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E.LEITZ,INC.
ROCKLEIGH
N.J.07647

Leica M5

"M" CAMERAS

The Leica is the magnificent result of almost one half century of progress in the design of 35mm cameras. Since 1924, when the introduction of the first Leica launched the present era of 35mm photography, constant improvements have been added to make operation easier and success more certain.

LEICA M5 WITH THROUGH-THE-LENS METERING

- All-metal body with hinged back and carrying strap eyelets on each side, available with bright or black chrome top and cover and baseplate. ¼ inch tripod bush.
- Built-in brilliant-frame viewfinder.
- Coupled rangefinder with 68.5 mm base length.
- Bright-line illuminated frame for focal lengths of 35, 50, 90, 135mm; changes automatically on fitting the appropriate lens.
- Automatic parallax compensation.
- Image frame selector.
- Interchangeable lenses in quick-change bayonet mounts.
- Selective through-the-lens exposure meter with built-in CdS cell. Meter needle and follow pointer visible in the finder, coupled with aperture settings, shutter speeds, and film speeds from 6 to 3,200 ASA (9 to 39 DIN). Takes Mallory PX 625 mercury battery.
- Measuring range of 21 EV steps; exposure times marked on the shutter speed dial. Visible in the viewfinder from 1/1000 second to 30 seconds.
- Meter circuit automatically switches off after exposure — switched on by winding the film.
- Battery test switch built into finder frame selector.
- Focal plane shutter with speeds of 1/2, 1/4, 1/8, 1/15, 1/30 (1/50), 1/60, 1/125, 1/250, 1/500 and 1/1000 second, and bulb setting.
- Automatic flash synchronization for flashbulbs up to 1/500 second and electronic flash up to 1/50 second.
- Separate standard flash outlets (M and X) for bulbs and electronic flash respectively.
- Hot-shoe outlet (X-synchronization) in the accessory shoe.
- Adjustable self timer (delayed action release).
- Rapid winding lever tensions the shutter and advances the film.
- Rapid film loading: removable quick-loading take-up spool for all standard 35mm films (with or without trimmed leader).
- Rewind crank in base for rewinding the exposed film; blocks the film transport when the crank is swung out.
- Exposure counter with automatic zero return on opening the baseplate.
- Film type indicator combined with calculator for converting alternative aperture / exposure time combinations from exposure readings.
- Film plane index mark.
- Adjustable carrying strap with non-slip pad.

10,501	**Leica M5 Chrome**, without lens . . . . .
10,502	**Leica M5 black**, without lens . . . . .
10,503	**Leica M5 chrome**, with 50mm Summicron f/2 lens . . . . .
10,504	**Leica M5 chrome**, with 50mm Summilux f/1.4 lens . . . . .
10,505	**Leica M5 black**, with 50mm Summicron f/2 lens . . . . .
10,506	**Leica M5 black**, with 50 mm Summilux f/1.4 lens . . . . .
14,541	**Soft Black Leather Eveready Case**, for Leica M5 . . . . .
14.544	**Hard Leather Eveready Case**, for Leica M5 . . . . .
14190	**Carrying Strap** for M5 with 2 strap lugs . . . . .
14196	**Carrying Strap** for M5 with 3 strap lugs . . . . .
14,183	**Double Synchro Outlet Cover**, for Leica M5 (replacement) . . . .

#10506 Leica M5 with 50mm Summilux f1.4 lens

The Leica MDa is a camera designed for industrial, medical and scientific use with the Visoflex reflex housing, Micro-IBSO and other specialized attachments. It is similar in construction to the M 4 camera but lacks a rangefinder and viewfinder. Shutter speeds are from one to 1 / 1000th of a second, and the MDa accepts the lenses and accessories used with the other "M" Leica models.

FRAME IDENTIFICATION

For laboratory use, the MDa permits frame identification to be printed on the negative at the same time the picture is made. This is accomplished by using a special baseplate (available as an accessory) which permits a transparent plastic strip to be inserted and positioned across one short edge of the film gate, in front of the film. Information marked on the plastic strip is thus printed on the negative when the exposure is made.

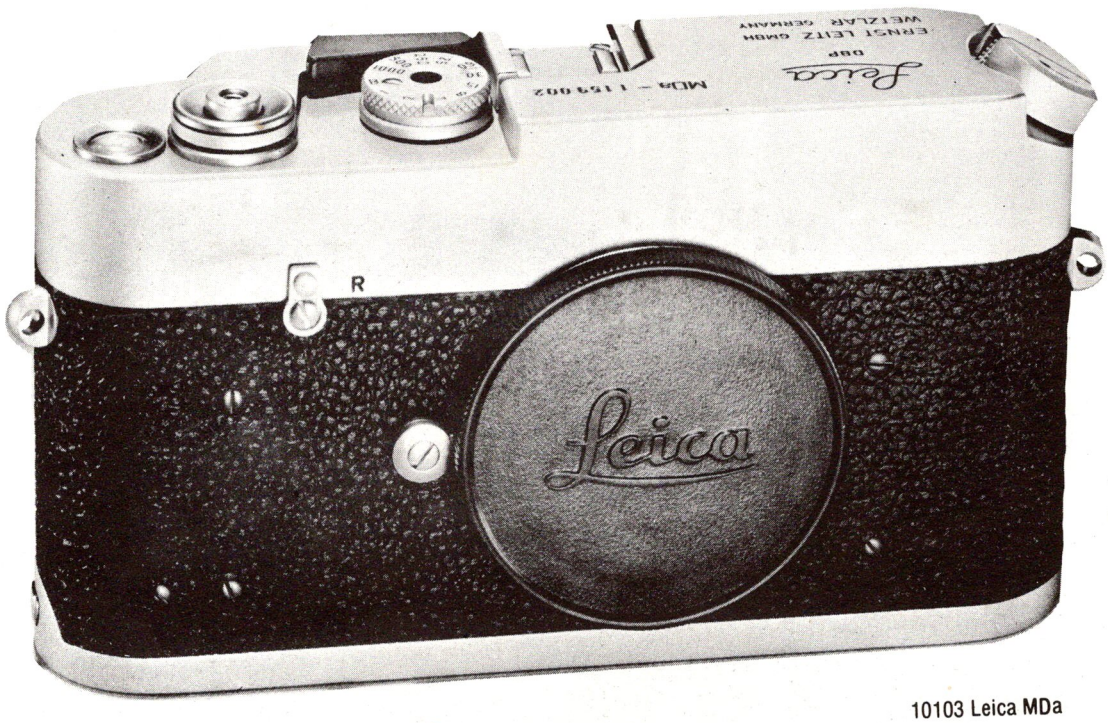
10,103 **Leica MDa** without lens and with standard baseplate . . . . . .

10,913 **Leica MDa** without lens, with special baseplate #14,142 . . . .

14,142 **Special Baseplate** for Leica MDa. Permits identification strips to be inserted into camera . . . . . .

14,170 **Negative Marking Strips** for use with special baseplate, #14,131 & #14,142. Can be written on and positioned in front of film in camera for frame identification at time of exposure. Package of 100 strips . . . . . .

10913 Leica MDa with special baseplate



10103 Leica MDa

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LEICA CL-COMPACT RF CAMERA

Leica CL

Only Leitz could have created the CL, a true take-it-anywhere camera with all the precision and performance of a Leica. And of all compact cameras, only the CL has Leica's 50 years of leadership in 35mm photography behind it.

Although it is small in size and relatively small in price, the CL should not be confused with other compact cameras. The CL was designed by the same engineers who created the Leica M5 and Leicaflex SL, the finest 35mm cameras in the world.

- Compact, 35mm rangefinder / viewfinder with interchangeable lenses and through-the-lens metering.
- Uses standard 35mm film cassettes.
- Leica M bayonet mount.
- All-metal body with black anodized aluminum front panel, base and top cover; balance of back, including side, covered in black-grained plastic.
- Interchangeable Leica M lenses on the Leica CL. The bayonet lens mount of the Leica CL is identical with that of the Leica M models. Hence numerous Leica M lenses are usable on the Leica CL. In addition, older screwmount lenses can be used with the appropriate bayonet / screw adapter rings.
- The Lecia CL finder incorporates bright-line frames for the 40mm, 50mm and 90mm fields of view. The total field is approximately that for 35mm lenses, 28mm lenses require the finder.
- Standard lens, 40mm Summicron-C f / 2; symmetrical Gauss type, 6 elements in 4 components; 57° diagonal angle of view; nearest focus 2¾ feet; aperture range f / 2-f / 16 with intermediate half stops.
- Long focus lens, 90mm Elmar-C f / 4; triplet derivative, 4 air-spaced elements; 27° diagonal angle of view; nearest focus 3⅓ feet; aperture range f / 4-f / 22 with intermediate half stops.
- Both lenses complete with lens hood, cap, rear cover, and (90mm only) soft leather pouch.
- Focal plane shutter with cloth blinds; runs vertically downward . . . 1 / 1000, 1 / 500, 1 / 250, 1 / 125, 1 / 60, 1 / 30, 1 / 15, 1 / 8, 1 / 4, 1 / 2 second and B . . . intermediate settings in entire range except between 1 / 30 and 1 / 60 second.
- X-sync at all speeds up to 1 / 60 second for electronic flash and flash bulbs . . . hot-shoe contact in accessory shoe on camera body top.
- Through-the-lens exposure metering.
- Exposure meter is a CdS cell on a swingout arm (7.5mm diam.) approximately 8mm in front of film plane . . . cell swings out of way as shutter release is depressed; returns to metering position upon film advancement.
- Selective (large spot) meter readings; coupled with shutter speed selection and set by zero alignment of meter needle on adjustment of lens aperature . . . acceptance angle is 11-1 / 2° with 40mm lens; 5° with 90mm lens . . . measuring field centered in image area: approximately double rangefinder field in finder with 40mm lens; identical with rangefinder field with 90mm lens.
- Film setting range is 25-1600 ASA, 15-33 DIN, and set on dial in center of shutter speed dial.
- System powered by 1.35 V mercury oxide button cell, PX625 or equivalent . . . battery test button.
- Brilliant-frame finder, 0.6 times magnification . . . reflected image frames corresponding to view of 40mm, 50mm and 90mm lenses.
- Automatic parallax correction of frame masks . . . viewfinder indications and signals: (1) exposure meter needle and zero mark; (2) swing-in battery test mark; (3) red warning signal indicates meter measuring limit at certain film speeds; (4) shutter speed scale and indicator.
- Combined split-image and double-image rangefinder with measuring field in center of viewfinder.
- Camera body 4¾ inch long x 3 inch high x 1¼ inch deep, without lens; 2⅝ inch deep with 40mm lens mounted; 4⅛ inch deep with 90mm lens mounted; strap lugs, winding lever, accessory shoe and shutter speed dial protrude about 5 to 10mm beyond basic body dimensions.
- Camera body without lens, 13 ounces; 40mm lens without hood, 4¼ ounces; 90mm lens without hood, 8¾ ounces.

LEICA CL

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LEICA CL-COMPACT RF CAMERA

10,700 Leica CL Body with strap #14,194 and lens opening cover #14,195 .....
11,542 40mm Summicron-C f / 2 lens with lens hood #12,518, rear cap and front cap .....
xxxxx Leica CL Camera with 40mm Summicron-C lens (#10,700 plus #11,542) .....
14,542 Eveready Case, soft black leather (similar to M5 case #14,541) .....
11,540 90mm Elmar-C f / 4 lens with pouch case #14,543, lens hood #12,517, front and rear lens caps .....
14,825 Combination Case black (similar to cases #14,823 and #14,824) ....
14,197 Wrist Strap black .....
14,194 Neck Strap black, replacement .....
14,195 Lens Opening Cover black, replacement .....
14,191 Front Lens Cap black, replacement .....
12,518 Lens Hood for 40mm lens, collapsible black rubber, replacement ....
12,517 Lens Hood for 90mm lens, collapsible black rubber, replacement ....
14,051 Rear Lens Cap black, replacement (same as for M cameras) .....
14,543 Soft black leather pouch for 90mm lens, replacement.....
98,150 UVa Filter .....
98,151 Skylight Filter.....
98,152 Medium Yellow Filter .....
98,153 Orange Filter.....
98,154 Green Filter .....
98,155 Red Filter.....
98,156 85 Type A to daylight .....
98,157 85B Type B to daylight .....

INTERCHANGEABLE LEICA M LENSES ON THE LEICA CL

The bayonet lens mount of the LEICA® CL is identical with that of the LEICA M models. Hence numerous LEICA M lenses are usable on the LEICA CL. In addition, older screw-mounted lenses can be used with the appropriate bayonet / screw adapter rings (Order No. 14 097 for 50mm, Order No. 14 098 for 28mm and 90mm and Order No. 14 099 for 35mm).

The LEICA CL finder incorporates bright-line frames for the 40mm, 50mm, and 90mm fields of view. The total visible field is approximately that for 35mm lenses. 28mm lenses require the finder (Order No. 12 007).

Exceptions:

1. The following lenses, when used on the LEICA CL, require removal of their lens hoods, particularly at close distances:

35mm SUMMICRON® ..... **f / 2**
35mm SUMMILUX® ..... **f / 1.4**
50mm SUMMILUX® ..... **f / 1.4**
90mm ELMARIT® ..... **f / 2.8**

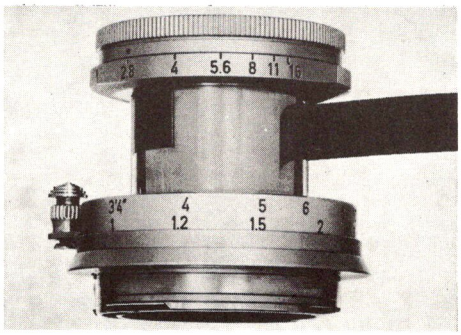
When used on the LEICA CL, the high speed 50mm SUMMILUX f / 1.4 lens should be stopped down to at least f / 2.

2. Lenses with extended focusing range:
The LEICA CL rangefinder covers a focusing range from infinity down to 32" (0.8m). Some LEICA M lenses focus on still nearer distances, but only by using their distance scales, not by rangefinder:

28mm ELMARIT® ..... **f / 2.8**
35mm SUMMICRON® ..... **f / 2**
50mm SUMMICRON® ..... **f / 2** (Order No. 11817)

The 50mm SUMMICRON f / 2 (dual-range) can be used without its near-focusing attachment only, i.e. down to a distance of 3'4" (1m).

3. Collapsible lenses need safety strips to limit the retraction of the lens barrel. These can be fitted by the user, employing embossing tapes available everywhere for Dymo and similar embossing machines. Apply the tape around the lens barrel, leaving a gap of about 1mm. To cut the right length first do a paper template.



Collapsible lens:		Required tape width
50mm ELMAR®	**f / 3.5**	**9.5mm (⅜ inch)**
50mm ELMAR	**f / 2.8**	
50mm SUMMAR	**f / 2**	
50mm SUMMITAR	**f / 2**	
50mm SUMMICRON	**f / 2**	
90mm ELMAR	**f / 4**	
50mm HEKTOR®	**f / 2.5**	**12.7 mm (½ inch)**

4. The following lenses of the LEICA M range cannot be used on the LEICA CL:

(a.) Lenses whose rear mount protrudes too far into the camera body, such as the 28mm ELMARIT f / 2.8 (serial numbers below 2314921) and the 21mm SUPER-ANGULON.

(b.) Lenses with a finder attachment such as the 35mm wide angle lenses for the LEICA M3 and the 135mm ELMARIT f / 2.8.

(c.) The 50mm Dual-Range SUMMICRON, except without finder attachment.

(d.) The 90mm SUMMICRON f / 2.

CL Lenses on LEICA M cameras

Screw-mounted LEICA lenses and lenses for the LEICA M models have a differential helical focusing movement, i.e. the rear focusing barrel bearing against the rangefinder coupling roller moves only in and out. For a more compact and lightweight design, the 40mm SUMMICRON-C f / 2 and 90mm ELMAR-C f / 4 for the LEICA CL have instead a direct rear focusing cam. These lenses can be mounted on the LEICA M, but do not provide precise coupling with the rangefinder. For this reason we do not recommend using the CL lenses on the LEICA M cameras.

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LEICAFLEX SL

SLR CAMERAS

DISC. -

This is the camera which brought Leica precision and the famous "Leica feel" to SLR photography. Wide-open thru-the-lens metering measures a central, circular area equal to one-sixth the acceptance angle of any lens attached to the camera. The area measured is sufficiently large to integrate typical scene brightness yet selective enough for accurate spot readings. ASA settings range from 8 to 6400. Through the use of a secondary mirror behind the reflex mirror a light beam is directed to the photo cell on the inside bottom of the camera. This is a highly precise yet simple system measuring the exact amount of light transmitted to the film plane. Meter operation is accurate to minus 5° F.

The meter needle and shutter speed are displayed in the viewfinder which shows an evenly bright, full image area. This area is 23mm by 35mm which corresponds to the size of commercially produced cardboard slides. The viewing screen consists of extra fine microprisms and focusing is possible throughout its entire area. A central focusing spot of relatively coarse microprisms gives an image which snaps in and out of sharpness for rapid focusing. A major feature of the SL is the exceptional brightness of the viewfinder which additionally adds to its focusing accuracy. Viewfinder magnification with the 50mm lens is 0.9. A plain ground glass version is available which is especially valuable for close-up and telephotography.

Shutter speeds range from 1/2000 sec. to 1 sec. and Bulb. Intermediate speeds are permitted throughout the entire range except from 1/60 to 1/30 second and from 1/8 to 1/4 second. A 9-millisecond shutter travel speed permits electronic flash synchronization at 1/100 second. Unlike most SLR cameras, in which the mirror is stopped by striking a strip of foam material cemented to the camera housing, the Leicaflex SL mirror is intercepted part way up by a lever which brings the mirror to a gentle stop, just prior to the shutter release. This effectively eliminates mirror-caused vibration. A true rapid-loading system for use with tongued or untongued (bulk-loaded) films is virtually fool-proof.

The Leicaflex SL system includes eighteen lenses from 21mm to 800mm. With the exception of the 35mm PA-Curtagon, 100mm Macro-Elmar and 400mm, 560mm and 800mm Telyt lenses, all Leicaflex lenses are fully automatic. This range of lenses covers diagonally measured angles of view from 3° to 92°. Reproduction ratios with both the 60mm Macro-Elmarit and 100mm Macro-Elmar with Bellows-R extend from infinity to 1:1 without additional accessories. Visoflex lenses (65mm to 560mm) of the Leica system can be used on the SL with the addition of an adapter ring, although without automatic diaphragm operation.

FEATURES:

- Selective thru-the-lens metering
- Full range of lenses from 21mm to 800mm
- Vibrationless gear dampened instant return mirror
- Depth of field preview button
- Extremely bright viewfinder
- Simple, fool-proof rapid film loading
- X-synchronization at 1/100 second
- Remarkably quiet for an SLR design
- Shutter speeds up to 1/2000 second
- Free choice of shutter speed / lens stop combinations
- Self-timer (exception: SL MOT)
- ASA speeds from 8 to 6400
- Leicaflex SL MOT for motorized operation

CATALOG NUMBER	ITEM
10,011	Leicaflex SL, without lens
10,012	Leicaflex SL, in black chrome finish, without lens
10,228	Leicaflex SL, with 50mm Auto-Aperture Summicron-R f/2 lens, reversible lens hood and Series 6 Filter Retaining Ring.

LEICA® R-3 ELECTRONIC

SLR CAMERAS

The electronic Leica R-3, latest of the world-famous Leitz single lens reflex cameras, offers exposure control with a choice of integrated area metering or selective area metering – both functioning in the automatic mode. It features a silken smooth, six bladed, Leitz initiated, all metal Copal-Leitz focal plane shutter which is electronically controlled, and offers continuous exposure times from 4 full seconds to 1/1000 second. There is a plus or minus two stops override, continuously variable even with automatic operation.

The dual exposure metering modes offer eight separate, distinct metering options to cover any conceivable photographic application. For most photographic situations, with auto-aperture lenses you simply select the desired aperture and the camera will provide the correct shutter speed for perfect exposure. A handy, easy-to-use control permits instant changeover from integrated area metering to selective area metering.

The superb new Leica R-3 is loaded with additional features, such as multi-exposure capability with perfect film registeration, an easy to use depth of field preview lever, an illuminated battery test, a visual film transport indicator, an automatic zero return film counting dial, an on-off switch, X and M flash contacts and an additional hot shoe flash contact.

