9$, $1/8$, $1/7$, $1/6$, $1/5$, $1/4$, etc.). For instance, the fraction $1/5$ marked in red means that an object in sharp focus at this distance is reproduced on the film 5 times smaller than actual size. Accordingly, a 5 times enlargement of the negative will give a life-size reproduction. This method of calibration—an ALPA exclusive—has proved more useful for close-ups than an extended distance scale, since it gives an immediate gauge for judging the size of the subject as it will appear on the film.

At $1/10$ the exposure factor is about 1.2 which might be considered for color photography.

The following conversion formula enables you to find the answers to some practical problems yourself:

Conversion formula

- A. The reproduction scale of $1/9$ is given. How do I calculate the distance from the subject ?

$$50 \times (9 + 1) = 500 \text{ mm distance or } 20''$$

The focal length of 50 mm ($2''$) is multiplied by the denominator of the figures $1/9$ marked in red plus one ($+1 = 10$).

- B. The distance of 2000 mm (2 m or $6\frac{1}{2}$ feet) is given. How do I calculate the reproduction scale of the subject ?

$$\frac{2000}{50} = 40 - 1 = 39 \quad \text{scale} = 1/39$$

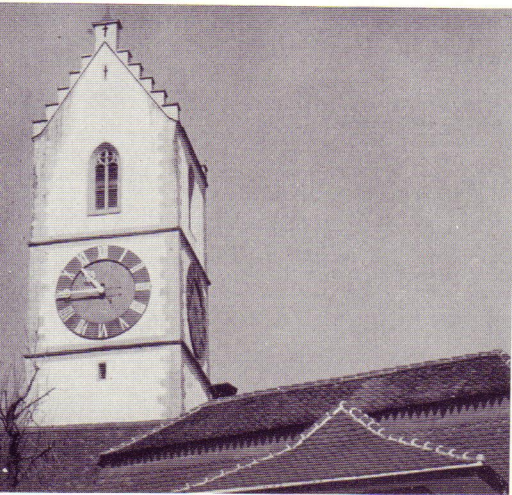
The distance of 2000 mm is divided by the focal length of 50 mm and one is subtracted from the result (-1).

ALPA coated glass filters

The photographer who visits exhibitions and follows photographic contests knows that most of the outstanding pictures owe their striking originality and artistry to the use of filters. Filters are indeed a nearly indispensable passport to success, both in black and white and color photography.

Filter effects. A filter primarily allows the passage of light rays of its own color, and to a certain extent of neighbouring colors, while absorbing the light rays of its complementary colors. In other words it enhances the value of its own color and darkens opposing colors. By using a yellow filter, yellows as well as greens are made lighter, while the blues and violets become darker. This effect becomes most obvious when the subject has

without filter :



with yellow filter :



with red filter :



front lighting, but may be practically nullified for *back-lit* subjects.