CAT. #	DESCRIPTION
10031	Leica R-3 electronic, silver chrome, without lens.
10032	Leica R-3 electronic, black chrome, without lens.
11215	Summicron-R 50mm f/2 Canadian-made.
11922	Elmar-R 180mm f/4.
14506	Eveready Case for Leica R-3.
14507	Eveready Case for Leica R-3 with deeper front part to accept a greater variety of lenses.
14828	Combination Case for Leica R-3.
14287	90° Finder for Leica R-3.
14226	Shoulder Strap for Leica R-3.
14183	Syncro Outlet Cover for Leica R-3.
14103	Lens Opening Cover for Leica R-3.
16541	Elpro Close-up lens #1 for the 50mm f/2 Summicron lens 11215
16542	Elpro Close-up lens #2 for the 50mm f/2 Summicron lens 11215
16543	Elpro Close-up lens #3 for the 180mm Elmar-R lens 11922
16544	Elpro Close-up lens #4 for the 180mm Elmar-R f/4 lens 11922.

Continued on page 6

The extremely brilliant viewfinder screen offers three focusing methods: a large split image rangefinder, a coarse microprism collar surrounding the split image rangefinder, and the balance of the finder field is comprised of ultra-fine microprisms enabling you to focus to the extreme corners. The outer limits of the microprism collar precisely define the metering field when the camera is set for selective area metering and there is an easy-to-use memory lock which enables the user to hold a selective area measurment up to 30 seconds while the picture can be composed.

The camera back is provided with a clear, light-tight window located over the film cartridge. It is, therefore, easy to see whether the camera is loaded or not and, if loaded, to read the type of film and film speed designated on most international standard film cartridges.

LEICAFLEX SL 2

SLR CAMERAS

The Leicaflex SL 2 maintains the standard of excellence set by the famous Leicaflex SL and brings Leica precision and the famous "Leica feel" to SLR photography. Wide open, through-the-lens metering measures a central, circular 7mm diameter area equal to one-sixth the acceptance angle of any lens attached to the camera. The area measured is sufficiently large to integrate typical scene brightness yet selective enough for accurate spot readings. ASA settings range from 8 to 6400.

The Leicaflex SL 2 meter features a greatly extended measuring range....8 times as sensitive as the Leicaflex SL and equal to the Leica M5. The increased meter sensitivity is especially helpful in low light conditions or with long bellows extensions. Through the use of a secondary mirror behind the reflex mirror a light beam is directed to the photo cell on the inside bottom of the camera. This is a highly precise yet simple system measuring the exact amount of light transmitted to the film plane. Meter operation is accurate to minus 5° F.

The meter needle, shutter speed, and lens opening are displayed in the viewfinder which shows an evenly bright, full image area. This area is 23mmx35mm which corresponds to the size of commercially produced cardboard slides. The viewing screen consists of extra fine microprisms and focusing is possible throughout its entire area. A central split image rangefinder wedge 3mm in diameter surrounded by a 7mm diameter circle of coarse microprisms provides easier focusing especially with wide angle lenses 16mm through 35mm.

With automatic diaphragm double cam Leicaflex lenses the aperture selected (f/1.4 to f-22) is shown on a scale next to the shutter speed scale. Meter needle visibility is greatly enhanced in poor light by pressing a button on the side of the pentaprism which silhouettes the needle against an illuminated panel.

A major feature of the Leicaflex SL 2 is the exceptional brightness of the viewfinder which additionally adds to its focusing accuracy. Viewfinder magnification with the 50mm lens is 0.86. In addition to the microprism/split image viewfinder screen there are two other choices: a ground glass screen valuable for close-up and telephotography and a standard microprism screen without the split image rangefinder wedge. Focusing screen preference should be stated when ordering the SL 2.

Shutter speeds range from 1/2000 second to 1 second and Bulb. Intermediate speeds are permitted throughout the entire range except from 1/60 second to 1/30 second and from 1/8 second to 1/4 second. A 9 millisecond shutter travel speed permits electronic flash synchronization at 1/100 second. The Leicaflex SL 2 is equipped with X and M synchronization contacts and also features an X synchronized hot shoe contact in the accessory shoe.

Unlike most SLR cameras, in which the mirror is stopped by striking a strip of foam material cemented to the camera housing, the Leicaflex SL 2 mirror is intercepted part way up by a lever which brings the mirror to a gentle stop, just prior to the shutter release. This effectively eliminates mirror-caused vibration. The Leicaflex SL 2 camera back is securely locked in the closed position by a safety catch. Opening the back is simplicity itself....release the safety catch, pull up the rewind crank, and the back opens. A true rapid-loading system for use with tongued or untongued (bulk-loaded) films is virtually fool proof.

Lens changing on the Leicaflex SL 2 is a rapid operation due to the bayonet lens mount design. The lens lock release button is located on the camera body where it can be comfortably operated with the left thumb. Rapid lens interchangeability is appreciated especially when photographing a constantly changing scene or event.

The Leicaflex SL 2 system includes 21 lenses from 16mm to 800mm. Three exciting new lenses, the 16mm f/2.8 Elmarit-R, 24mm f/2.8 Elmarit-R and 80-200mm f/4.5 Vario Elmar-R further extend the capabilities of the SL 2.

With the exception of the 35mm PA Curtagon, 100mm Macro-Elmar, and 400, 560, and 800mm Telyt lenses, all Leicaflex lenses are fully automatic. Diagonally measured angles of view range from 180°(16mm lens) to 3°(800mm lens).

Reproduction ratios with both the 60mm f/2.8 Macro-Elmarit-R and 100mm f/4.0 Macro Elmar with Bellows-R extend from infinity to 1:1 without additional accessories. Visoflex lenses (65mm to 560mm) of the Leica System can be used on the SL 2 with the addition of an adapter ring, in the stop-down metering mode.

The Leicaflex SL 2 is the nucleus of a comprehensive photographic system built to traditional Leitz standards of uncompromising quality. For the photographer who demands the finest the Leicaflex SL 2 is the obvious choice.

Leicaflex SL 2 body #10022 with 50mm f2.0 lens #11,228.

FEATURES OF THE SL 2:

- Selective through-the-lens metering; meter sensitivity equal to the Leica M5.
- ASA speeds from 8 to 6400.
- Apertures visible in viewfinder next to shutter speeds when double cam SL lenses are used.
- Illuminated panel increasing meter needle visibility in low light conditions.
- Choice of 3 viewfinder screens: split image/microprism, ground glass, or microprism. Screen preference should be stated when ordering.
- X-synchronization at 1/100 second; hot shoe outlet in accessory shoe.
- Secure camera back locking mechanism via safety catch.
- Black or satin chrome finish.
- Camera body shape fits in hand beautifully; three position film advance lever.
- Body mounted lens lock button easily operated with left thumb.
- Large shutter speed dial permitting speed change without removing eye from finder.
- Flattened eyepiece permitting excellent viewfinder visibility even for eyeglass wearers.
- Vibrationless gear dampened instant return mirror.
- Depth of field preview button.
- Simple, fool-proof, rapid film loading.
- Shutter speeds to 1/2000 second; shutter remarkably quiet for an SLR design.
- Free choice of shutter speed/aperture combinations.
- Self-timer with 5-10 second delay.
- Full range of lenses, 16mm through 800mm.
- Uses new Leitz lenses 16mm f/2.8 Elmarit-R, 24mm f/2.8 Elmarit-R, and 80mm-20mm f/4.5 Vario Elmar-R.
- Custom built feel that only a Leitz instrument has.

10021 Leicaflex SL 2, silver chrome finish, without lens. Split image screen.
10081 With micro prism.
10082 With ground glass.
10022 Leicaflex SL 2, black chrome finish, without lens. Split image screen.
10083 With micro prism.
10084 With ground glass.
14504 Eveready carrying case for Leicaflex SL 2.

LEICAFLEX SL 2 MOT

SLR CAMERAS

The Leicaflex SL 2 MOT incorporates most Leicaflex SL 2 features and is available for purposes requiring single exposures with automatic film transport and shutter wind, sequence photography, time lapse exposures and / or remote operation by cable, radio or other device. The Leicaflex SL 2 MOT is used with Leicaflex motor #14077.

The maximum exposure rate at continuous operation is 3-4 frames per second at appropriate shutter speeds. Film transport and shutter wind occur only at the completion of the exposure no matter what shutter speed is used. The motor, supplied separately, operates from 10 AA batteries or a rechargeable Ni Cad battery pack #98105. The battery pack is easily removed for cold weather operation when the battery should be kept warm while not in use.

The Leicaflex SL 2 MOT is also fully operable without the motor. Manual operation is identical to that of the Leicaflex SL 2, however the SL 2 MOT does not have a self-timer. The SL 2 MOT is supplied in black chrome finish only and is normally supplied with ground glass viewfinder screen.

For applications in sports, news, wildlife, fashion, scientific, sequence and time-lapse photography the motorized SL 2 MOT is ideal. The Leicaflex SL 2 MOT offers the complete versatility of the 35mm format and the traditional excellence of Leitz craftmanship in design and manufacture.

FEATURES OF THE SL 2 MOT:

- Selective through-the-lens metering; meter sensitivity equal to the Leica M5.
- ASA speeds from 8 to 6400.
- Apertures visible in viewfinder next to shutter speeds when double cam SL lenses are used.
- Illuminated panel increasing meter needle visibility in low light conditions.
- Normally supplied with ground glass viewfinder screen.
- X-synchronization at 1/100 second; hot shoe outlet in accessory shoe.
- Secure camera back locking mechanism via safety catch.
- Black chrome finish.
- Camera body shape fits hand beautifully.
- Body mounted lens lock button easily operated with left thumb.
- Large shutter speed dial permitting speed change without removing eye from finder.
- Flattened eyepiece permitting excellent viewfinder visibility even for eyeglass wearers.
- Vibrationless, gear-dampened, instant return mirror.
- Depth of field preview button.
- Simple, fool-proof, rapid film loading.
- Shutter speeds to 1/2000 second; shutter remarkably quiet for an SLR design.
- Free choice of shutter speed/aperture combinations.
- Full range of lenses 16mm through 800mm.
- Uses new Leitz lenses 16mm f/2.8 Elmarit-R, 24mm f/2.8 Elmarit-R, and 80-mm-200mm f/4.5 Vario Elmar-R.
- Custom built feel that only a Leitz instrument has.

Cat. #	Item Description
10023	Leicaflex SL 2 MOT, body only, black chrome finish, split image viewfinder screen, for use with motor drive #14077. The SL 2 MOT body does not have a self-timer or exposure meter battery disconnect switch on film advance lever.
10085	With ground glass.
10086	With micro prism.
14077	Leicaflex Motor for use with Leicaflex SL 2 MOT #10023 and SL MOT #10013.

Leicaflex SL 2 MOT #10,023 with motor #14,077, hand grip #14,181 and 90mm f2.0 Summicron-R lens #11,219.

LEICAFLEX MOTOR

The Leicaflex motor 14077 attaches directly to the Leicaflex SL 2 MOT camera body 10023 by a single ¼-20 screw. The Leicaflex motor provides a choice of continuous run or single exposure. Of particular importance to the professional sports or news photographer is the ability to load the camera without removing the motor. The loading operation can be accomplished in seconds. Battery packs can be changed very quickly; this is especially important when shooting a great number of rolls or when working in low temperatures. The Leicaflex Motor # 14,077 provides a 3-4 frames per second framing rate when used with the fully-charged Ni-Cad battery pack # 98,105.

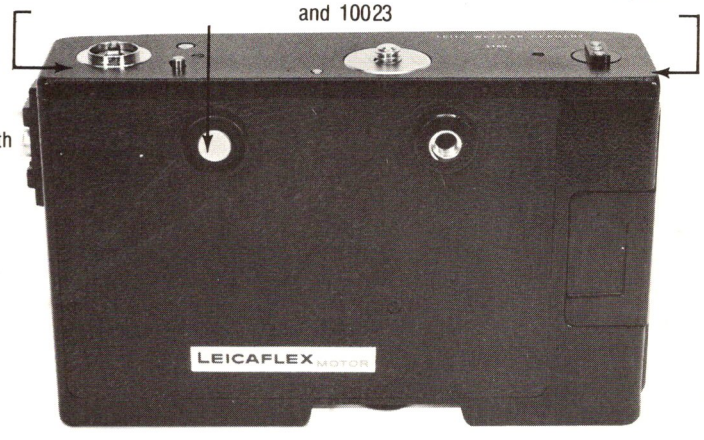
The Leicaflex SL 2 MOT with motor drive is a valuable tool in the hands of the scientist for recording phenomena such as plant growth, pollution discharge, etc. The electronic control unit #22226 is used to control the number of exposures and time between exposures. Sports, news, and wildlife photographers use the SL 2 MOT in combination with long lenses such as the 180mm-560mm to produce stunning close-ups from a distance. Portrait and fashion photographers value the SL 2 MOT as an action-ready camera to obtain photographs that otherwise may not have been obtained due to time lost in manually advancing film in a non-motorized camera.

The Leicaflex SL 2 MOT with motor is an exciting camera system usable by all photographers for an endless variety of applications.

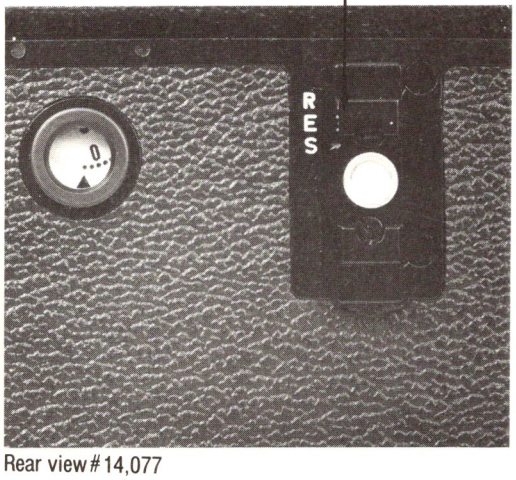
Leicaflex SL 2 MOT #10,023 with motor #14,077, hand grip #14,181 and 90mm f2.0 Summicron-R lens #11,219.

LEICAFLEX MOTOR

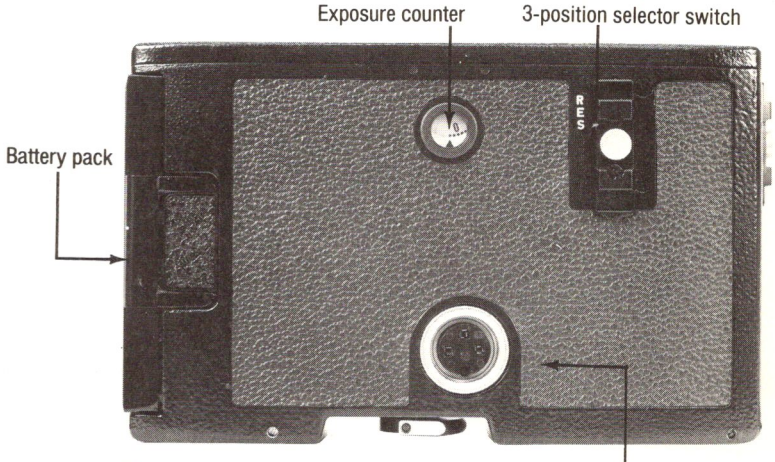
14077	Leicaflex Motor for use with Leicaflex SL 2 MOT only. Uses 10 AA cells in battery pack #14147. Sealed Ni-Cad pack #98105 is recommended for professional use.
10023	Leicaflex SL 2 MOT, body only, black chrome finish, for use with motor drive #14077. Body with split image focus screen.
10085	As above, but equipped with ground glass screen.
10086	As above, but equipped with micro prism screen.



Front view #14,077



Rear view # 14,077



Rear view #14,077

ACCESSORIES FOR LEICAFLEX SL 2 MOTOR DRIVE

14148 Tripod Bracket - especially helpful when heavy lenses (180mm-250mm) are used. Cannot be used when hand grip 14181 is used.

14181 Hand Grip - cannot be used when tripod bracket 14148 is used.

98105 Ni-Cad Battery pack for Leicaflex Motor complete in battery housing. Especially recommended for professional use.

98106 Battery charger built into a housing with a plug to fit standard outlet with connecting cord and plug to the battery.

14147 Battery housing for Leicaflex Motor (as replacement).

14176 Remote control release, with connecting cable 8 ft. long.

14177 Remote control release with exposure counter, without connecting cable. Requires cable 14178 or 14179.

14179 Extension cord for remote control release 14176 and 14177, 16 ft. long.

14178 Extension cord, same as 14179, 80 ft. long.

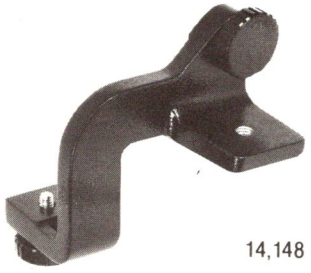
22226 Electronic control unit for release of single exposures and controlled sequence photography.

14187 Connecting cord connects Leicaflex motor to electronic control unit 22226.

14180 Twin cable. This can be used to connect two control units, such as radio control and counter, to the Leicaflex motor.

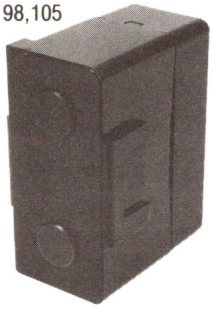
14185 Tandem coupling device for 2 Leicaflex SL 2 MOTs.

14189 Electric release for universal grip 14188, Recommended when using SL 2 MOT/MOTOR combination with 400mm and 560mm f6.8 Telyt lenses.

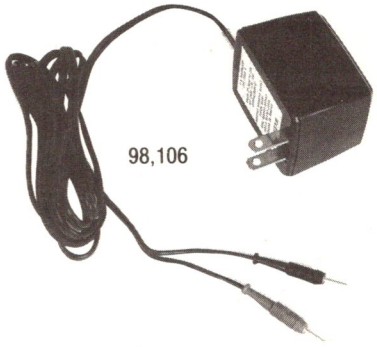


14,148

14,181



98,105



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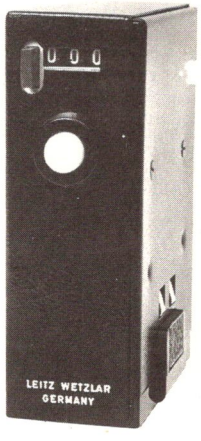
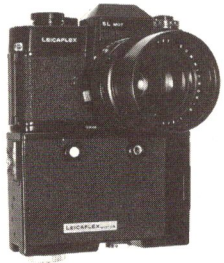
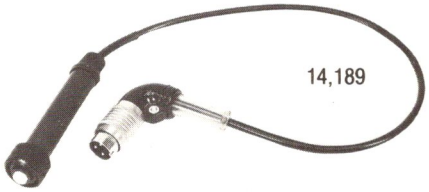
14,187



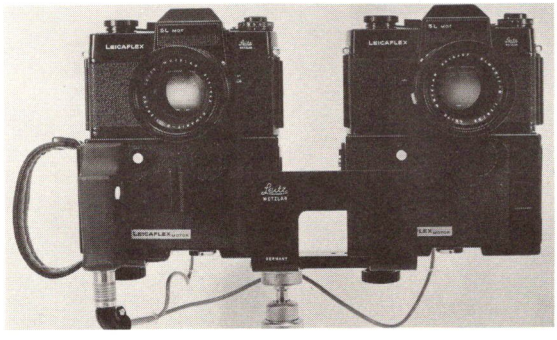
14,177





14,189

Typical arrangement with #22,226 electronic control unit



Tandem Coupling Device #14,185 consisting of bracket, electrical release cables and special hand grip.