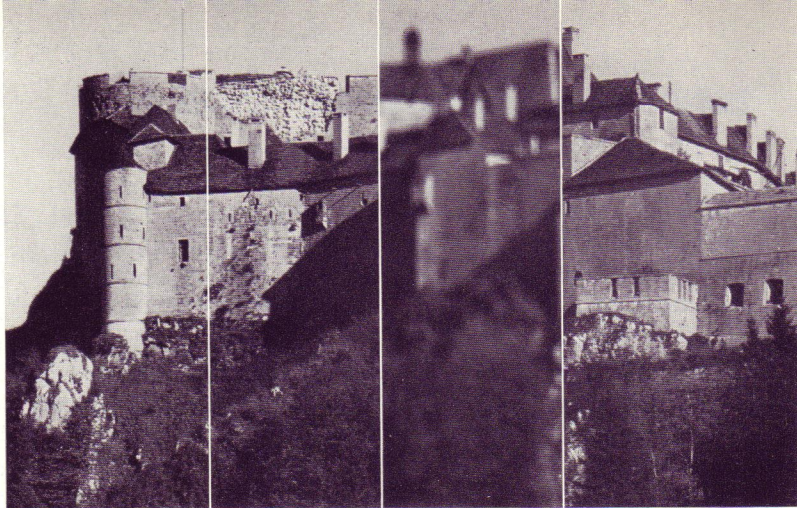
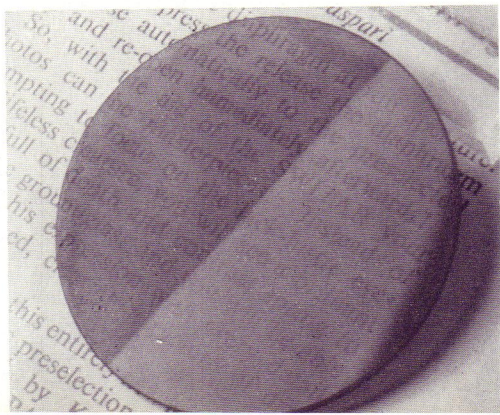
The use of color filters involves longer exposure. The *exposure factor* is governed not only by the *color* of the filter, but also by the color temperature of the light source and the chromatic sensitivity of the film emulsion. A yellow filter which at midday requires an exposure factor of 2.5, i.e. 2.5 times the exposure given by the exposure meter, only needs a factor of 1.5 in the early morning or warm evening light, because the light itself has a much warmer color tone. It is therefore wise to remember that all filter factors are approximations and must be interpreted according to the circumstances. Your own experience and adherence to the recommendation of the film manufacturer will assure best possible results.

Optical qualities of filters

It is indispensable to use utmost discrimination in selecting a good set of filters. Optically unsatisfactory filters, chosen for economy's sake, may impair the outstanding optical qualities of the best lens and the pictures taken with it. ALPA filters are manufactured of finest optical glass dyed in the mass, plane parallel and coated, thus guaranteeing the highest possible performance. ALPA trademark and the number of the filter tint are marked right on the glass itself. Practical slip-in mounts of 42 mm (filtrana) and 52 mm (filtrabe) diameter fit nearly all lenses and can be instantly removed with a slight turn.

For the few tints which are not yet available in solid glass, Wratten gelatine filters may be supplied in ALPA filter mounts.

All ALPA glass filters are coated, i.e. protected by anti-reflection coating. The illustration below is an unretouched photograph of a demonstration filter, only half of which has been coated, which shows the tremendous increase in transparency, due to the coating.



Comparative pictures taken with an ALPA mounted on a tripod, with Alefar 180 mm f/4.5 lens at 1/100 sec. A = without filter. B = with coated colorless ALPA haze filter No. 40, eliminating ultra-violet rays. C = with ordinary light pink, skylight cemented filter. D = with light pink, skylight gelatine filter. All 3 filters used in this example have very light colortones, which render similar tone values. But note the enormous difference in strictly optical effects. Purchase of inferior filters may save you a few dollars, but will seriously impair the optical performance of the finest lenses.

Filters for color photography: Our previous remarks primarily concerning filters for black and white photography apply in principle to color photography as well. The essential difference is that particular colors are not suppressed, but rather modified by brightening them up etc. Accordingly, filters for color photography have much milder tones. Only the haze filters—also used in black and white photography and usually colorless—completely absorb the strong bluish effect of ultraviolet rays.

Infrared photography

The ALPA REFLEX Camera equipped with any of the ALPA lenses is also ideally suitable for infrared pictures. No general purpose lens (Apochromats included) focuses with infrared light in the same plane as with visual light, so that adjustment becomes necessary. The infrared section of the spectrum begins at $690\text{ m}\mu$ wave length and goes up to more than $1400\text{ m}\mu$. Infrared 35 mm films have their maximum sensitivity generally at $830\text{ m}\mu$.