22,226

QUICK REFERENCE CHART

LEICA LENSES

Leitz®
E.LEITZ, INC.
ROCKLEIGH
N.J. 07647

SPECIFICATIONS \ LENSES	Super-Angulon 21mm f3.4	Elmarit 28mm f2.8 above #2314921	Summicron 35mm f2.0	Summilux 35mm f1.4	Summicron 50mm f2.0	Summilux 50mm f1.4	Noctilux 50mm f1.2	Tele-Elmarit 90mm f2.8 above #2,585,501	Elmarit 90mm f2.8	Summicron 90mm f2.0	Tele-Elmar 135mm f4.0	Elmarit 135mm f2.8
Catalogue number	11103	11801	11309	11870	11817	11114	11820	11800	11129	11123	11851	11829
Angle of view	92°	76°	64°	64°	45°	45°	45°	27°	27°	27°	18°	18°
Number of elements	8	8	6	7	6	7	6	4	5	6	5	5
Filter	Series 7 in hood #12501	Series 7 in hood #12501	Series 7 in hood #12504	Series 7 in hood #12504	E-39	E-43	Series 8 in hood #12503	E-39	E-39	E-48	E-39	Series 7 held by ring #14161
Polarizer	—	—	13352	13352	13352	13351	—	13352	13352	—	13352	—
Leitz screw-in filter designation	E-48	E-48	E-39	—	E-39	E-43	—	E-39	E-39	E-48	E-39	—
Filter thread	48 x 0.75	48 x 0.75	39 x 0.50	—	39 x 0.50	43 x 0.75	—	39 x 0.50	39 x 0.50	48 x 0.75	39 x 0.50	—
Lenshood	12501	12501	12504	12504	12585	12586	12503	12575	12575	—	12575	—
Smallest aperture	f22	f22	f16	f16	f16	f16	f16	f16	f22	f22	f22	f32
Focusing range	28″ to ∞	28″ to ∞	28″ to ∞	40″ to ∞	28″ to ∞	40″ to ∞	40″ to ∞	40″ to ∞	40″ to ∞	40″ to ∞	5′ to ∞	5′ to ∞
Smallest field covered	15″ x 23″	21″ x 32″	17″ x 26″	24″ x 38″	11″x 16½″	16″ x 25″	16″ x 25″	9″ x 13″	9″ x 13″	9″ x 13″	9″ x 13″	9″ x 13″
Finish	black	black	black	black	black	black	black	black	black	black	black	black
Finder	12002	12007	—	—	—	—	—	—	—	—	—	—
Front cap	14102	14102	14122	14143	14122	14123	14102	14122	14122	14124	14122	14124
Rear cap	14042	14051	14051	14051	14051	14051	14051	14051	14051	14051	14051	14051
Case	98281 (#1)	98281 (#1)	98281 (#1)	98281 (#1)	98282 (#2)	98282 (#2)	98283 (#3)	98292 (#12)	98292 (#12)	98283 (#3)	98285 (#5)	98293 (#13)
Weight	10.6 oz.	7.9 oz.	6 oz.	8.7 oz.	9.2 oz.	12.7 oz.	18.2 oz.	8 oz.	11.7 oz.	23.3 oz.	18 oz.	25.8 oz.
Length with hood	1¾″	2⅜″	1¾″	1 11/16″	2 7/16″	2¾″	3 1/16″	3⅞″	4⅞″	4″	5 9/16″	4″
Length less hood	1 3/16″	1¾″	1⅛″	1⅛″	1 11/16″	1¾″	2⅛″	2⅜″	3 7/16″	—	4⅛″	—
Maximum diameter with hood	2⅞″	2⅞″	2½″	2½″	2⅜″	2 11/16″	3⅛″	2¼″	2¼″	2½″	2¼″	2⅝″ 3⅞″ finder width
Maximum diameter less hood	2 1/16″	2 1/16″	2 3/16″	2¼″	2″	2″	2 5/16″	2″	2″	—	2¼″	—
Meter with M-5?	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Usable on CL?	no	yes	yes	yes	yes	yes, close to at least f2.0	no	yes, close to at least f4.0	yes, close to at least f4.0	no	no	no

QUICK REFERENCE CHART

VISOFLEX LENSES

Leitz®
E. LEITZ, INC.
ROCKLEIGH
N.J. 07647

SPECIFICATIONS \ LENSES	Elmar 65mm f3.5	Elmarit 90mm f2.8	Summicron 90mm f2.0	Tele-Elmar 135mm f4.0	Elmarit 135mm f2.8	Telyt 200mm f4.0	Telyt 280mm f4.8	Telyt 400mm f6.8	Telyt 560mm f6.8
Catalog number	11162	11026	11133	11852	11828	11063	11914	11966	11864
Angle of view	36°	27°	27°	18°	18°	12°	8.5°	6°	4.3°
Number of elements	4	5	6	5	5	4	4	2	2
Filter	Series 6 held by ring 14160	E-39	E-48	E-39	Series 7 held by ring 14161	E-58	Series 8 held by ring 14169	Series 7 in slot Series 8 held by ring 14165	Series 7 held in slot
Polarizer	13358	13352	—	13352	13359	—	—	13372 with 14165 and 98170	13370 in slot
Leitz screw-in filter designation	—	E-39	E-48	E-39	—	E-58	—	—	—
Filter thread	44.0 x 0.75	39.0 x 0.50	48.0 x 0.75	39.0 x 0.50	54.0 x 0.75	58.0 x 0.75	66.0 x 0.75	72.0 x 0.75 (deep set)	—
Lenshood	built-in	12575	built-in	12575	built-in	built-in	built-in	built-in	built-in
Smallest aperture	f22	f22	f22	f22	f32	f22	f22	f32	f32
Focusing range	∞ to 13"	∞ to 19¾"	∞ to 28⅜"	∞ to 38⅝"	∞ to 59⅜"	∞ to 10'	∞ to 11'8"	∞ to 12'	∞ to 21'
Smallest field covered	2¼" x 3½"	3⅛" x 4¾"	5¾" x 8½"	4¾" x 7⅛"	8½" x 12¾"	12¼" x 18¼"	9¾" x 14½"	6" x 9"	8" x 12"
Finish	black	black	black	black	black	black	black	black	black
Front cap	14153	14122	14124	14122	14124	14044	14079	14152	14140
Rear cap when in focusing mount	14051	14051	14051	14051	14051	14051	14051	14051	14051
Case for lens in mount	98282	98282	98281	98281	98281	98286 holds lens plus 16466	98287	98288, 98270, or 98271	98271
Weight lens plus mount	10.4 oz.	11.1 oz.	18.2 oz.	12 oz.	16.8 oz.	22.6 oz.	42.4 oz.	4 lbs.	5½ lbs.
Length in focusing mount	2"	1¾"	2⅝"	2½"	2⅞"	5⅜" with 16466	7⅜"	15"	21"
Maximum diameter in mount	2¼"	2¼"	2½"	2¼"	2½"	2⅞"	3⅛"	3"	3¾"
Focusing mount	16464	16464	16462	16464	16462	—	—	—	—
Extension tube	16471	16471	16474	16471	16474	14020 or 16469	16469	14182	14182

Specifications subject to change without notice

QUICK REFERENCE CHART

LEICAFLEX LENSES

Leitz®
E. LEITZ, INC.
ROCKLEIGH
N.J. 07647

SPECIFICATIONS \ LENSES	Fisheye-Elmarit-R 16mm f2.8	Elmarit-R 19mm f2.8	Super Angulon-R 21mm f4.0	Elmarit-R 24mm f2.8	Elmarit-R 28mm f2.8	Summicron-R 35mm f2.0	Elmarit-R 35mm f2.8 (above #2517851)	PA-Curtagon-R 35mm f4.0	Summicron-R 50mm f2.0	Summilux-R 50mm f1.4	Macro Elmarit-R 60mm f2.8	Angenieux-R 45-90mm f2.8
Catalog number	11222	11225	11813	11221	11204	11227	11201	11202	11228	11875	11203	98000
Angle of view	180°	95.7°	92°	84°	76°	64°	64°	63°-78°	45°	45°	39°	27°-51°
Number of elements	11	9	10	9	8	9	7	7	6	7	6	15
Filter	Built-in	*	Series 8½ held by hood 12506	Series 8	Series 7 or E-48	Series 7 or E-48	Series 7 or E-48	Series 8 held by hood 12514	Series 6 held by ring 14160	Series 7 or E-48	Series 8 held by hood 12514	Series 8
Polarizer	—	*	—	13370 in hood	13370 in hood 12509	13370 in hood 12509	13370 in hood 12509	13372 in hood 12514	13358 or 13353	13370 in hood 12508	13372 in hood 12514	—
Leitz screw-in filter designation	—	*	—	—	E-48	E-48	E-48	—	—	E-48	—	—
Filter thread	—	82.0 x .75	72.0 x 0.75	*	48.0 x 0.75	48.0 x 0.75	48.0 x 0.75	60.0 x 0.75	44.0 x 0.75	48.0 x 0.75	60.0 x 0.75	67.0 x 0.75
Lenshood	—	12529	12506 f3.4 12511	*	12509	12509	12509 old 12564	12514	12564	12508	12514	supplied with lens
Smallest aperture	f16	f16	f22	f22	f22	f16	f22	f22	f16	f16	f22	f22
Focusing range	∞ to 12″	∞ to 19.7″	∞ to 8″	∞ to 12″	∞ to 12″	∞ to 12″	∞ to 12″	∞ to 12″	∞ to 20″	∞ to 20″	lens only ∞ to 1:2 lens plus ring 1:2 to 1:1	∞ to 3′3″
Smallest field covered	15.8″ x 23.7″	18.4″ x 27.6″	6″ x 8¾″	10″ x 15″	7½″ x 11¼″	5¾″ x 8½″	5¾″ x 8½″	5¾″ x 8½″	7¼″ x 10¾″	7¼″ x 10¾″	lens only 2″ x 3″ lens plus ring 1″ x 1½″	8″ x 12″
Finish	Black	black	black	Black	black	black	black	black	black	black	black	black
Front cap	14089	14221	14145 f3.4 14107 over 12511	*	14172	14172	14172 old 14163 over 12564	14184	14163—fits over reversed 12564	14171 or 14172	14184	44352C from Repair
Rear cap	*	14162	14162 f3.4 14106	14162	14162	14162	14162	14162	14162	14162	14162	14162
Case	*	*	98281	*	98281	98283	98281	98281	98282	98281	98286	98286
Weight	16 oz.	19 oz.	14.5 oz.	13¼ oz.	9.7 oz.	18.7 oz.	10.5 oz.	10.2 oz.	12 oz.	16.2 oz.	lens only 16 oz. lens plus ring 22 oz.	28 oz.
Length with hood	—	3 7/16″	2⅜″	*	2 9/16″	3⅜″	2 9/16″	2¾″	2⅜″	3″	lens plus ring and hood 4½″	5⅝″
Length less hood	2.4″	2¾″	1¾″	1.8″	1⅝″	2⅜″	1⅝″	2″	1½″	1⅞″	lens plus ring 3⅞″	4¾″
Maximum diameter with hood	2.8″	5″ diag.	4 5/16″	2.7″	3¼″	3¼″	3¼″	3⅛″	2 9/16″	2¾″	3⅛″	3 1/16″
Maximum diameter less hood	—	3 7/16″	3 1/16″	*	2 7/16″	2⅝″	2 7/16″	2¾″	2 7/16″	2½″	2¾″	2¾″

*Information not available at press time.

QUICK REFERENCE CHART

LEICAFLEX LENSES

Leitz®
E. LEITZ, INC.
ROCKLEIGH
N.J. 07647

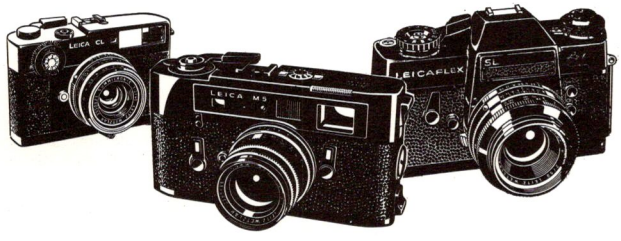
LENSES / SPECIFICATIONS	Vario-Elmar-R 80-200mm f4.5	Elmarit-R 90mm f2.8	Summicron-R 90mm f2.0	Macro-Elmar 100mm f4.0	Elmarit-R 135mm f2.8	APO-Telyt-R 180mm f3.4	Elmarit-R 180mm f2.8	Telyt-R 250mm f4.0	Telyt-R 400mm f6.8	Telyt-R 560mm f6.8	Telyt-S 800mm f6.3
Catalog number	11224	11239	11219	11230	11211	11240	11919	11920	11960	11865	11921
Angle of view	12°-30°	27°	27°	24.5°	18°	13.3°	14°	10°	6°	4.3°	3°
Number of elements	14	5	5	4	5	7	5	6	2	2	3
Filter	—	Series 7 held by ring 14161	Series 7 held by ring 14161	Series 7 held by ring 14161	Series 7 held by ring 14161	*	Series 8 held by ring 14165	Series 8 held by ring 14165	Series 7 in slot Series 8 held by ring 14165	Series 7 held in slot	Series 7 held in slot
Polarizer	—	13359 or 13354	13359 or 13354	13359 or 13354	13359 or 13354	*	13372 with 14165 and 98170	13372 with 14165 and 98170	13372 with 14165 and 98170	13370 in slot	13370 in slot
Leitz screw-in filter designation	E-55	—	—	—	—	*	—	—	—	—	—
Filter thread	55 x 0.75	54.0 x 0.75	54.0 x 0.75	54.0 x 0.75	54.0 x 0.75	*	72.0 x 0.75 (deep set)	72.0 x 0.75 (deep set)	72.0 x 0.75 (deep set)	—	—
Lenshood	built-in	built-in	built-in	built-in	built-in	built-in	built-in	built-in	built-in	built-in	supplied with lens
Smallest aperture	f22	f22	f16	f22	f22	f22	f16	f22	f32	f32	f32
Focusing range	∞ to 6′	∞ to 28″	∞ to 28″	∞ to life-size with Bellows-R 16860	∞ to 5′	∞ to 8.2 ft.	∞ to 6′8″	∞ to 15′	∞ to 12′	∞ to 21′	∞ to 41′
Smallest field covered	6.8″ x 10.2″ 16.3″ x 24.5″	5¾″ x 8½″	5¾″ x 8½″	1″ x 1½″	8¼″ x 12¼″	10.4″ x 16.3″	8½″ x 12¾″	14¼″ x 22″	6″ x 9″	8″ x 12″	12″ x 18″
Finish	black	black	black	black	black	black	black	black	black	black	black
Front cap	*	14089	14144	14089	14089	14089	14166	14166	14152	14140	on request
Rear cap	14162	14162	14162	14162	14162	14162	14162	14162	14162	14162	14162
Case	*	98284	98284	98284	98283	98285	98286	98286	98288, 98270, or 98271	98271	supplied with lens
Weight	25 oz.	18.2 oz.	19.8 oz.	12.9 oz.	23.1 oz.	26.5 oz.	3 lbs.	3 lbs.	4 lbs.	5½ lbs.	15 lbs.
Length with hood	*	2⅞″	2⅜″	2 5/16″	3⅝″	6″	5⅜″	6¼″	15″	21″	—
Length less hood	6.18″	—	—	—	—	—	—	—	—	—	31″
Maximum diameter with hood	2.83″	2 9/16″	2¾″	2⅝″	2 9/16″	2¾″	3¼″	3¼″	3″	3¾″	5.9″
Maximum diameter less hood	*	—	—	—	—	—	—	—	—	—	—

*Information not available at press time.

Specifications subject to change without notice

Leitz®
E.LEITZ,INC.
ROCKLEIGH
N.J. 07647

ALL ABOUT CAMERA LENSES



In the first part of this review, subjects concerning camera lenses in general are discussed. The second part outlines the optical design, performance and application of individual lenses in the LEICA (rangefinder), Visoflex (reflex housing), and LEICAFLEX SL (single lens reflex) systems.

Image Quality

Optimum correction of a photographic lens is possible only for a specific focusing range which depends on the principal use to which the lens is applied. Normally, photographic lenses are corrected for long focusing distances (= ∞). Depending on the type of lens, a slight deterioration of performance will be noticed in the close-focusing range. However, performance can be considerably improved if the lens is appropriately stopped down in the close - focusing range.

Special lenses for process work, enlargers and macrophotography have optimum corrections for their main fields of application.

In addition, optimum correction for a specific focusing range can be obtained for infinity-corrected lenses by the use of matched close-focusing attachments (e.g., the Leitz ELPRO achromatic attachments for the LEICAFLEX). The lens and its associated close-focusing attachment will then become a new optical system of optimum correction for the focusing range required.

Lens Design

In a lens of conventional design, the intercept distance (distance between the vertex of the rear lens and the focal plane) is always shorter than the focal length. The exceptions to this rule are as follows:

■ Retro-focus Types:
Wide-angle lenses for the LEICAFLEX are members of this class. The intercept distance is considerably longer than the focal length, making possible a longer free distance between the rear element of the lens and the film plane . . . necessary for single lens reflex cameras because of the mirror function. The optical design is more complicated than in conventional lenses.

■ So-called Genuine Telephoto Lens Types:
Their intercept distance is considerably shorter than the focal length (e.g., 90mm TELE-ELMARIT compared with 90mm ELMARIT). This results in a shorter total length of the lens.

Here too, the optical design is more complicated than in conventional cases. It must be remembered that not all so-called telephoto lenses are really true telephoto types.

An even shorter overall length than that of the telephoto types can be achieved with mirror lenses. They are, therefore, used for extremely long focal lengths, but their diameter is larger and they have the disadvantage that they cannot be stopped down. Gray filters have to be used to allow for different object brightness. As a result, depth of field cannot be influenced.

Mirror lenses, therefore, only form a sharp image of the object plane focused within the depth of field range corresponding to their rated aperture. Objects outside the depth of field zone exhibit annular figures of confusion instead of point-shaped circles of confusion. This constitutes a further disadvantage of such lenses.

Angle Of Field

The angles of field of lenses in the Leitz product line refer to the format diagonal when a lens is focused on infinity. Field coverage becomes narrower when the object approaches the camera (reduction of the field).

The image outlines in the LEICA viewfinder are always matched for the minimum focusing distance:

	35mm frame	50mm frame	90mm frame	135mm frame
LEICA M2 / M4 / M5	28"	39"	39"	5'
M3	39"	39"	39"	5'

The LEICAFLEX viewfinder outlines a format of 23 x 35mm. This means that the cardboard-mounted slide format is fully covered.

Color Rendering

Types of glass, number of elements, cementing and lens coating all affect the spectral transmission and, therefore, the color rendition of a lens.

Because they incorporate modern, highly refractive glasses, Leitz lenses transmit hardly any UV radiation. In addition, we use an UV-attenuating Absorban film coating, enabling us to standardize the color reproduction in all Leitz lenses.

A UVa filter for current Leitz lenses merely has the function of protecting the front member. It should not be used when light sources are in the picture area (e.g., night pictures) because of the increased risk of reflection.

Progress In Lens Design

The present high level of performance of Leitz lenses has been made possible by the introduction of new optical glasses of extremely high refractive indices. Using these new glass formulations, we can reduce the number of necessary elements while increasing performance (e.g., the new SUMMICRON lens has one element less than its predecessor). Another important point is that when highly refractive glasses are used, the length of the lens can be reduced; as a result, the risk of vignetting is slighter (See Vignetting).

Quality Rating

The performance of a lens must be judged from many points of view. Publications of resolving power ratings have no generally valid significance, since final picture quality is affected by the contrast of the subject photographed, by the type of film used and its processing. Resolving power ratings merely give relations within a test and are not accepted by experts as valid performance criteria.

To form a reasonably reliable judgement of lens quality, a number of facts must be known:

■ Intended uses of the lens, e.g., for general photography, enlargement, reproduction, macrophotography, etc.

■ General contrast rendering. This determines the brilliance of the picture as a whole, and, in color photography, color saturation and color differentiation. Contrast rendering is also responsible for the sharpness of the entire picture.

■ Resolving power. This indicates the rendering of fine detail, but also depends on contrast rendering; only the contrast decides whether the eye can resolve the boundaries between bright and dark lines.

Infra-Red Index

For infra-red pictures, a lens must not be focused on the engraved distance index. The long-wave, infra-red rays have a more distant focal point than the visible rays, so that the helical mount of a lens must be turned out slightly further.

In the past, the focusing scale of lenses included an infra-red index. Today this is no longer so, because infra-red materials are sensitized and filters are designed for different wavelengths — so that a generally valid infra-red index can no longer be used.

Close-Focusing Range—Exposure Factors

The close-focusing range can be covered by two factors:

■ Lens extension. The film plane to lens extension determines the scale of reproduction based on optical laws. Additional extension reduces the effective lens speed. In practice, exposure factors must therefore be allowed from the ratio of 1:5 onwards. With conventional lenses (entry: exit pupil ratio = 1:1 — see point 10), the exposure factor is calculated according to the formula:

$$(\text{Reproduction Ratio} + 1)^2$$

■ Optical attachments. In principle, a close-up attachment works like a magnifier, forming an enlarged image of the object from a shorter viewing distance without introducing an exposure factor.