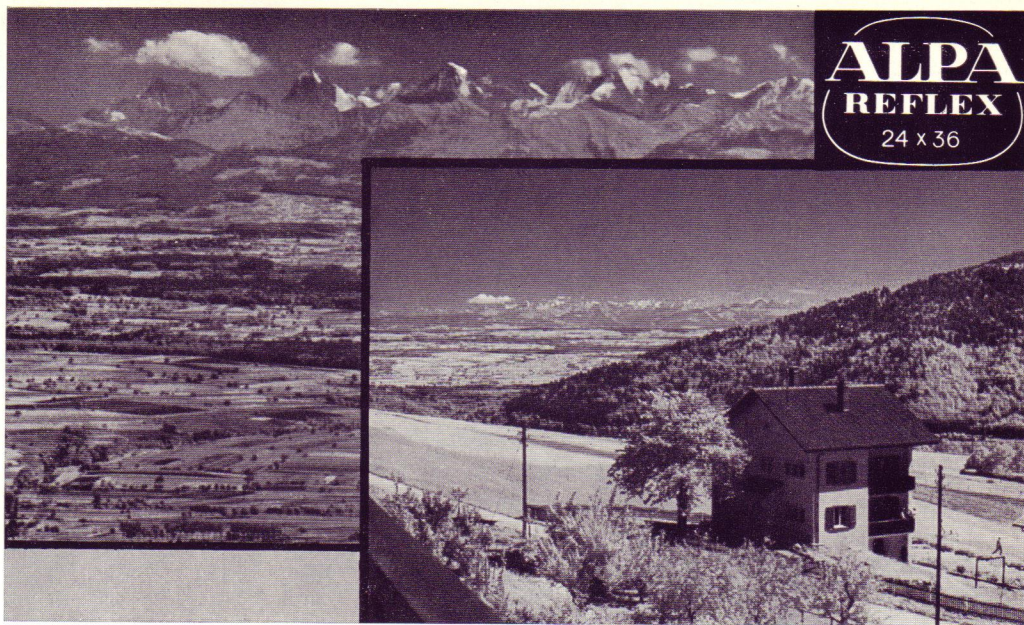
These films are sensitive to other wave lengths as well, which have to be suppressed with a deep red filter (filtrana or filtrabe 64).

Focusing is done *without* the filter. The lens-to-film distance must be increased between $\frac{1}{4}\%$ and $\frac{1}{2}\%$ of the focal length *after* focusing, so as to correct the difference between visual and infrared light.

A red index mark on each ALPA standard lens indicates the exact focus correction.

In order to obtain the best possible definition, it is recommended you use the smallest diaphragm opening that conditions permit, as the correction of lenses in the infrared range of the spectrum is not as good as for visual light. Suitable indications for exposure are given by the film manufacturers, but distant landscapes may usually be photographed with $\frac{1}{25}$ second at $f/8$ or $f/11$. Infrared films are not fine-grain films, so that the possibilities of enlarging are limited.

Distant views are not the only application of infrared photography. There are also medical, especially dermatological applications, as well as scientific and technical uses. Please note that infrared photographs render green foliage in landscapes as white.



ALPA
REFLEX
24 x 36

View from Ballaigues to the Swiss Alps, distance over 77 miles (125 km).

Photo at right taken with standard 50 mm lens, photo at left taken with telephoto 300 mm lens, both on infrared film with deep-red filters. — Note the white (like snow) rendering of green foliage and grass while the green of the needle-wood remains dark! — In the center is the Jungfrau, to the left Moench, Eiger, Lauteraar- and Schreckhoerner. — Hills and plains in the middle ground give a practically complete cross section of Switzerland.

The lens-to-film distance for infrared focusing is increased as follows:

ALPA lens :	Increase	Tele-Xenar f/3.5-90 mm	Increase
Alorar f/3.5-50 mm and Alfinon f/2.8-50 mm .	0.12 mm	Apochromat f/2-100 mm	0.38 mm
Xenon f/1.9-50 mm and Switar f/1.8-50 mm . .	0.13 mm	Algular f/3.2-135 mm .	0.6 mm
Xenar f/3.5-75 mm . .	0.3 mm	Alefar f/4.5-180 mm .	1 mm
		Tele-Xenar f/5.5-360 mm	1.3 mm

Polarizing filters

These are a special class of filters, useful for both types of photography. In black and white pictures they diminish or even completely eliminate awkward reflections from glass, lacquer, wood, water, etc. (but not from blank metal!). In colorwork their supplementary purpose is to darken skies (particularly in northern direction), without changing the coloring of the landscape. This is particularly important for the effect of "night photographs" at dusk. Without a polarizing filter, the sky will appear too light, especially if sufficient exposure must be given to bring out the darker details.

without polarizing filter



Polarizing filters have an exposure factor of between 2 and 2.5, which is quite reasonable considering their usefulness.

The table on page 23 lists all ALPA coated glass filters, with a brief description of their effects. Your photo dealer will be happy to supply you with further details on the use of filters.

The effect of a polarizing filter is clearly visible on the glass and lacquer of the motorcar below.

with polarizing filter



Chart of ALPA coated glass filters

filters for color films

filters for black and white films

ALPA Filter No.	Exposure factor *	Tint	Principal effects
40	1.2	colorless	hazefilter, eliminates the invisible ultra-violet rays (which have strong bluish effect), makes distant subjects and views taken with lenses of long focal length appear to be nearer.
610	1.2	pale pink	Skylightfilter, compensates for lack of warm tones: when sun is high in the sky, for interiors illuminated by daylight only, mountains and snow scenes, distant views.
615	1.4	pink	as 610 but stronger.
507	1.2	salmon	for use with type F film (3800° Kelvin) in daylight.
51	1.2	pale green	for mountain and snow scenes, especially in winter for eliminating strong violet tones.
502	1.2	pale blue	compensates for warm tones: for scenes taken immediately after sunrise or before sundown.
41	2.5	medium blue	for use with daylight film with artificial light.
pol.	2.5	neutral grey	eliminates reflections on shiny surfaces of glass, lacquer, wood, water, etc., darkens the sky, indispensable for photographs at dusk.
40	1.2	colorless	hazefilter, indispensable for pictures at high altitudes, reduces the haze, but does not darken the sky.
42	1.5	pale yellow	as 40, but stronger.
41	2.5	medium blue	deepens reds (lips and cheeks)
45	1.5	bright yellow	for hazy days, increases contrast, darkens blue sky slightly.
47	1.6	medium yellow	as 45, but stronger, darkens blue sky more, increases contrast of distant subjects.
50	2	deep yellow	as 47, but still stronger, darkens blue sky still more, especially suitable for lenses of long focal length.
55	2	bright green	as 45, but deepens reds.
53	3	medium green	as 47, but deepens reds still more.
56	4	deep orange	for landscapes and distant views, renders exaggerated contrast, enables you to see the eyes behind sunglasses, brightens up dark skin.
58	4	bright red	for distant views with telephoto lenses, gives strong contrast on panchromatic film.
60	5	medium red	for distant views with telephoto lenses, gives maximum contrast on panchromatic film, moonshine effects with underexposure on bright days.
64	15-20	deep red	infrared filter, exclusively used with infrared films.

* Rough approx. (see page 19)