ALL ABOUT CAMERA LENSES

Simple front lens attachments adversely affect the performance of a lens. The Leitz ELPRO front lens attachments consist of two cemented elements matched for the camera lenses with which they are to be used and maintain image quality even within the close-up range.

Optimum Aperture

This is the lens stop at which lens performance is at its best. It is judged above all according to contrast and uniform sharpness distribution. The uses for which the lens is designed play a decisive part. In available-light photography, for instance, contrast certainly plays the more important part, whereas for reproduction work, stress is on optimum detail rendering. Performance deteriorates when diffraction effects become significant, from f / 16 and smaller stops.

Entry-Exit Pupil Ratio

Normally, the slightly closed diaphragm of a lens appears at equal size when it is viewed from the front (entry pupil) and the back (exit pupil). Here then, the entry-exit pupil ratio will be 1:1.

Depending on the design and position of the diaphragm within a lens, the entry-exit pupil ratio may assume different values. If the diameter of the entry pupil is clearly larger than the exit pupil, the lens will be a telephoto type. If it is smaller, it will be a retro-focus type.

The entry-exit pupil ratio enters the formula for the calculation of the exposure factors in the close-focusing range and must, therefore, be allowed for when its value strongly diverges from 1. Here is the precise formula:

$$EF = \left(\frac{\text{Reproduction Ratio}}{PM} + 1 \right)^2$$

EF = Exposure factor PM = Pupillary Magnification

Depth Of Field

The highest definition of a lens will always be found in the focusing plane. In addition, the eye sees the foreground and background in sharp focus as long as the circle of confusion does not exceed a certain diameter, i.e., as long as a point is still seen by the eye as a point.

Leitz depth of field tables are based on a circle of confusion of 1 / 750″ diameter. This value is based on an assumed subsequent enlargement up to 4.8″ x 7.2″ viewed from a distance of about 10″. If the demands are more exacting, e.g., for giant enlargements or projection, a smaller circle of confusion is to be used. Its diameter is reduced to 1 / 1500″ if the lens is stopped down two stops more than indicated in the table or on the depth of field ring. (e.g., stop down to f / 11 if the reading is f / 5.6).

The extent of the depth of field depends on reproduction ratio and f stop in use. It increases as the lens is stopped down. Stops smaller than f / 16 are not recommended because general sharpness will suffer from diffraction effects. In the close-focusing range, smaller stops are often used because depth of field is more important than ultimate resolution.

Zoom Lenses

The main advantage of these systems is in the continuous adjustment of their focal length. This is most evident with color reversal film (frame-filling treatment of the subject). In black and white techniques, this can partly be compensated for in an enlarger. But performance of zoom lenses as we know them today is not considered equal to that of good lenses of fixed focal length. To improve their quality would require more complicated designs, and therefore larger dimensions.

Enlargement Quality

A 2.8″ x 4″ enlargement is not very strong evidence of the performance of a lens. A better method is inspection of the negative with a 5x magnifier (any 50mm camera lens is suitable for this purpose). For fully valid comparisons, at least good 8″ x 10″ enlargements are necessary.

Many unsharp pictures are the result of faulty handling and camera motion. A poor or old lens in an enlarger also produces bad results. The same applies to the assessment of color transparencies. The quality of a lens can be utilized fully only if the enlargements, too, are made with first-class lenses, or if transparencies are projected on a first-class projector.

Lens Coating

Coating improves contrast rendering, light transmission and the color character (see color rendering) of a lens.

Reflections from the surfaces of the various elements (and therefore loss of light), as well as color degradation and contrast reduction are largely eliminated. A coated lens surface is recognized by a slight tint with certain color shifts depending on the thickness of the evaporated film (See Color Rendering).

Distortion / Converging Lines / Perspective

■ Distortion is the change of a geometrical form by the lens which can be recognized in the picture, e.g., the pincushion of barrel deformation of an oblong. The larger the angle of field of a lens, the more complicated measures have to be taken to reduce these optical aberrations to a tolerable level. All Leitz wide-angle lenses are corrected so that they are practically free from distortion for the purpose for which they are intended.

■ Converging lines occur whenever the camera is tilted upwards or downwards during the exposure and are particularly prominent with short focal length lenses. Pictures containing converging lines can, however, be corrected in the enlarger.

■ Perspective distortion has nothing to do with lens correction. It occurs when wide-angle lenses are used at short camera distances. According to the laws of central projection, the perspective is perfect, but the eye is completely unaccustomed to this effect.

Vignetting

Vignetting is the more or less pronounced darkening of a picture towards the corners. The extent of vignetting depends, among other things, on the exposure and the exposure latitude of the film material used. We distinguish between:

■ Natural vignetting. This occurs above all with wide-angle lenses, due to physical laws, and depends on the angle of field of the lens. With standard lenses (angle of field 45°), this natural loss of light will not be noticeable; however, it becomes more and more prominent as the angle of field increases. New design features of current Leitz lenses have considerably reduced this phenomenon.

■ Artificial vignetting (lens mount vignetting).
This occurs with lenses of wide maximum apertures, and is caused by their large number of elements and the corresponding increase in lens length required. To reduce this effect, large front and rear elements are used and the number of elements reduced as much as possible through the introduction of highly refracting glasses.

Artificial vignetting quickly decreases as the lens is stopped down. For many purposes, such as available-light photography, residual vignetting at large maximum apertures is not particularly disturbing.

Artificial vignetting must be distinguished from that caused by the wrong type of lens hood or other parts mounted in front of the lens. Such vignetting will become more prominent as the lens is stopped down.

It is possible to counteract vignetting in ultra-wide angle lenses (21mm) by using graduated gray filters. Their gray density is stronger in the central field than towards the edges. But, since the degree of vignetting is affected by the aperture, such a graduated filter will be suitable only for a limited range of f / stops.

Optical Attachments And Intermediate Members

If a simple front lens, a filter that is not optically corrected, or one-half of a pair of binoculars that is not corrected for photographic purposes is mounted on the lens, image quality will be affected. If specially computed optical attachments are used, however, the optical performance of the lens is maintained for the focusing range for which these attachments are designed (as in the ELPRO) close-focusing achromats for the LEICAFLEX).

In this context, the lens converter must also be briefly mentioned. The following points should be observed when this accessory is used:

■ The f / numbers of a lens are no longer valid: with a 2x converter — doubling of the focal length — the light loss amounts to two stops.

■ Since a converter cannot have the best possible correction for each camera lens, the lens must be stopped down more in order to ensure satisfactory image quality (f / 11 to f / 16). As a result, hand-held exposures are generally no longer possible.

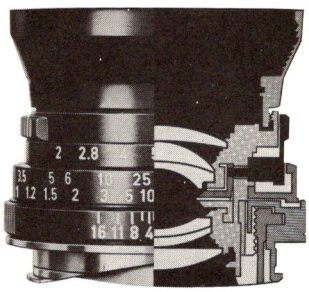
SUMMICRON-C 40mm f2.0 CATALOG #11542

The new 40mm SUMMICRON-C with its increased angle of view and high speed is the perfect lens for snapshots, short-range feature photography, architecture, interiors, or close-quarter shooting. The great depth of field of this lens gives you enormous action shooting latitude: moving subjects remain within your field of view and sharpness zone. Further, this lens covers broad landscapes and wide views with maximum detail right into the image corners.

Catalog number	11,542
Angle of view	57°
Number of elements	6
Filter	Series 5.5 held by lenshood #12,518
Lenshood, rubber, collapsible (supplied with lens)	#12,518
Smallest aperture	f16-lens equipped with full & half click stops
Focusing range	∞ to 32"
Smallest field covered	17x25½"
Finish	black
Finder	camera finder
Front cap	#14,191
Rear cap	#14,051
Case, holds lens with hood and caps	#98,282 (#2)
Weight	4½ oz.
Length	with hood 1⅝" . . . less hood ⅞"
Maximum diameter	with hood 2¼" . . . less hood 2¼"
Polarizing Filter	#13,352 with adapter #98,183

The 40mm f2.0 Summicron-C lens is not recommended for Leica M cameras.

40mm f2.0 Summicron-C lens with hood



Cross Section

Leica CL with 40mm f2.0 Summicron-C

ELMAR-C 90mm f4.0 CATALOG #11540

In contrast to the 40mm lens, the 90mm ELMAR-C concentrates on details that matter. The longer focal length gives more than twice the image size of the 40mm lens. It fills the frame to isolate the subject, leaving out irrelevant surroundings. That makes the 90mm ideal for portraiture, children and animals as well as flowers and still life subjects. This lens will equally thrill you for distant views, architecture and landscape photography, and for feature and sport shots.

Catalog number	#11,540
Angle of view	27°
Number of elements	4
Filter	Series 5.5 held by lenshood #12,517
Lenshood, rubber, collapsible (supplied with lens)	#12,517
Smallest aperture	f22-lens equipped with full & half click stops
Focusing range	∞ to 40"
Smallest field covered	8½ x 12¾"
Finish	black
Finder	camera finder
Front cap	#14,191
Rear cap	#14,051
Case, soft black leather pouch (supplied with lens)	#14,543
Weight	8¾ oz.
Length	with hood 3⅜" . . . less hood 2⅜"
Maximum diameter	with hood 2⅛" . . . less hood 2"
Polarizing Filter	#13,352

The 90mm f4.0 Elmar-C lens is not recommended for Leica M cameras.

90mm f4.0 Elmar-C lens with hood

Case #14,543

Leica CL with 90mm f4.0 Elmar-C

Cross Section

Super-Angulon 21mm f3.4 CATALOG #11103

Wideangle lens with extremely large angle of view

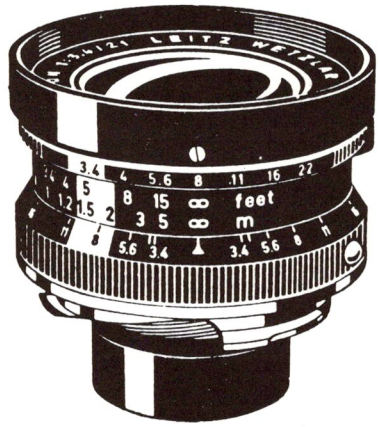
This lens has 8 elements and 4 members. Compared with its predecessor, image illumination is even more uniform at medium f/ stops; image quality is also excellent at the close-focusing range. The lens is practically free from distortion. The SUPER-ANGULON is an ultra-wide angle lens for architectural photography as well as reportages with astonishing impact — provided it is used correctly. The angle of field at 92° is more than twice that of a 50mm lens. Because of this and the extremely great depth of field, pictures of unusual perspective can be obtained. At short camera distances, foreground objects are exaggerated in size in relation to a rapidly diminishing background.

THE SUPER-ANGULON lens is eminently suitable for photographing architectural models. The following basic rules should be observed:

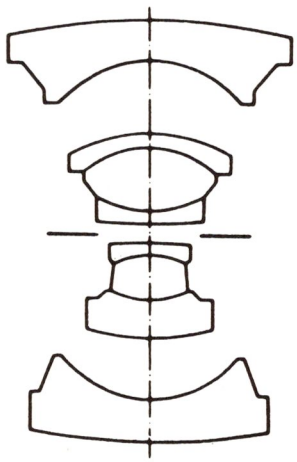
a) Extremely powerful light sources in the picture area should be avoided.
b) Attention should be paid to converging lines.
c) The outside lens elements must be kept clean.
d) Perspective distortion at the edges of the picture at close distances should be observed.

Catalog number	11103
Angle of view	92°
Number of elements	8
Filter	E-48 screw-in or Series 7 held in lenshood #12501
Lenshood	#12501 supplied with lens
Smallest aperture	f22, lens equipped with full and half click stops
Focusing range	28" to infinity
Smallest field covered	15" x 23" (approx.)
Finish	black
Finder	#12002 (black finish) fits into Leica accessory shoe
Front cap	#14102
Rear cap	#14042
Case #98281	holds lens with hood attached
Case #14617	holds finder #12002
Weight	10.6 ounces
Length	with hood - 1¾", less hood - 1$\frac{3}{16}$"
Maximum diameter	with hood - 2⅞", less hood - 2$\frac{1}{16}$"

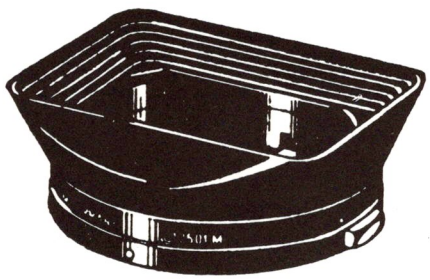
The Super-Angulon lens does not permit through-the-lens metering with the Leica M-5.
Lenses below #2473251 must be modified to fit the Leica M-5.
The Super-Angulon lens cannot be used on the Leica CL.



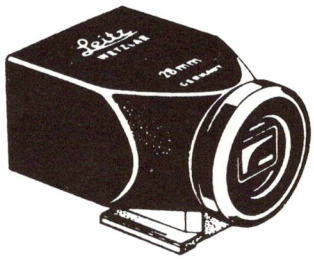
#11103



Cross Section



Lenshood #12501



#12002

#14617

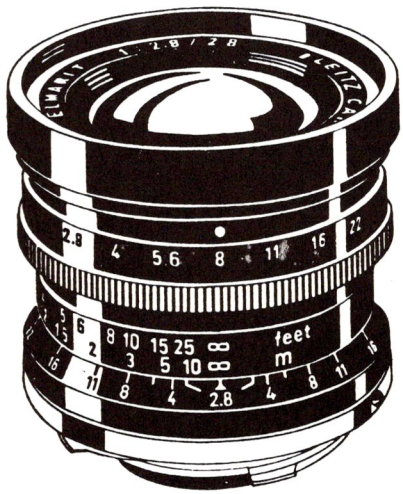
Elmarit 28mm f2.8 CATALOG #11801

Wideangle lens with large angle of view

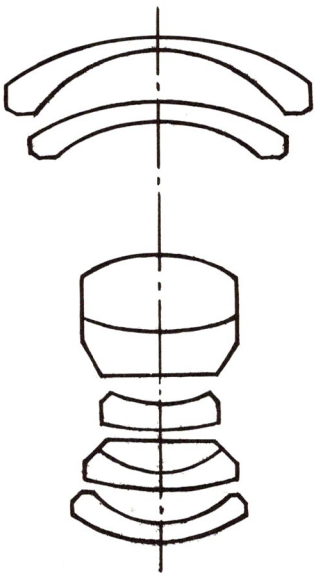
This wide-angle lens consists of 8 elements and 6 members. General performance is good throughout its entire range of applications, and from f / 4 onwards, contrast increases. Beyond f / 16, performance suffers slightly from diffraction effects.
This handy and very powerful special wide-angle lens is also suitable for unusual photography of moving objects. Because of its very wide angle of field and comparatively high speed of f / 2.8, it is particularly popular among press photographers, since it covers a large area even within the most confined space. And with its great depth of field, focusing need not be too critical. In addition, of course, this wide-angle lens is most suitable for landscape and architectural photography.

Catalog number	11801
Angle of view	76°
Number of elements	8
Filter	E-48 screw-in or Series 7 held by lenshood #12501
Lenshood	#12501 supplied with lens
Smallest aperture	f22 - lens equipped with full and half click stops
Focusing range	28" to infinity.
Smallest field covered	21" x 32"
Finish	black
Finder #12007	(black finish), fits into Leica accessory shoe.
Front cap	#14102
Rear cap #14042	lenses under #2314921
Rear cap #14051	lenses #2314921 and above /
Case #98281	holds lens with hood attached
Case #14617	holds finder #12007.
Weight	7.9 ounces
Length	with hood - 2⅜", less hood - 1¾"
Maximum Diameter	with hood 2⅞", less hood - 2 1/16"

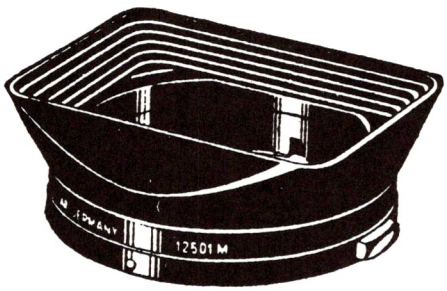
Permits through-the-lens metering with the Leica M-5.
28mm f2.8 Elmarit lenses below #2314921 must be modified to fit the Leica M-5; once modified they do not permit through-the-lens metering. Elmarit 28mm f2.8 lenses above #2314921 can be used with the Leica CL.



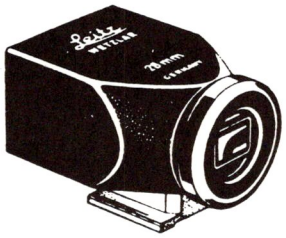
#11801



Cross Section



Lenshood #12501



Finder #12007

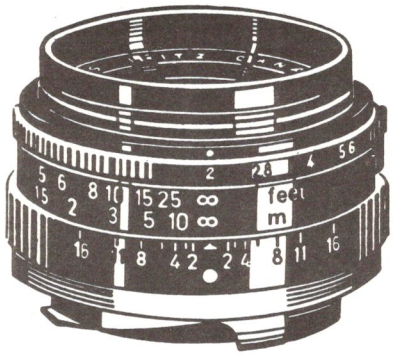
Finder Case #14617

Summicron 35mm f2.0 CATALOG #11309

Wideangle lens with large maximum aperture

Its shorter length has made this 6-element modified Gauss lens handier. It produces a contrastier image than its predecessor even at full aperture throughout the entire focusing range from infinity to 28". Vignetting at f/2 to f/4 is negligible, which is especially favorable in color photography. Photographs of objects of high luminous density in the center of the picture exhibit hardly any flare.
Together with the 50mm SUMMICRON and one of the 90mm lenses, the 35mm SUMMICRON forms the backbone of the LEICA lens system.

Catalog number	11309
Angle of view	64°
Number of elements	6
Filter	E-39 screw-in or Series 7 held by lenshood #12504. Use #13352 polarizing filter.
Lenshood	#12504 supplied with lens
Smallest aperture	f16 - lens equipped with full and half click stops.
Focusing range	28" to infinity
Smallest field covered	17" x 26" (approx.)
Finish	black
Finder	camera finder
Front cap	#14122
Rear cap	#14051
Case	#98281 (#1), holds lens with hood attached
Weight	6 ounces
Length	with hood - 1¾", less hood - 1⅛"
Maximum diameter	with hood - 2½", less hood - 2 3/16"



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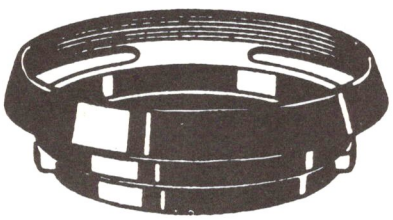
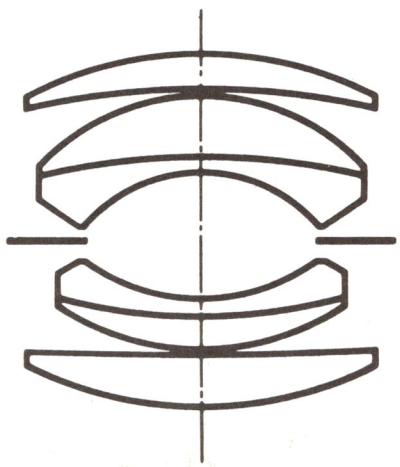


Lenshood #12504



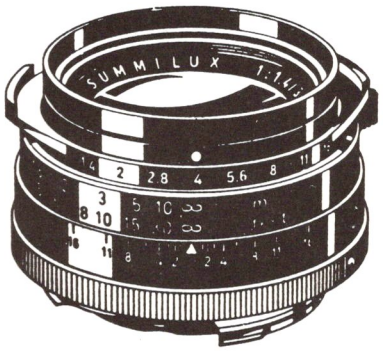
Cross Section

Summilux 35mm f1.4 CATALOG #11870

Wideangle lens with very large maximum aperture

This lens is a Gauss variant with 7 elements and 5 members. Even at full aperture f / 1.4, optical performance is remarkable. Sharpness balanced right to the corners of the picture is striking. When stopped down to medium values, the lens produces good contrast throughout the entire picture.
At given f / stops its performance equals that of the 35mm SUMMICRON f / 2. But its larger maximum aperture provides the 35mm SUMMILUX with an additional light reserve for photography in poor lighting conditions. At full aperture, the danger of reflections produced by powerful light sources along the edge of the object field should be observed.

Catalog number	11870
Angle of view	64°
Number of elements	7
Filter	Series 7 held by lenshood #12504. Use polarizing filter #13352
Lenshood #12504	supplied with lens
Smallest aperture	f16-lens equipped with full and half click stops
Focusing range	40" to infinity
Smallest field covered	24" x 38"
Finish	black
Finder	camera finder
Front cap	#14143
Rear cap	#14051
Case #98281	holds lens with hood attached
Weight	8.7 ounces
Length	with hood - 1 11/16", less hood - 1⅛"
Maximum diameter	with hood - 2½", less hood - 2¼"



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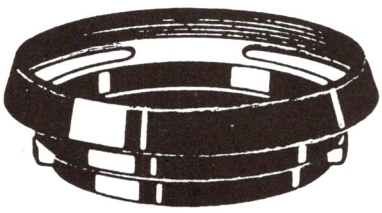
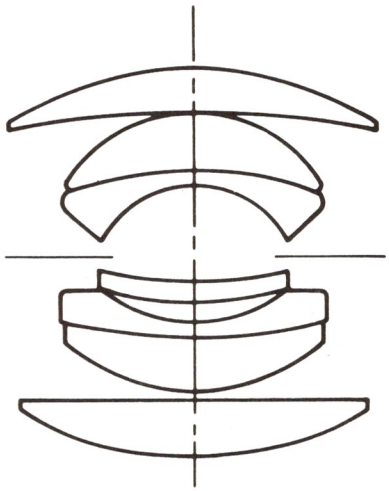


Lenshood #12504



Cross Section

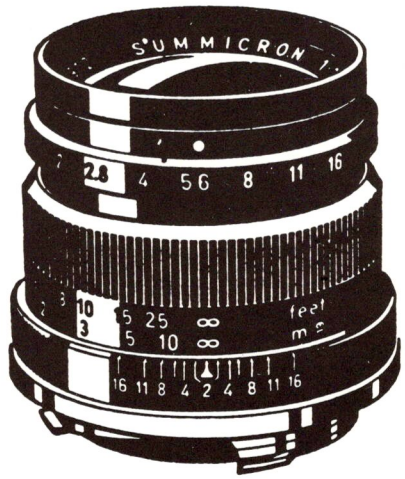
Summicron 50mm f2.0 CATALOG #11817

Normal lens with large maximim aperture

This lens is a 6-element Gauss variant with 5 members. Although it has one less element than the SUMMICRON manufactured previously, improvement in performance made possible by a new computation is remarkable, above all at full aperture: contrast is greater, curvature of field improved, and vignetting in the corners of the picture is negligible. Within the close-focusing range down to 28" object distance (minimum focusing distance through the measuring viewfinder), the image quality of this new lens is improved at its optimum aperture of f / 5.6.
Its light weight (Approx. 9 ozs.), in spite of its very rugged mount, is very convenient. The 50mm SUMMICRON f / 2 is also ideally suited as an enlarging lens for large format prints.

Catalog number	11817
Angle of view	45°
Number of elements	6
Filter	E-39 screw-in. Use #13352 polarizing filter
Lenshood #12585	supplied with lens
Smallest aperture	f16-lens equipped with full and half click stops
Focusing range	28" to infinity
Smallest field covered	11" x 16½" (approx.)
Finish	black
Finder	camera finder
Front cap #14122	fits lens directly
Front cap #14033	fits reversed lenshood #12585
Rear cap	#14051
Case #98282	holds lens with hood reversed
Weight	9.2 ounces
Length	with hood - 2 7/16", less hood - 1 1/16"
Maximum diameter	with hood - 2⅜", less hood - 2"

Lens unit can be used on close-up device #16526 via adapter #16508. Adapter #17672 is required for use on Focomat Ic enlarger.



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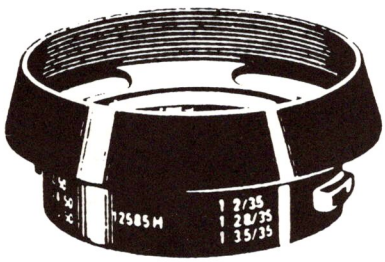
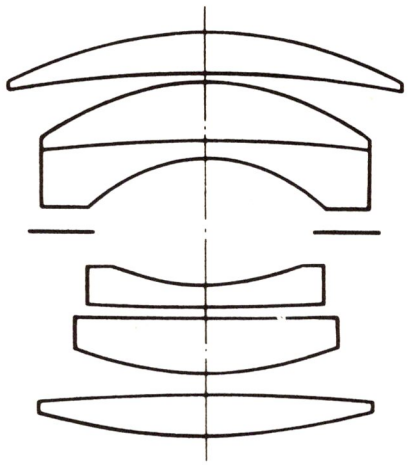


Lenshood #12585



Cross Section

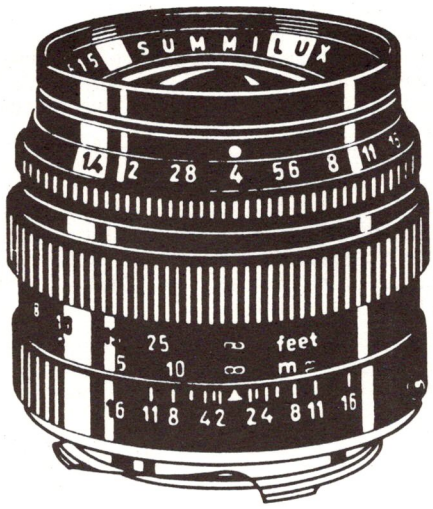
Summilux 50mm f1.4 CATALOG #11114

Normal lens with very large maximum aperture

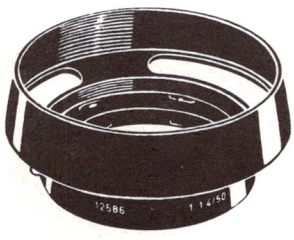
The SUMMILUX is a 7-element Gauss variant with 5 members. Excellent correction for coma as well as outstanding contrast rendering and freedom from reflections at full aperture f / 1.4 deserve special emphasis.
Although the SUMMILUX is designed above all for exposures in poor lighting conditions, because of its large maximum aperture, it offers excellent general performance, suitable for all purposes within its focusing range. It is not, however, designed for use on close-focusing devices or for reproduction purposes (copy work).

Catalog number	11114
Angle of view	45°
Number of elements	7
Filter	E-43 screw-in. Use #13351 Polarizing filter.
Lenshood #12586	supplied with lens
Smallest aperture	f16-lens equipped with full and half click stops
Focusung range	40" to infinity
Smallest field covered	16" x 25" (approx.)
Finish	black
Finder	camera finder
Front cap #14123	fits lens directly
Front cap #14037	fits over lenshood #12586.
Rear cap	#14051
Case #98282	holds lens with hood reversed.
Weight	12.7 ounces
Length	with hood - 2¾", less hood - 1¾"
Maximum diameter	with hood - 2$^{11}/_{16}$", less hood - 2"

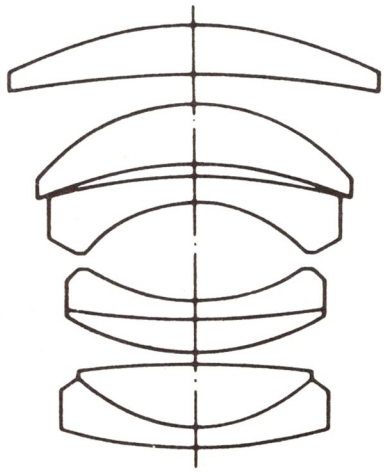
The 50mm Summilux can be used on the Leica CL, but should be closed down to at least f2.0.



#11114



Lenshood #12586



Cross Section

Noctilux 50 mm f1 CATALOG #11821

Special ultra-fast lens

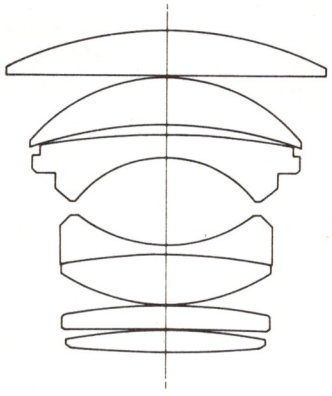
The f/1 NOCTILUX uses a highly refractive LEITZ-developed optical glass first employed in the original f/1.2 NOCTILUX introduced in 1966. This glass, which has a refractive index higher than 1.9, is produced exclusively by ERNST LEITZ, GmbH, WETZLAR, and was "indispensible to maintain optimum contrast through the entire image area," according to designer Walter Mandler of ERNST LEITZ, CANADA, which manufactures the new NOCTILUX in its Midland, Ontario factory.

The more complex design of the f/1 NOCTILUX, using seven glasses in six components, and including a thin "air-lens" between its second and third elements, made possible the elimination of costly aspheric surfaces used in the older f/1.2 version. The modified Gauss construction retains the characteristically high contrast of its predecessor, especially at apertures between f/1 and f/2, making the new NOCTILUX f/1 particularly advantageous for use in weak illumination, with high-speed color and black-and-white films.

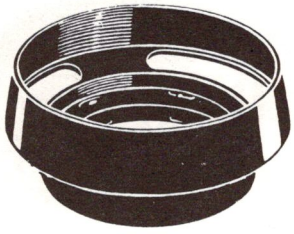
Catalog number	11821
Angle of view	45°
Number of elements	7
Filter	58 x .75
Lenshood #12519	supplied with lens
Smallest aperture	f16 lens equipped with full and half click stops
Focusing range	39″ to infinity
Smallest field covered	16″ x 25″ (approx.)
Finish	black
Finder	camera finder
Front cap	#14205
Rear Cap	#14051
Case #98283	holds lens with caps
Weight	approx 600 g
Length	2¾″, w/hood-4″
Maximum diameter	2¾″, w/hood-3⅛″

The 50mm Noctilux is not recommended for the Leica CL.

#11821



Cross Section



Lenshood #12519

Tele-Elmarit 90mm f2.8 CATALOG #11800

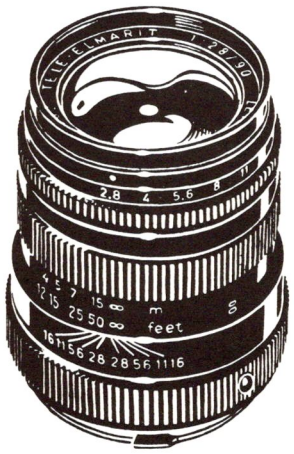
Telephoto lens of moderate maximum aperture

This true telephoto lens has 4 uncemented elements, and is quite short (only 2.375" compared with 3.75" of the standard 90mm ELMARIT). It can, therefore be carried in an everready case (without lens hood). From f / 4 onwards, a slight fall-off at the corners is no longer noticeable. Like all true telephoto lenses, it is less suitable for work within the close-focusing range (Stop down!). The lens head cannot be unscrewed.
The TELE-ELMARIT is a typical reportage lens of longer focal length. Beacuse of its short construction, it is particularly handy. Even relatively slow shutter speeds can still be used with the camera hand-held.

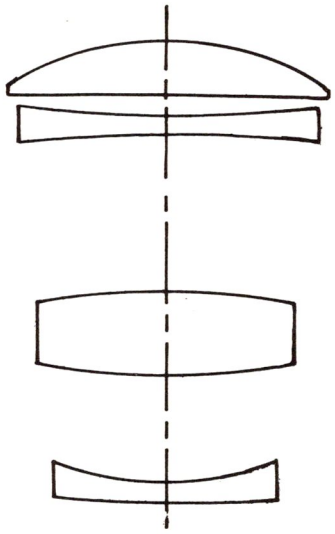
Catalog number	11800
Angle of view	27°
Number of elements	4
Filter	E-39 screw-in. Use #13352 polarizing filter
Lenshood #12575	supplied with lens
Smallest aperture	f16-lens equipped with full and half click stops
Focusing range	40" to infinity
Smallest field covered	9" x 13" (Approx.)
Finish	black
Finder	camera finder
Front cap #14122	fits lens directly
Front cap #14033	fits over reversed lenshood #12575
Rear cap	#14051
Case #98292	holds lens with hood #12575
Weight	8 ounces
Length	with hood 3⅞", less hood - 2⅜"
Maximum diameter	with hood 2¼" , less hood 2"

The Tele-Elmarit lens is for rangefinder use only; the lens unit is not removable.

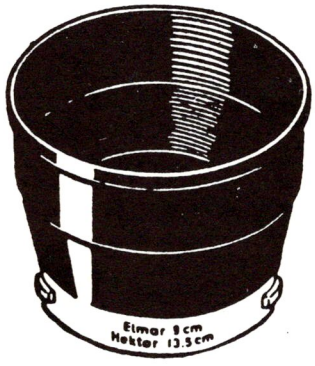
CAN BE USED ON LEICA CL.



#11800



Cross Section



Lenshood #12575

Elmarit 90mm f2.8 CATALOG #11129

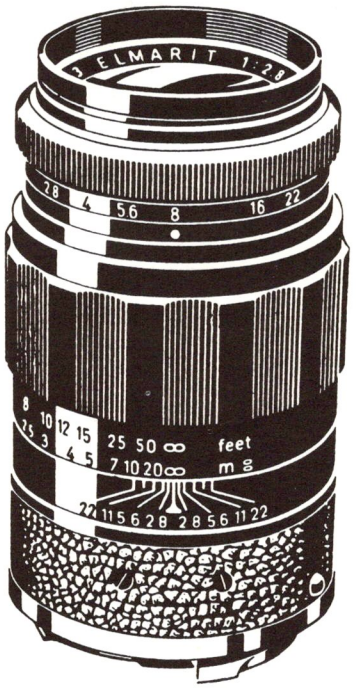
Long focus lens of moderate maximum aperture

This triplet variant has 5 elements and 3 members. It is characterized by good resolving power at full aperture and optimum brilliance at f / 4. At close distances, in order to have sufficient depth of field, the lens should be stopped down.
The ELMARIT is the most universal 90mm lens in the M system. It is handy, light (11-ozs.) and moderately priced. It can be used on the VISOFLEX and the Universal Focusing Bellows II and produces brilliant pictures within the entire working range. It is a popular portrait lens at full aperture.

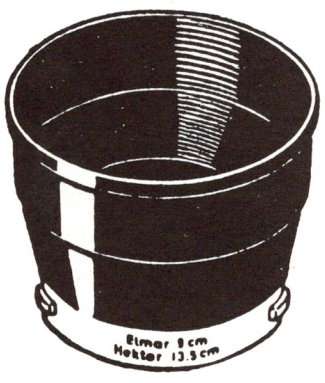
Catalog number	11129
Angle of view	27°
Number of elements	5
Filter	E-39 screw-in. Use #13352 polarizing filter
Lenshood #12575	supplied with lens
Smallest aperture	f22-lens equipped with full click stops
Focusing range	40" to infinity
Smallest field covered	9" x 13" (approx.)
Finish	black
Finder	camera finder
Front cap #14122	fits lens directly
Front cap #14033	fits over reversed lenshood #12575
Rear cap	#14051
Case #98292	holds lens with hood reversed
Weight	11.7 ounces
Length	with hood - 4⅞", less hood - 3 7/16"
Maximum diameter	with hood - 2¼", less hood - 2"

Lens unit removable for use with Visoflex II - III reflex housing via universal focusing mount #16464.
Lens unit can also be used with Bellows II via adapter #16558 and Bellows R via adapter #16863.
Please refer to Visoflex section for further details.

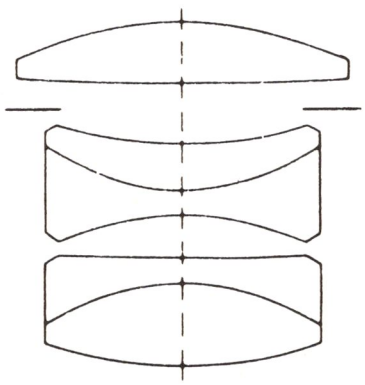
CAN BE USED ON LEICA CL.



#11129



Lenshood #12575



Cross Section

Summicron 90mm f2.0 CATALOG #11123

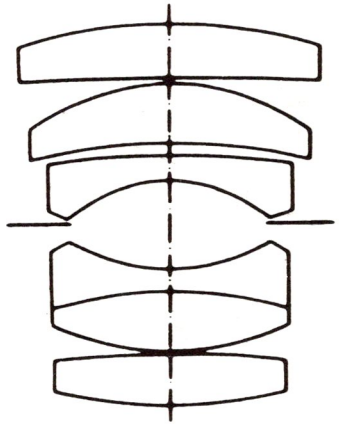
Long focus lens of large maximum aperture

This lens is a variant of the Gauss type. It has 6 elements and 5 members. Excellent sharpness rendering and good contrast even at full aperture are remarkable. It is practically free from flare. When stopped down to f / 2.8, detail rendering in the entire picture area is further improved and excellent total performance obtained.

Catalog number	11123
Angle of view	27°
Number of elements	6
Filter	E-48 screw-in
Lenshood	built-in, collapsible
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range	40" to infinity
Smallest field covered	9" x 13" (approx.)
Finish	black
Finder	camera finder
Front cap	#14124
Rear cap	#14051
Case	#98283
Weight	23.3 ounces
Length	4"
Maximum diameter	2½"

Lens unit removable for use with Visoflex II-III reflex housing via universal focusing mount #16462.
Please refer to Visoflex section for further details.
The 90mm f2.0 Summicron lens cannot be used on the Leica CL.

#11123



Cross Section

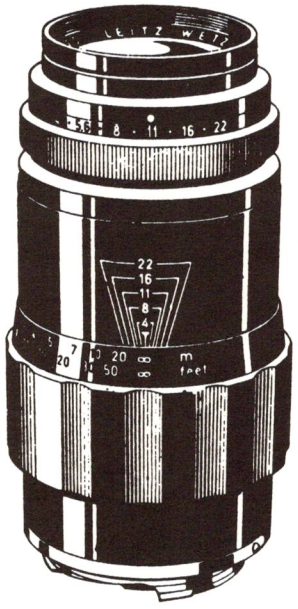
Tele-Elmar 135mm f4.0 CATALOG #11851

Telephoto lens of moderate maximum aperture

The Tele-Elmar is a true telephoto lens physically shorter than its focal length. It has 5 elements and 3 members, and is remarkable for its excellent optical performance right into the corners of the picture. Stopping down does not produce any further improvement. This makes the 135mm TELE-ELMAR a snapshot lens of long focal length, which because of its handy size and light weight, is most convenient to carry about. The lens should be stopped down further only to achieve sufficient depth of field at close distances.

Catalog number	11851
Angle of view	18°
Number of elements	5
Filter	E-39 screw-in. Use polarizing filter #13352.
Lenshood #12575	supplied with lens.
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range	5' to infinity
Smallest field covered	9" x 13" (approx.)
Finish	black
Finder	camera finder
Front cap #14122	fits lens directly
Front cap #14033	fits over reversed lenshood #12575
Rear cap	#14051
Case	#98285 with hood
Weight	18 ounces
Length	with hood - 5 5/16", less hood - 4 1/8"
Maximum diameter	with hood - 2 1/4", less hood - 2 1/4"

Lens unit removable for use with Visoflex II-III reflex housing via universal focusing mount #16464.
Lens unit can also be used with Bellows II via adapter #16558 and Bellows R via adapter #16863.
Please refer to Visoflex section for further details.
The 135mm f4.0 Tele-Elmar lens is not recommended for the Leica CL.