Characteristics of ALPA lenses

Objective	Diaphragm*	Focal length mm	Magnification 50 mm = 1	Aperture f/	Angle	Filter Code :	Filter \emptyset	Sunshade \emptyset Code :	Focusing down to**	Weight in ounces	Codeword	Leather case :
RETROFOCUS	p.s.	28	0.56	3.5	75°	filtrace	\emptyset 60 C	—	46 cm = 18 1/8"	12 1/2	pretrof	xetdark
ALFINAR	c.	38	0.76	3.5	59°	filtrana	\emptyset 42 A	omxana	60 cm = 24"	2 1/2	alfiaf	fitdark
MAKRO-KILAR	ord.	40	0.8	3.5	55°	ecrana	\emptyset 30	included	Mod. E 20 cm = 8" Mod. D 17.5 cm = 7"	5 1/2	malken maldan	xetdark
ALORAR	c.	50	1	3.5	45°	filtrana	\emptyset 42 A	omxana	1 m = 3 1/4'	3	aloraf	normdark
ALFINON	p.s.	50	1	2.8	45°	filtrana	\emptyset 42 A	omxana	56 cm = 22"	3 3/4	finstof	normdark
XENON	p.s.	50	1	1.9	45°	filtrana	\emptyset 42 A	omxana	56 cm = 22"	5 1/4	anxenof	normdark
XENON	autom.	50	1	1.9	45°	filtrabe	\emptyset 52 A	included	80 cm = 32"	7	autxenof	—
SWITAR	autom.	50	1	1.8	45°	filtrana	\emptyset 42 A	omxana	56 cm = 22"	6	autswitaf	normdark
XENAR	c.	75	1.5	3.5	32°	filtrana	\emptyset 42 A	omxana	46 cm = 18 1/8"	5 1/2	xenaf	xetdark
TELE-XENAR	c.	90	1.8	3.5	27°	filtrabe	\emptyset 52 B	omxabe	60 cm = 24"	7 3/4	texenaf	xetdark
MAKRO-KILAR	p.s.	90	1.8	2.8	27°	filtrana	\emptyset 42 A	included	40 cm = 16"	21 1/2	malnof	cendark
APOCHROMAT	p.s.	100	2	2	24°	filtrace	\emptyset 60 C	paranka	72 cm = 29"	20 3/4	kinof	cendark
ALGULAR	p.s.	135	2.7	3.2	18°	filtrabe	\emptyset 52 B	omxabe	120 cm = 4'	9 1/2	algulaf	fardark
ALEFAR	p.s.	180	3.6	4.5	13°	filtrabe	\emptyset 52 B	omxabe	2 m = 7'	11	alefaf	fardark
TELE-XENAR	p.s.	360	7.2	5.5	7°	xfiltran	\emptyset 70 S	parante	4.5 m = 15'	47 1/4	telexar	texdark

* Key to abbreviations : p.s. = preset diaphragm
 autom. = automatic diaphragm
 c. = click-stop diaphragm

** All distances are indicated from camera-back.

Page 1 of cover :

Sunrise over the Matterhorn. ALPA
photo by M. André Brandt, Lausanne,
taken with ALPA-Alefar 180 mm f/4.5.

Folder above :

Taken from the same spot... with lenses
of different focal length ... the famous
Château de Chillon !



100 mm



50 mm



75 mm



90 mm



135 mm



180 mm



360 mm



50 mm



50 mm



50 mm



40 mm



38 mm



28 mm

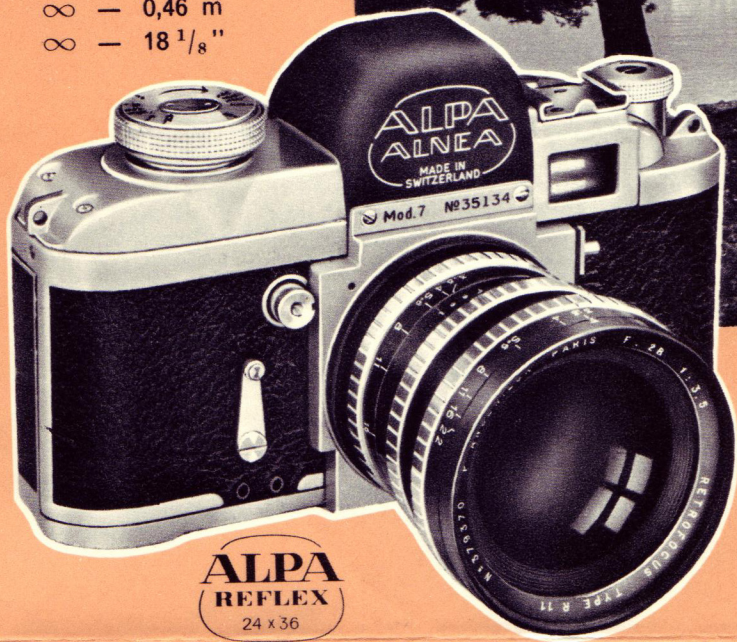
Focal length **28**
Focale mm
Brennweite mm