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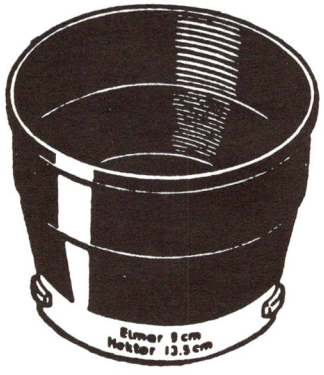
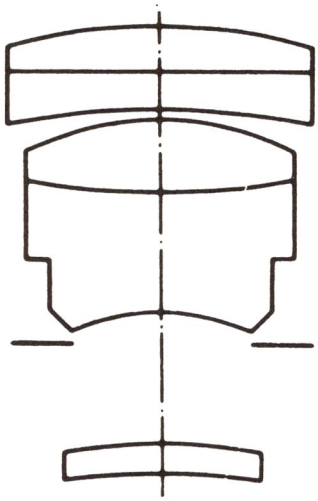


Lenshood #12575



Cross Section

Elmarit 135mm f2.8 CATALOG #11829

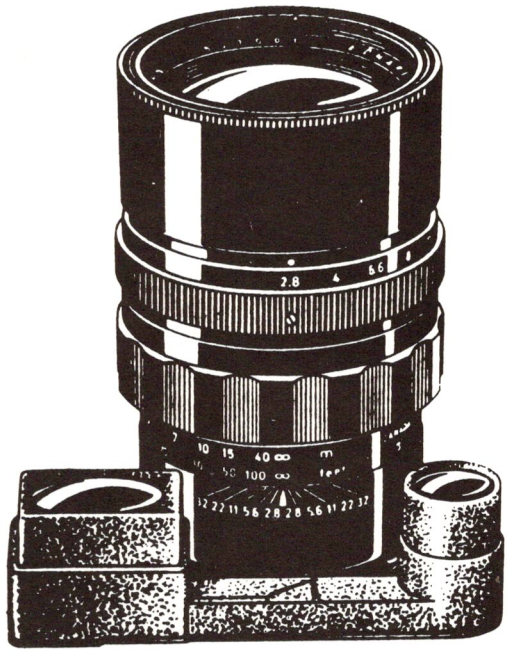
Telephoto lens of large maximum aperture

In construction and performance, this lens is like the 135 mm ELMARIT-R. The viewfinder attachment not only permits the use of the larger viewfinder frame of the 90mm lens, but also increases the measuring accuracy by a factor of about 1.4x.
The decisive advantages of this lens are the enlarged viewfinder image and increased measuring accuracy, making it possible to work very quickly even in poor lighting conditions.

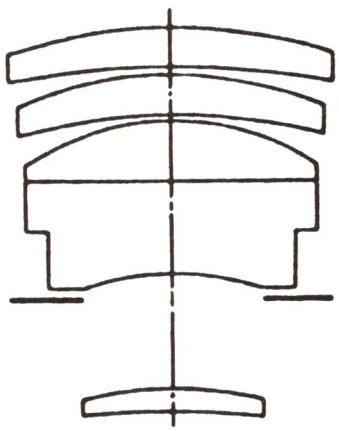
Catalog number	11829
Angle of view	18°
Number of elements	5
Filter	Series 7 held by retaining ring #14161
Lenshood	built-in, collapsible
Smallest aperture	f32-lens equipped with full and half click stops
Focusing range	5' to infinity
Smallest field covered	9" x 13" (approx.)
Finish	black
Finder	camera finder
Front cap	#14124
Rear cap	#14051
Case	#98293
Weight	25.8 ounces
Length	4 "
Maximum diameter	2⅝", finder system 3⅞" wide.

Lens unit removable for use on Visoflex II-III reflex housing via universal focusing mount #16462. Please refer to Visoflex section for further details.

The 135mm f2.8 Elmarit lens cannot be used on the Leica CL.



#11829



Cross Section

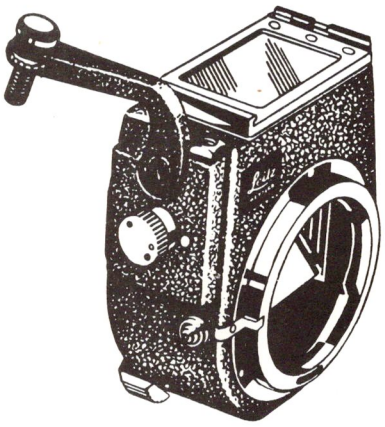
VISOFLEX LENSES

Leica Visoflex Lenses

Visoflex III

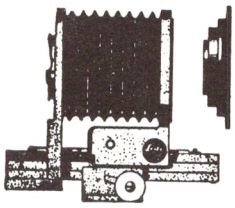
The Leitz Visoflex III reflex housing converts the M-Leica into a single lens reflex camera and is designed to accept Leitz lenses from 65mm to 560mm and the focusing Bellows II #16556. Attaching the Visoflex to the Leica is as easy as mounting a lens. A 4x eye-level magnifier #16499 provides an upright laterally correct image. A 5x vertical magnifier #16461 provides an upright reversed image and is especially valuable when the Visoflex is mounted on a tripod (#14100 plus #14119 or #14,168) or a copystand (#16707). Mirror action of the Visoflex can be adjusted to three positions: rapid rise, slow rise or locked up. The fine grained ground glass screen is inscribed with a centered 7mm wide circle which shows the area covered by the Leica M-5 exposure meter. Two vertical lines spaced 10mm apart are also provided to make reproduction ratio measurements easier.

All Visoflex lenses discussed in the following section can be used on the discontinued Visoflex II and IIa. The only currently produced lens that can be used on the discontinued Visoflex 1 is the 200mm f / 4.0 Telyt #11063. The Visoflex III cannot be used on the Leica CL.



#16497

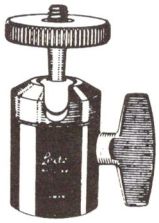
#16461



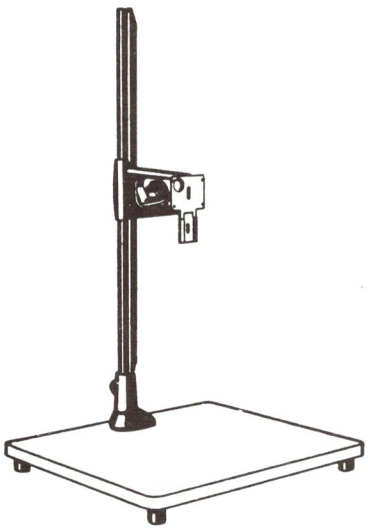
Bellows II #16556
with adapter #16558

#16499

Visoflex III #16498
is composed of
housing #16497
plus magnifier #16499



Small ball and
socket head #14119



Copystand #16707

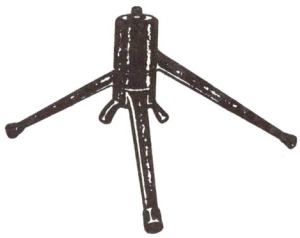
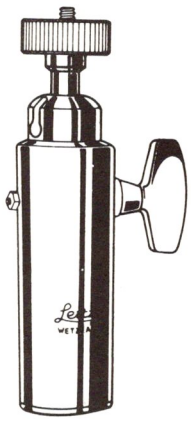


Table tripod #14100



Large ball and
socket head #14,168

VISOFLEX LENSES

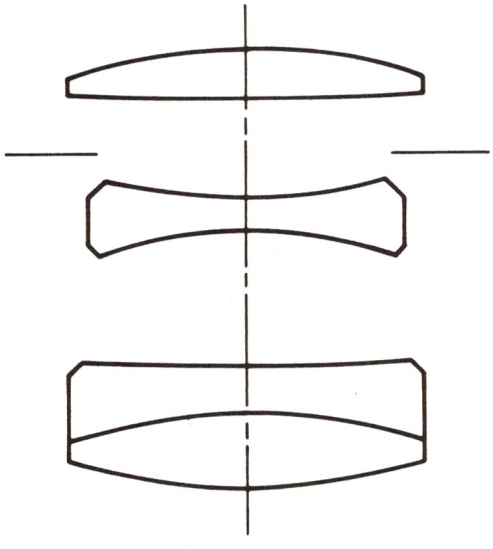
Elmar 65mm f3.5 CATALOG #11162

Normal lens of moderate maximum aperture.

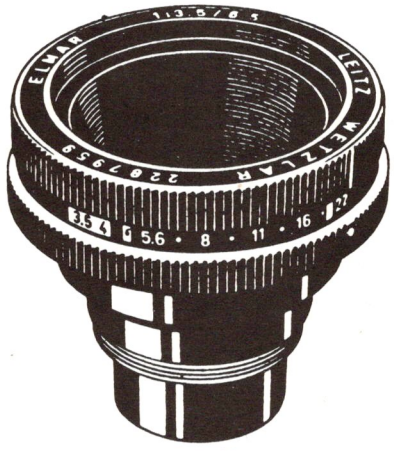
The 65mm ELMAR is a 4-element triplet. Compared with the previous computation, it is slightly shorter and contrast performance and detail rendering are considerably improved. It is a special lens for the VISOFLEX III reflex housing for LEICA M rangefinder cameras, used preferably for subjects within the close-focusing and macro range, but it is also suitable for distances up to infinity. The brilliant image permits rapid and accurate focusing on the VISOFLEX ground-glass screen.
Because of its relatively short focal length, it is also ideal for copying in combination with the Leitz copying stand #16707.

Catalog number	11162
Angle of view	36°
Filter: Series 6 held by filter retaining ring #14160. Use polarizing filter #13358. Lenses under #2378901 require E-41 screw-in filter and polarizing filter #13360	
Lenshood	built-in
Diaphragm	pre-set
Smallest apperture	f22-lens equipped with full and half click stops
Focusing mount #16464	(black finish)
Focusing range	infinity to 13″
Smallest field covered	2¼″ x 3½″ (1:2.25)
Extension tube #16471	(black finish)
Range	13″ to 10¾″
Field covered	2¼″ x 3½″ (1:2.25) to 1⅛″ x 1¾″ (1:1.13)
Finish	black
Front cap	#14153
Rear cap #14074	for lens only; #14051 for focusing mount #16464
Case #98282	holds lens #11162 in mount #16464
Weight	in mount #16464 - 10.4 ounces
Length	in mount #16464 - 2″
Maximum diameter	in mount #16464 - 2¼″

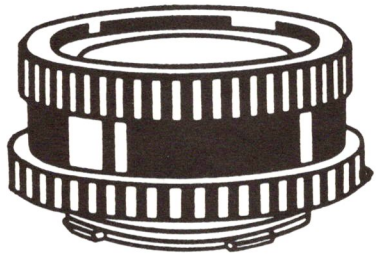
Lens #11162 provides infinity to 1.4:1 range with Bellows II via adapter #16558 and with Bellows-R via adapter #16863.



Cross Section



#11162



#16464

#16471

VISOFLEX LENSES

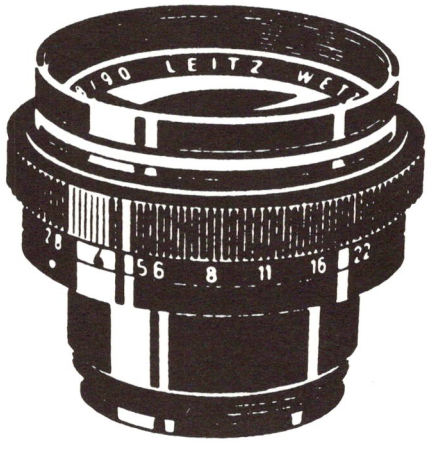
Elmarit 90mm f2.8 CATALOG #11026

Long focus lens of moderate maximum aperture.

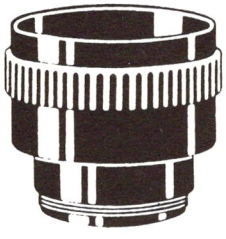
Lenshead #11026 is identical to that used in rangefinder coupled lens #11129 (p.15). Information pertaining to Visoflex use is presented as follows:

Catalog number	11026
Focusing mount #16464	(black finish)
Diaphragm	manual
Lenshood	#12575
Focusing range	infinity to 19¾"
Smallest field covered	3⅛" x 4¾" (1:3.13)
Extension tube #16471	(black finish)
Range	19¾" to 15½"
Field covered	3⅛" x 4¾" (1:3.13) to 1⅝" x 2⅜" (1:1.63)
Rear cap #14074	for lens head only, #14051 - for focusing mount #16464
Case #98282	holds lenshead #11026 in mount #16464
Weight	in mount #16464 - 11.1 ounces
Length	in mount #16464 - 1¾"
Maximum diameter	in mount #16464 - 2¼"

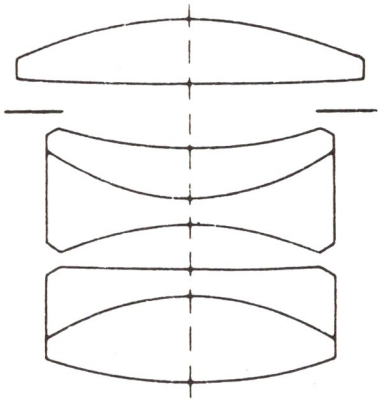
Lenshead #11026 provides infinity to 1:1 (life size) range with Bellows II via adapter #16558 and with Bellows-R via adapter #16863.



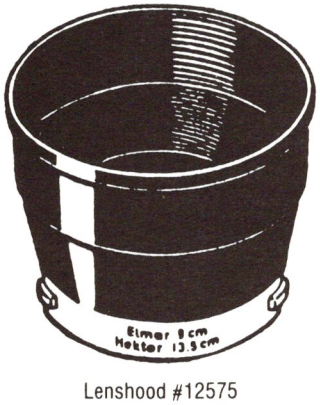
Lenshead #11026



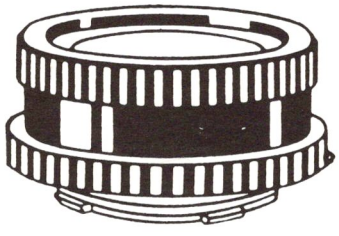
Extension Tube #16471



Cross Section



Lenshood #12575



Universal Focusing Mount
#16464

VISOFLEX LENSES

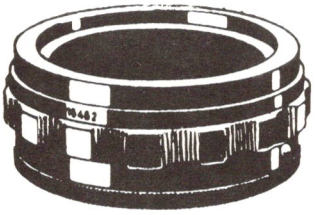
Summicron 90mm f2.0 CATALOG #11133

Long focus lens of large maximum aperture.

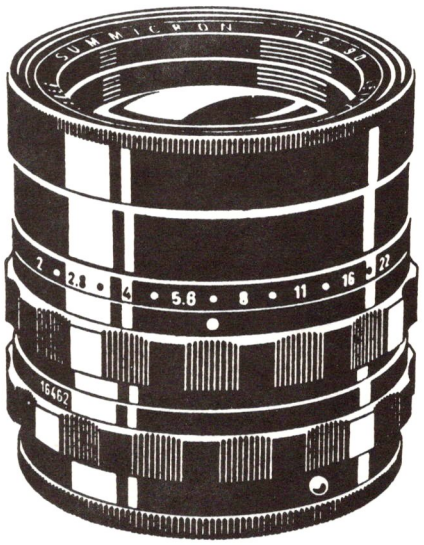
Lenshead #11133 is identical to that used in rangefinder coupled lens #11123 (p.16). Information pertaining to Visoflex use is presented as follows:

Catalog number	11133
Focusing mount #16462	(black finish)
Diaphragm	manual
Focusing range	infinity to 28⅜"
Smallest field covered	5¾" x 8½" (1:5.8)
Extension tube #16474	(black finish)
Range	28⅜" to 18½"
Field covered	5¾" x 8½" (1:5.8) to 2⅞" x 4⅜" (1:2.88)
Rear cap #14051	for focusing mount #16462
Case #98281	holds lenshead #11133 in mount #16462
Weight	in mount #16462 - 18.2 ounces
Length	in mount #16462 - 2⅝"
Maximum diameter	in mount #16462 - 2½"

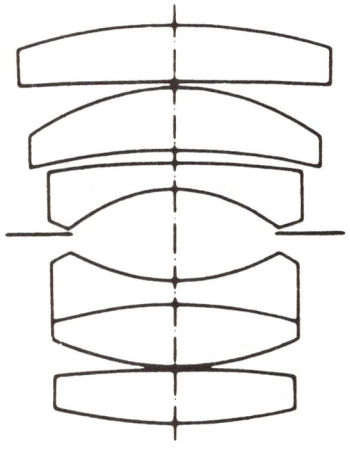
Lenshead #11133 provides 1:25 to 1:1 range with Bellows II via adapter #16598.



Universal Focusing Mount
#16462



Lenshead #11133
in mount #16462



Cross Section

VISOFLEX LENSES

Tele-Elmar 135mm f4.0 CATALOG #11852

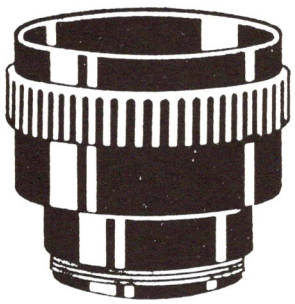
Telephoto lens of moderate maximum **aperture**.

Lenshead #11852 is identical to that used in rangefinder coupled lens #11851 (p.17). Information pertaining to Visoflex use is presented as follows:

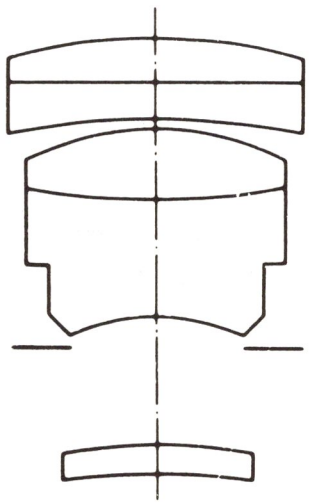
Catalog number	11852
Focusing mount #16464	(black finish)
Diaphragm	manual
Lenshood	#12575
Focusing range	infinity to 38⅝"
Smallest field covered	4¾" x 7⅛" (1:4.75)
Extension tube #16471	(black finish)
Range	38⅝" to 26¾"
Field covered	4¾" x 7⅛" (1:4.75) to 2⅜" x 3½" (1:2.38)
Rear cap #14074	for lens head only; #14051 - for focusing mount #16464
Case #98281	holds lenshead #11852 in mount #16464
Weight	in mount #16464 - 12 ounces
Length	in mount #16464 - 2½"
Maximum diameter	in mount #16464 - 2¼"

Lenshead #11852 provides infinity to 1:1.3 range with Bellows II via adapter #16558 and with Bellows-R via adapter #16863.

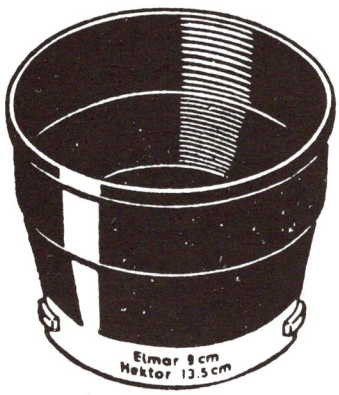
Lenshead #11852



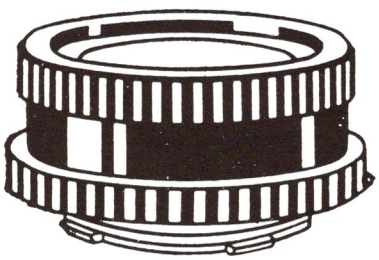
Extension Tube
#16471



Cross Section



Lenshood
#12575



Universal Focusing Mount
#16464

VISOFLEX LENSES

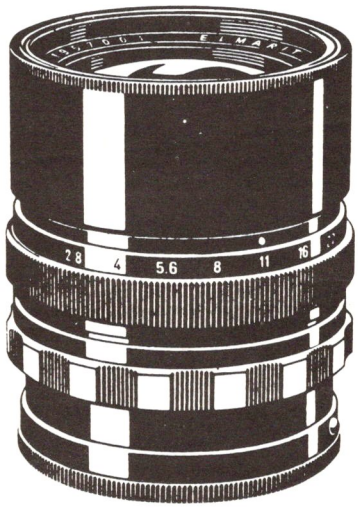
Elmarit 135mm f2.8 CATALOG #11828

Telephoto lens of large maximum aperture.

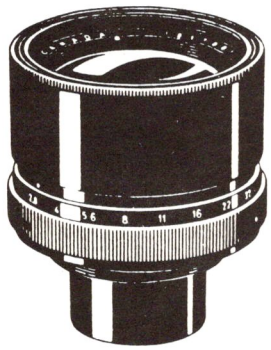
Lenshead #11828 is identical to that used in rangefinder coupled lens #11829 (p.18). Information pertaining to Visoflex use is presented as follows:

Catalog number	11828
Filter Series 7 held by filter retaining ring #14161. Use polarizing filter #13359	
Focusing mount #16462	(black finish)
Diaphragm	manual
Focusing range	infinity to 59⅜"
Smallest field covered	8½" x 12¾" (1:8.5)
Extension tube #16474	(black finish)
Range	59⅜" to 36"
Field covered	8½" x 12¾" (1:8.5) to 4⅜" x 6½" (1:4.38)
Rear cap #14051	for focusing mount #16462
Case #98281	holds lenshead #11828 in mount #16462
Weight	in mount #16462 - 16.8 ounces
Length	in mount #16462 - 2⅞"
Maximum diameter	in mount #16462 - 2½"

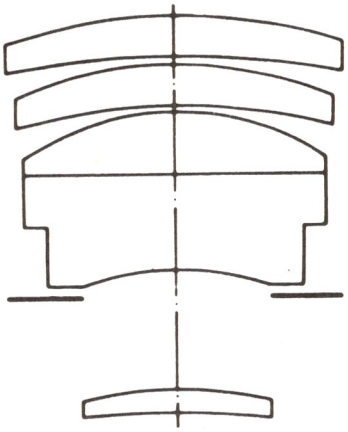
Lenshead #11828 provides 1:17.0 to 1:1.25 range with Bellows II via adapter #16598.