Aperture f/
Ouverture rel.1: **3.5**
rel. Öffnung 1:

∠ **75°**

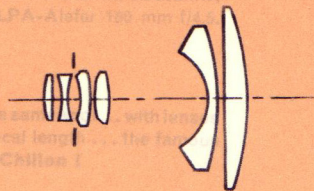
∞ — 0,46 m

∞ — 18 1/8"



ALPA
REFLEX
24 x 36

RETROFOCUS
(Angénieux, Paris)



Swirls over the Matterhorn. ALPA
photo by M. André Brandt, Lausanne,
taken with ALPA-Alia 190 mm lens.

Folder above,
seen from the side, with lens
of different focal lengths. The lens
Château de Chillon.

MADE IN SWITZERLAND P.O. Box 1000

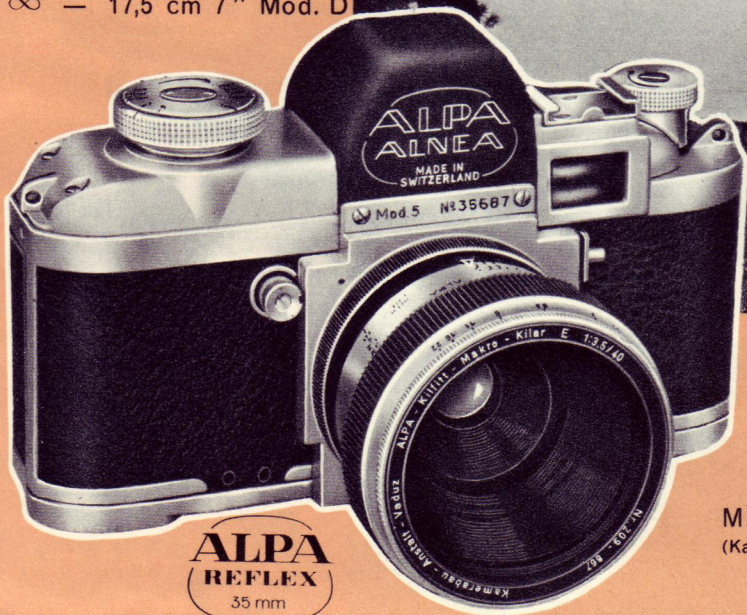
Focal length **40**
Focale
Brennweite mm

Aperture f/
Ouverture rel.1: **3.5**
rel. Öffnung 1:

∠ **55°**

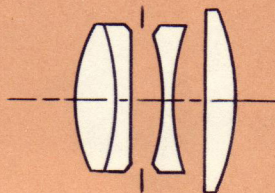
∞ — 20 cm 8" Mod. E

∞ — 17,5 cm 7" Mod. D



ALPA
REFLEX
35 mm

MACRO-KILAR
(Kamerabau-Anstalt, Vaduz)



Focal length **50**
Focale
Brennweite mm

Aperture f/
Ouverture rel. 1: **1.8**
rel. Öffnung 1:

\angle **45°**

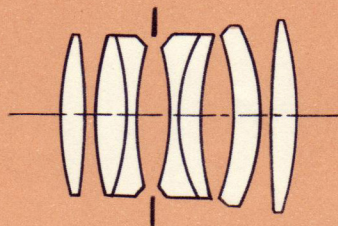
∞ — 0,56 m

∞ — 22"



ALPHA
REFLEX
24 x 36

SWITAR (Kern & Co. S. A., Aarau)




Focal length
Focale
Brennweite

75
mm

Aperture f/
Ouverture rel. 1:
rel. Öffnung 1:

3.5

 **32°**

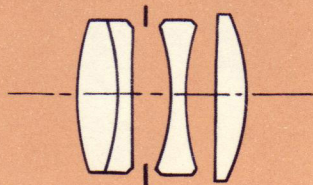
∞ — 0,46 m

∞ — 18"



ALPHA
REFLEX
35 mm

XENAR (Jos. Schneider & Co., Kreuznach)



Focal length **90**
Focale
Brennweite mm

Aperture f/
Ouverture 1: **3.5**
rel. Öffnung 1:

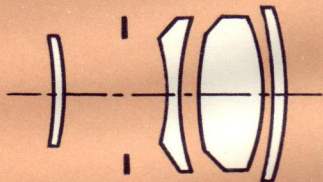
∠ **27°**

∞ — 0,6 m

∞ — 24"



TELE XENAR
(Jos. Schneider & Co., Kreuznach)



Focal length **100**
Focale
Brennweite mm

Aperture f/
Ouverture rel. 1: **2**
rel. Öffnung 1:

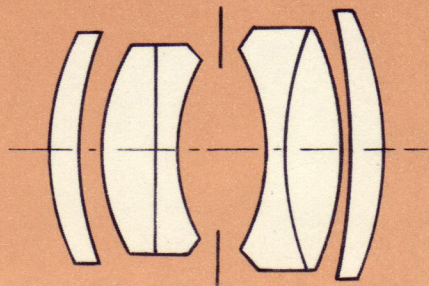
∠ **24°**

∞ — 0,72 m
∞ — 29"



ALPHA
REFLEX
35 mm

APOCHROMAT
(KINOPTIK, Paris)



Focal length
Focale
Brennweite

135
mm

Aperture f/
Ouverture rel. 1:
rel. Öffnung 1:

3.2

\sphericalangle **18°**

∞ — 1,2 m

∞ — 4'



ALGULAR (Syst. Old Delft)

Focal length
Focale
Brennweite

180
mm

Aperture f/
Ouverture 1:
rel. Öffnung 1:

4.5

\sphericalangle **13°**

∞ — 2 m

∞ — 7'



ALPA
REFLEX
35 mm

ALEFAR

(Syst. Old Delft)

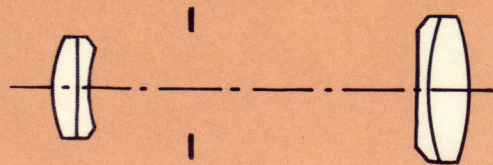
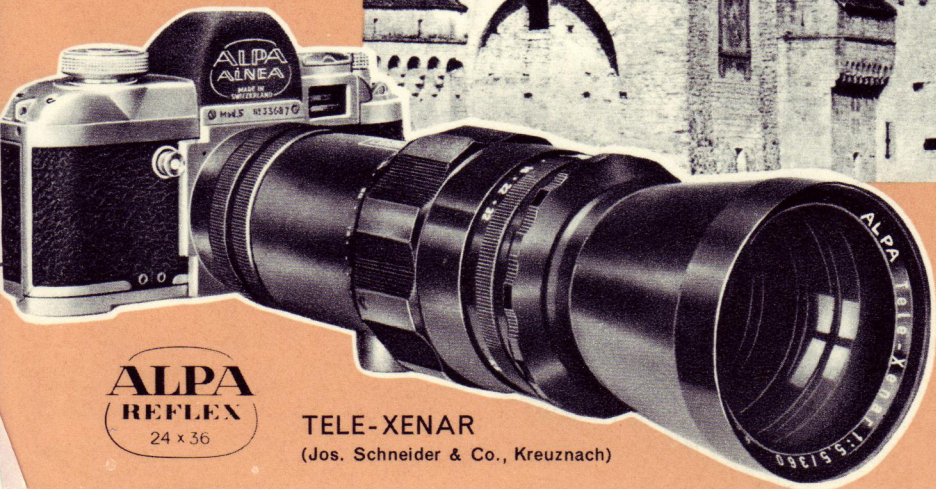
Focal length **360**
Focale
Brennweite mm

Aperture f/
Ouverture 1: **5.5**
rel. Öffnung 1:

∠ **7°**

∞ — 4,5 m

∞ — 15'



ALPA
REFLEX
24 x 36

TELE-XENAR
(Jos. Schneider & Co., Kreuznach)