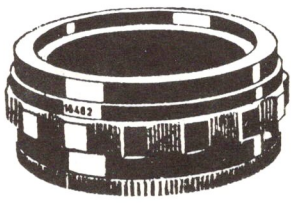
Lenshead #11828
in mount #16462



Lenshead #11828



Cross Section



Universal Focusing Mount
#16462

VISOFLEX LENSES

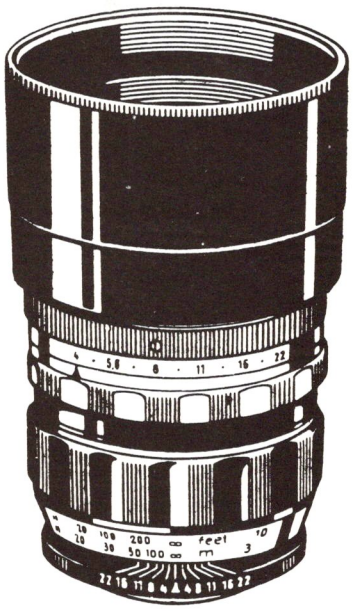
Telyt 200mm f4.0 CATALOG #11063

Telephoto lens of large maximum aperture.

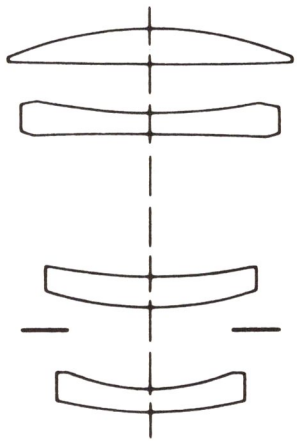
Extension tube #16466 must be used with Visoflex II - III. Lens #11063 is used directly on discontinued Visoflex I.
This true telephoto lens has 4 uncemented elements. It produces a very flat field, and at full aperture sharpness distribution is uniform; however, image quality improves when stopped down to f / 5.6.
The TELYT is a handy long-distance lens which, together with an extension tube or tubes, can also be used for the close-focusing range. The risk of camera movement is greater with long focal length lenses. At shutter speeds slower than 1 / 125 sec., the lens should be supported by a tripod or other means of steadying.

Catalog number	11063
Angle of view	12°
Number of elements	4
Filter	E-58 screw-in
Lenshood	built-in, collapsible
Diaphragm	pre-set
Smallest aperture	f22 - lens equipped with full and half click stops
Focusing mount	supplied with lens, lenshead removable
Focusing range	infinity to 10′
Smallest field covered	12¼″ x 18¼″ (1:12.25)
15mm screw mount extension tube	#14020
	fits between Visoflex I and lens #11063
	or between tube #16466 and lens #11063
One #14020 tube	10′ to 5′8″ - (12¼″ x 18¼″ to 6¼″ x 9½″)
Two #14020 tubes	5′8″ to 4′4″ - (6¼″ x 9½″ to 4¼″ x 6½″)
Finish	black, focusing scale and aperture ring finished in chrome
Case #98286	holds lens #11063 with adapter #16466
Weight	22.6 ounces
Length	5⅜″ with #16466 adapter
Maximum diameter	2⅞″

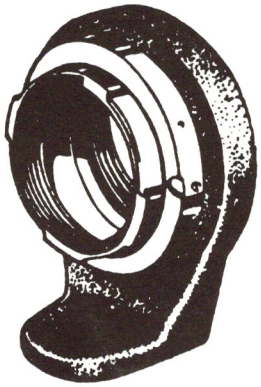
Lenshead only provides infinity to 1:3 range on Bellows II via adapter #16598.



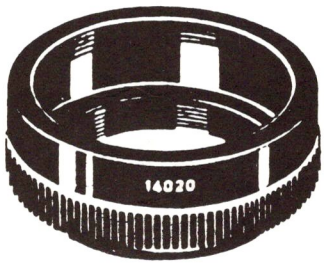
#11063



Cross Section



Extension Tube
#16466



Extension Tube
#14020

Telyt 280mm f4.8 CATALOG #11914

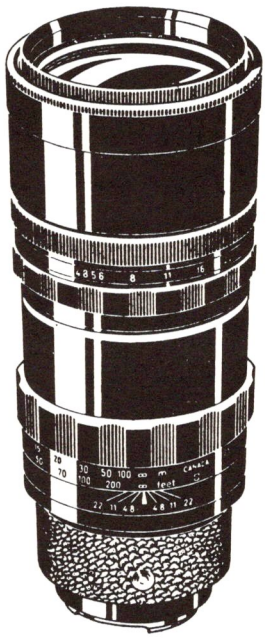
Telephoto lens of large maximum aperture.

The 280mm Telyt is a true telephoto lens with 4 uncemented elements and pre-set diaphragm. High contrast and excellent definition are evident when focusing on the groundglass screen of the VISOFLEX. Optimum performance is at f/5.6. Quality is outstanding in the close-focusing range. Becuase of its good contrast rendering, the lens can be rapidly and critically focused.

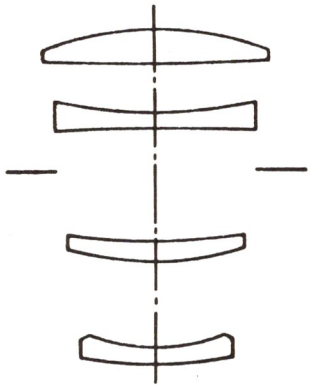
Catalog number	11914
Angle of view	8.5
Number of elements	4
Filter	Series 8 held by filter retaining ring #14169
Lenshood	built-in, collapsible
Diaphragm	pre-set
Smallest aperture	f22-lens equipped with full and half click stops
Focusing mount	supplied with lens, lenshead removable. Lenshead #11904 (available separately) usable on Televit-M #14136 or Televit-R #14146 via adapter #14138. Focuses to 6'8" (4" x 6") with Televit-M or Televit-R.
Focusing range	infinity to 11'8"
Smallest field covered	9¾" x 14½"
10mm Bayonet extension tube #16469	fits between Visoflex II-III and lens #11914
One #16469 tube	11'8" to 9'2" (9¾" x 14½" to 7¼" x 10¾")
Two #16469 tubes	9'2" to 7'5" (7¼" x 10¾" to 5¾" x 8½")
Finish	black
Case	#98287
Weight	42.4 ounces
Length	7⅜"
Maximum diameter	3⅛"

Lenshead #11904 provides infinity to 1:6 range on Bellows II via adapter #16598.

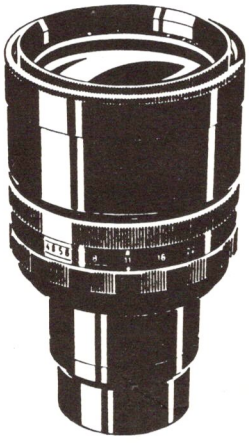
NOTE: TELEVIT UNITS HAVE BEEN DISCONTINUED.



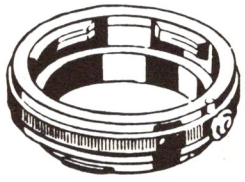
#11914



Cross Section



#11904



#16469

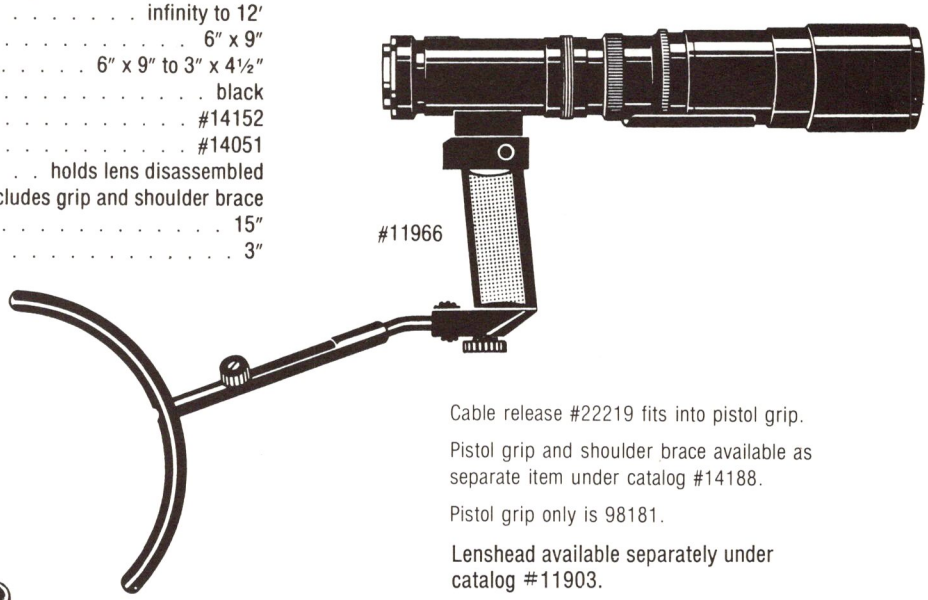
VISOFLEX LENSES

Telyt 400mm f6.8 CATALOG #11966

Rapid focusing lens of long focal length

The lightweight, rapid focusing Telyt 400mm f6.8 long focus lens has become the favorite of sports, nature and wildlife photographers. Focusing is accomplished by sliding the lens head along the lens axis. The 2 element cemented achromat design with only 2 air-to-glass surfaces delivers high contrast even at maximum aperture. A pistol grip / shoulder brace assembly permits hand holding the 400mm f6.8 Telyt at reasonable shutter speeds. Near life-size reproduction ratios are obtained by using extension tubes; this feature can be used by the photographer / scientist for photographing small difficult to approach living creatures such as butterflies.

Catalog number	11966
Angle of view	6°
Number of elements	2
Filter	Series 7 in special filter compartment
	Series 8 held by filter retaining ring #14165 (ring #14165 is available as an accessory). Polarizer 13372 can be used with adapter 98170.
Lenshood	built-in, collapsible
Diaphragm	manual
Smallest aperture	f32 - lens equipped with full click stops (half click stops between f8 and f16)
Focusing range	infinity to 12′
Smallest field covered	6″ x 9″
Extension tube #14182	6″ x 9″ to 3″ x 4½″
Finish	black
Front cap	#14152
Rear cap	#14051
Case #98288	holds lens disassembled
Weight	4 pounds, includes grip and shoulder brace
Length	15″
Maximum diameter	3″



#11966

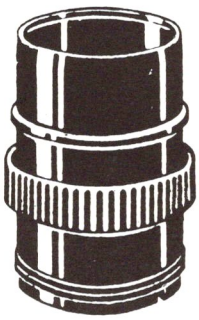
Cable release #22219 fits into pistol grip.

Pistol grip and shoulder brace available as separate item under catalog #14188.

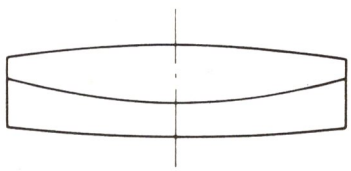
Pistol grip only is 98181.

Lenshead available separately under catalog #11903.

Visoflex mounting tube available separately under Catalog #11905.



Extension Tube
#14182



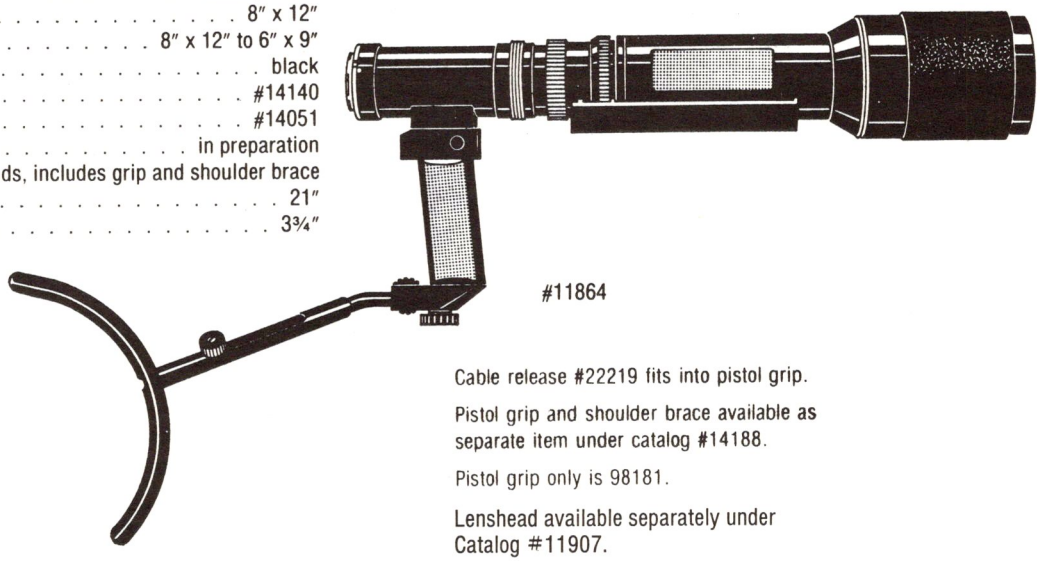
Cross Section

Telyt 560mm f6.8 CATALOG #11864

Rapid focusing lens of long focal length

The 560mm f6.8 Telyt lens is similar in design to the 400mm f6.8 Telyt and is excellent for sports, nature, wildlife, and surveillance photography. When a high magnification yet portable, lightweight lens is required, the 560mm Telyt is ideal. It is advisable with the 560mm f6.8 Telyt to use a tripod, unipod, or other support for optimum performance. Frame filling close-ups are possible from as close as 21′; extension tubes extend the close-focus range.

Catalog number	11864
Angle of view	4.3°
Number of elements	2
Filter	Series 7 in special filter compartment
Lenshood	built-in, collapsible
Diaphragm	manual
Smallest aperture	f32-lens equipped with full click stops (half click stops between f8 and f16).
Focusing range	infinity to 21′
Smallest field covered	8″ x 12″
Extension tube #14182	8″ x 12″ to 6″ x 9″
Finish	black
Front cap	#14140
Rear cap	#14051
Case	in preparation
Weight	5½ pounds, includes grip and shoulder brace
Length	21″
Maximum Diameter	3¾″



#11864

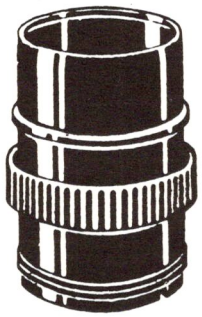
Cable release #22219 fits into pistol grip.

Pistol grip and shoulder brace available as separate item under catalog #14188.

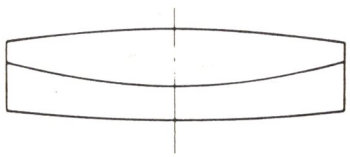
Pistol grip only is 98181.

Lenshead available separately under Catalog #11907.

Visoflex mounting tube available separately under Catalog #11905.



Extension Tube
#14182



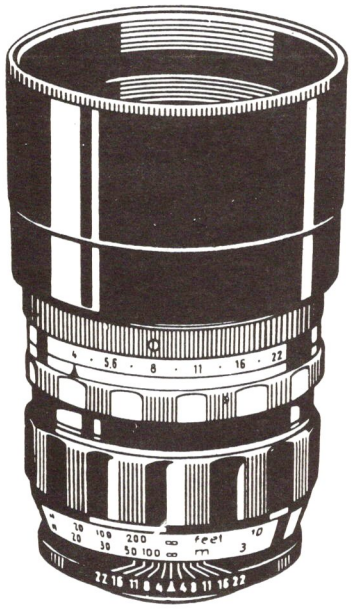
Cross Section

E.LEITZ,INC.
ROCKLEIGH
N.J. 07647

VISOFLEX LENSES

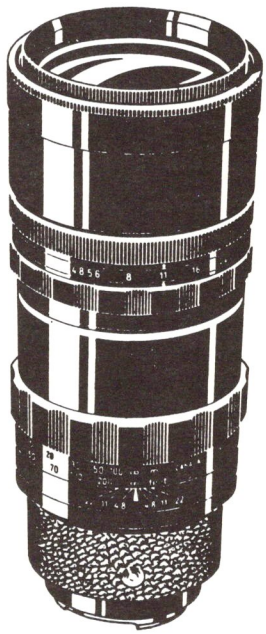
Visoflex lenses on the Leicaflex

Visoflex lenses can be used on the Leicaflex (Standard, SL or SL2) with an adapter. The Leicaflex Standard uses adapter #14127* or #14127 (discontinued). The Leicaflex SL/SL2 uses adapter #14167 (the #14127* can also be used but the aperture simulator should be ignored).



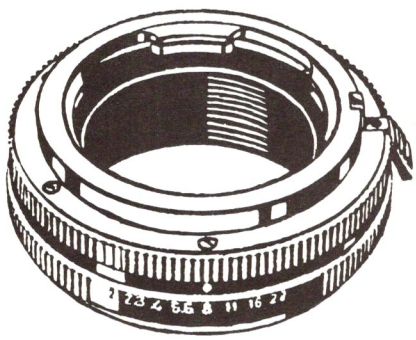
11063

11162

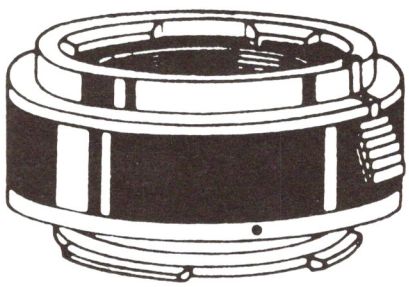


11914

Examples of Visoflex lenses usable on
the Leicaflex Standard and Leicaflex SL / SL 2



14127 *
for Leicaflex Standard



#14167
for Leicaflex SL/SL2.

Elmarit-R 16mm f2.8 Fisheye – CATALOG #11222

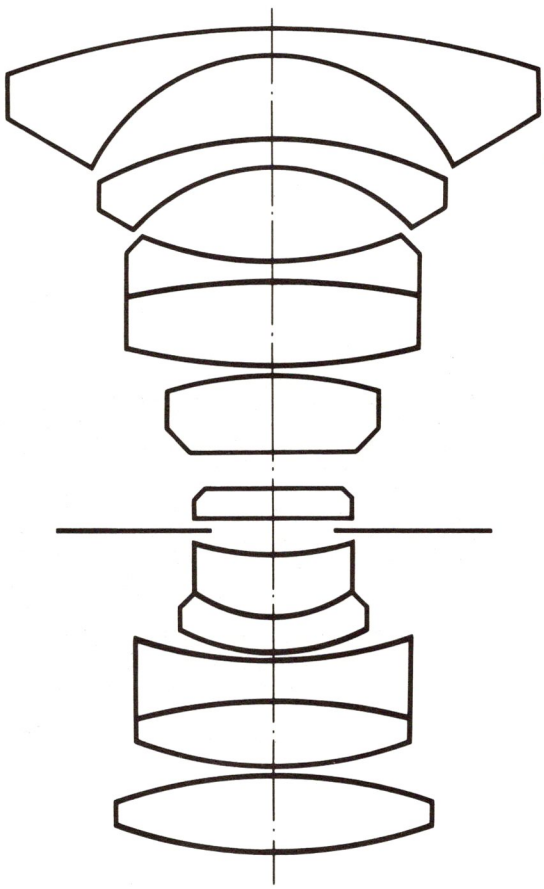
Wide angle lens with extremely large angle of view

Fisheye lenses are super-wide angle lenses with unusual optical effects: In comparison to other lenses the object area it covers is not rectangular but cushion-shaped. The Fisheye ELMARIT-R has the particular advantage that it does not produce a circular image within the rectangular film format, but fills the entire picture area. The angles of view in the horizontal and the vertical are 137° and 86° respectively, the diagonal angle of view is 180°

Catalog number:	11222
Angle of view:	180°
Number of elements:	11
Filter:	built-in (1A Skylight, Y48 Yellow, 054 Orange, 80B)
Lenshood:	built-in
Diaphragm:	fully automatic
Smallest aperture:	f16-lens equipped with full and half click stops
Focusing range:	infinity to 12''
Smallest field covered:	15.8'' x 23.7''
Finish:	black
Front cap:	14089
Rear cap:	14162
Case:	98281 (#1)
Weight:	16 ounces
Length:	2.4'' without caps
Maximum Diameter:	2.8'' without caps

SPECIAL NOTE: The 16mm f2.8 Fisheye Elmarit-R lens is intended for use only on the Leicaflex SL2 and SL2 Mot.

#11222



Cross Section

Elmarit-R 19mm f2.8 CATALOG #11225

Wide angle lens with wide angle of view.

This extreme wide angle lens for the Leicaflex combines a 95.7° field of view with high speed and excellent correction. This is a rectilinear lens which is valuable for architectural photography, and other applications requiring its very wide field of view.

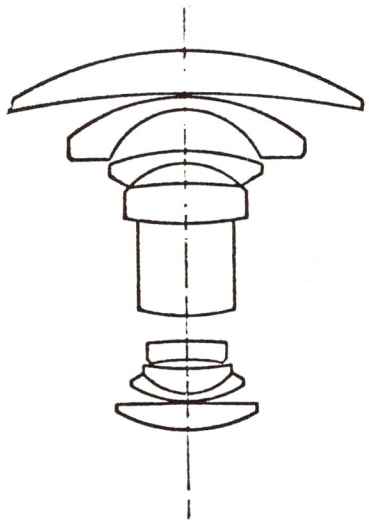
As with any extreme wide angle lens, foreground objects will be exaggerated when the lens is used at short camera to subject distances.

The following general rules should be observed when using this lens:

a) Avoid if possible, light sources in the picture area.
b) Pay close attention to leveling the camera to avoid converging lines.
c) The lens must be kept clean.
d) Perspective distortion will be observed at the format edges at close focusing distances, therefore, if correct shape retention is important, avoid placing nearby subjects at the frame edges.

Catalog number	11225
Angle of view	95.7
Number of elements	9
Filter Thread	M 82 x .75
Lenshood	12529
Diaphragm	fully automatic
Smallest aperture	f/16 lens equipped with full and half click stops
Focusing range	infinity to 19.7''
Smallest field covered	18.4'' x 27.6''
Finish	Black
Front cap	14221
Rear cap	14162
Weight	19 ounces
Length	without hood 2 3/4'' with hood 3 7/16''
Maximum diameter	without hood 3 7/16'' with hood 5'' diagonal

#11225



Cross Section

Lenshood #12529

Super-Angulon-R 21mm f4.0 CATALOG #11813

Wideangle lens with extremely large angle of view.

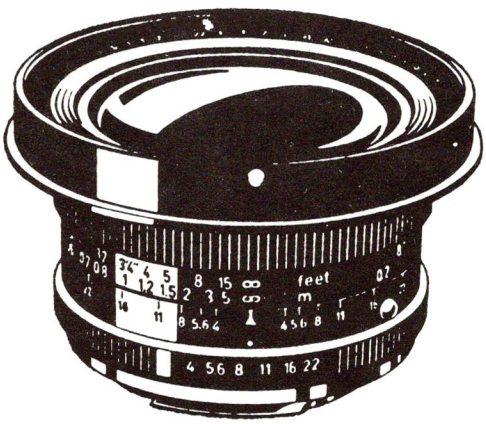
This retro-focus lens for the LEICAFLEX has 10 elements and 8 members. Due to the long intercept distance, the image can be observed through the reflex finder. At full aperture, image has good contrast and detail rendering.

Quality is improved when the lens is stopped down. At f / 22 performance suffers slightly from diffraction effects. Within the close-focusing range from 16″ to 9″, the lens should be stopped down to at least f / 11.
The favorable position of the exit pupil illuminates the picture more evenly at medium apertures than its predecessor did. Strong light sources within the picture area may cause reflections. The lens is free from pincushion and barrel distortion which are often noticeable with other ultra-wide angle lenses.

The SUPER-ANGULON is an ultra-wide angle lens for architectural photography as well as reportage with astonishing impact – provided it is used correctly. The angle of field at 92° is more than twice that of a 50mm lens. Because of this and the extremely great depth of field, pictures of unusual perspective can be obtained. At short camera distances, foreground objects are exaggerated in size in relation to a rapidly diminishing background.
SUPER-ANGULON lenses are eminently suitable for photographing architectural models. The following basic rules should be observed:

a) Extremely powerful light sources in the picture area should be avoided.
b) Attention should be paid to converging lines.
c) The outside lens elements must be kept clean.
d) Perspective distortion at the edges of the picture at close distances should be observed.

Catalog number:	11813
Angle of view:	92°
Number of elements:	10
Filter:	Series 8½ held by lenshood #12506
Lenshood:	#12506 supplied with lens
Diaphragm:	fully automatic
Smallest aperture:	f22 - lens equipped with full and half click stops
Focusing range:	infinity to 8″
Smallest field covered:	6″ x 8¾″ (approx.)
Finish:	black
Front cap:	#14145
Rear cap	#14162
Case:	#98281, holds lens with hood attached
Weight:	14.5 ounces
Length:	1¾″ (less hood), 2⅜″ (with hood)
Maximum diameter:	3 1/16″ (less hood), 4 5/16″ (with hood)



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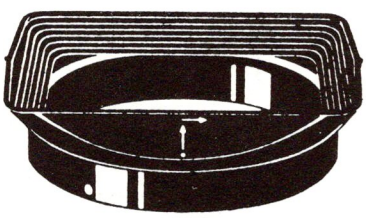
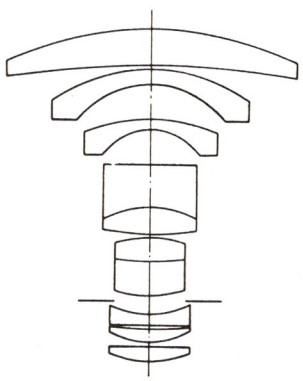


Lenshood #12506



Cross Section

Elmarit-R 24mm f2.8 CATALOG #11221

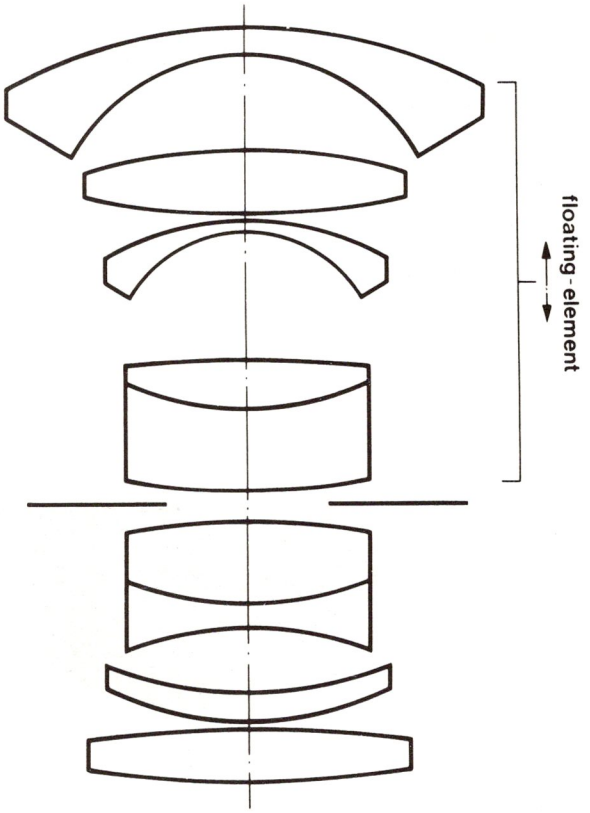
Wide angle lens with large field of view

The combination of extreme wide-angle of view and high speed; freedom from vignetting and outstanding optical performance at full aperture gives the 24 mm ELMARIT-R f/2.8 a special advantage for reportage in confined spaces, architectural photography and last, but not least, for dynamic photography with unusual perspectives.
The 24 mm ELMARIT-R f/2.8 has floating elements which produce optimum optical quality throughout the entire focusing range.
The focal length of 24 mm at an angle of view of 84° is exactly mid-way between the 21 and 28 mm focal lengths.

Catalog number:	11221
Angle of view:	84°
Number of elements:	9
Filter:	Series 8 held by lenshood #12523
Polarizing filter:	#13372 held by lenshood #12523
Lenshood:	12523
Diaphragm:	fully automatic
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range:	infinity to 12''
Smallest field covered	9.8'' x 14.7''
Finish:	black
Front cap:	14184
Rear cap:	14162
Case:	98281 (#1)
Weight:	13¼ ounces
Length:	without hood - 1.8'', with hood - 2 5/8''
Maximum diameter:	without hood-2.7'', with hood-3 5/8''

SPECIAL NOTE: The 24 mm f2.8 Elmarit-R lens is intended for use only on the Leicaflex SL2 and SL2 Mot.

#11221



Cross Section

Elmarit-R 28mm f2.8 CATALOG #11204

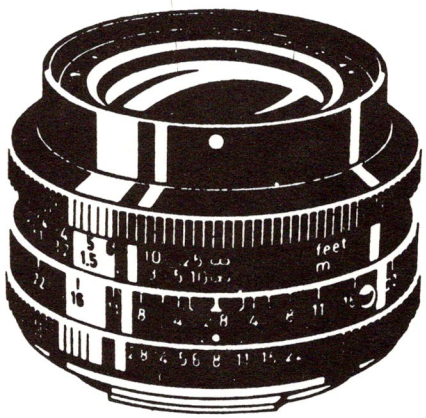
Wide angle lens with large angle of view

This ultra-wide angle lens for the LEICAFLEX is not only exceptionally fast for its focal length, but also unusually compact. It is only a little over 1.5″ long and weighs only 9.25 ozs. Image definition is excellent over the whole field and the lens reaches its optimum performance at f / 4 to 5.6 for distances between infinity and 3.5′. Within the close-focusing range from 12″ to 3.5′ the lens should be stopped down to at least f / 11.

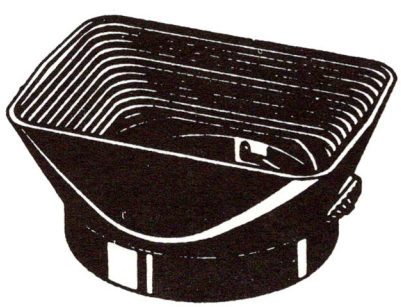
It is of special value for feature photography in confined spaces - indoors or out - for architectural photography and for unusual perspective effects in creative publicity. The extreme angle of view with high speed and outstanding performance at full aperture make this lens particularly suitable for all these applications. And its remarkable freedom from vignetting (for an angle of this order) makes the 28mm ELMARIT-R an excellent lens for wide-angle color photography.

The system shows remarkable freedom from flare to yield brilliant and irradiation-free images even with high contrast subjects. In color shots this means more saturated colors and greater color differentiation in the shadows. The lens is, therefore, outstanding for available light photography and for shots with bright light sources in the image field - still at full aperture. All this makes the 28mm ELMARIT-R f / 2.8 one of the most important working lenses, not just for the professional but for the amateur as well.

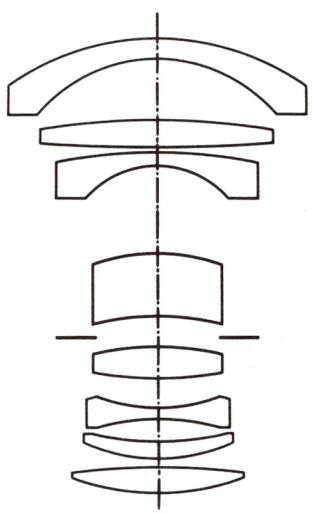
Catalog number:	11204
Angle of view:	76°
Number of elements:	8
Filter:	Series 7 held by lenshood #12509. Lens accepts E-48 screw-in filters directly. Use polarizing filter #13370 in lenshood #12509
Lenshood:	#12509 supplied with lens. Use leather case #14621 for lenshood #12509.
Diaphragm:	fully automatic
Smallest aperture:	f22 - lens equipped with full and half click stops
Focusing range:	infinity to 12″
Smallest field covered:	7½″ x 11¼″
Finish:	black
Front cap:	#14172
Rear cap:	#14162
Case:	#98281, holds lens with hood attached.
Weight:	9.7 ounces.
Length:	1⅝″ (less hood), 2 9/16″ (with hood)
Maximum diameter:	2 7/16″ (less hood), 3¼″ (with hood)



11204



Lenshood #12509



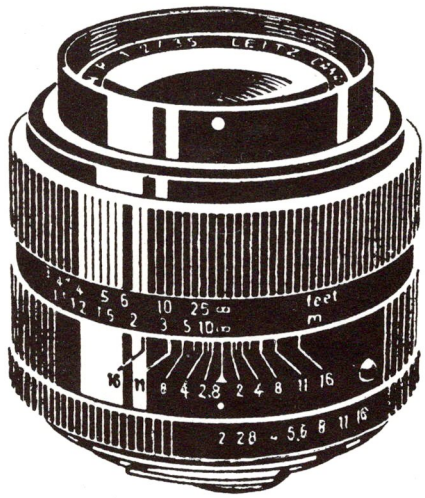
Cross Section

Summicron-R 35mm f2.0 CATALOG #11227

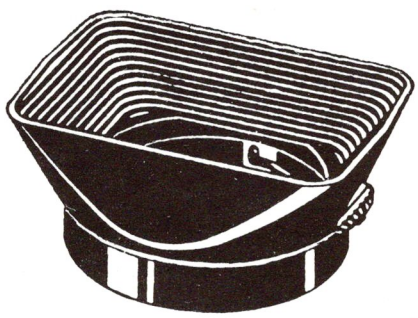
Wideangle lens with large maximum aperture

The SUMMICRON-R f/2 is the fastest wide-angle lens for the LEICAFLEX and is especially suitable for live color shots in poor light. It is an excellent lens for night shots. Strong light sources in the field of view cause no trouble, because it is flare-free even at maximum aperture. Performance is fully on a par with the SUMMICRON lenses for the LEICA, with outstanding definition and image quality. Image illumination is very uniform—important for color shots of large subject areas.
This is the top lens among fast wide-angle systems for single lens reflex cameras.

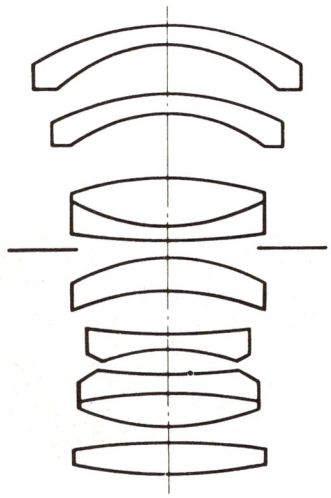
Catalog number	11227
Angle of view	64°
Number of elements	9
Filter	Series 7 held by lenshood #12509. Lens accepts E-48 screw-in filters directly. Use polarizing filter #13370 in lenshood #12509.
Lenshood #12509	supplied with lens. Use leather case #14621 for lenshood #12509.
Diaphragm	fully automatic
Smallest aperture	f16-lens equipped with full and half click stops
Focusing range	infinity to 12″
Smallest field covered	5¾″ x 8½″
Finish	black
Front cap	#14172
Rear cap	#14162
Case #98283	holds lens with hood attached
Weight	18.7 ounces
Length	2⅜″ (less hood), 3⅜″ (with hood)
Maximum diameter	2⅝″ (less hood), 3¼″ (with hood)



#11227



Lenshood #12509



Cross Section

Elmarit-R 35mm f2.8 CATALOG #11201

Wideangle lens with moderate maximum aperture

The ELMARIT-R is a retro-focus type consisting of 7 elements and 6 members. This versatile wideangle lens, recently computed at #2517851, provides excellent contrast and resolution. Optimum performance is reached as early as f / 4.0. Special lens coating and UV absorbing cement are utilized to reduce transmission of UV light. In practice, for the close focusing range below 40″, the lens should be stopped down, if possible, to f / 11. Like all retro-focus systems this lens is less suitable for copy work.

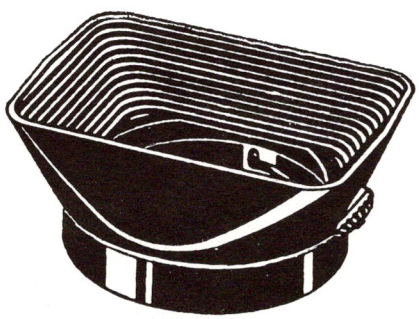
Catalog number	11201
Angle of view	64°
Number of elements	7
Filter	Series 7 held by lenshood #12509. Lens accepts E-48 screw-in filters directly. Use polarizing filter #13370 in lenshood #12509.
Lenshood	#12509 supplied with lens. Use leather case #14621 for lenshood #12509.
Diaphragm	fully automatic
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range	infinity to 12″
Smallest field covered	5¾″ x 8½″
Finish	black
Front cap	#14172
Rear cap	#14162
Case	#98281 holds lens with hood attached
Weight	10.5 ounces
Length	1⅝″ (less hood), 2 7/16″ (with hood)
Maximum diameter	2 7/16″ (less hood), 3¼″ (with hood)

#11201

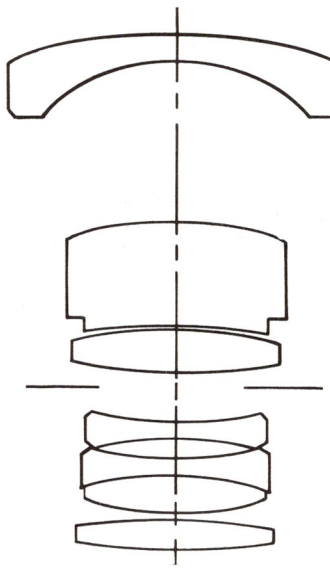
SPECIAL NOTE:

Elmarit-R 35mm f / 2.8 lenses below #2517851 require

Series 6 filters held by retaining ring	*#14160*
Polarizing filter	*#13358*
Lenshood	*#12564*
Front cap	*#14163 (fits over reversed lenshood #12564)*
Case	*#98282 (holds lens with hood reversed)*



Lenshood #12509



Cross Section

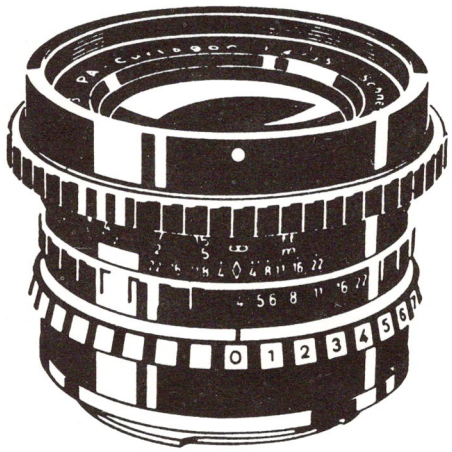
PA-Curtagon-R 35mm f4.0 CATALOG #11202

Wideangle lens with perspective adjustment

The optical "secret" behind the PA-CURTAGON-R is that the lens has been corrected to cover a larger angle than required for normal 35mm lenses. With this extra coverage, the optical axis of the lens can be decentered in any direction up to 7mm. You mount it on the camera like any other interchangeable lens, then the front part can be moved up, down or sideways. In this way, the LEICAFLEX can take in tall buildings without having to tilt the camera, while you avoid converging verticals and eliminate undesirable foreground subjects. In effect, it is an ultra-wide angle lens with an even bigger angle than the 28mm ELMARIT-R; you cover any part of the ultra-wide angle view you want to by laterally moving the lens.
In addition to architectural and industrial photography, this displaceable lens also offers many possibilities for perspective control. The field of view, including the change in the image field obtained by displacing the optical axis, is directly observable through the LEICAFLEX viewfinder. With its focal length of 35mm and an image field of 57mm diameter, the PA-CURTAGON-R has an effective image angle of 78°. The optical system is built into a helical focusing mount to cover distances from infinity to 12", measured from the film plane!

Catalog number	11202
Angle of view	63° - 78°
Shift from optical axis	7mm
Number of elements	7
Filter	Series 8 held by lenshood #12514. Use polarizing filter #13372 in lenshood #12514.
Lenshood #12514	supplied with lens
Diaphragm	manual
Smallest aperture	f22-lens equipped with full click stops
Focusing range	infinity to 12"
Smallest field covered	5¾" x 8½"
Finish	black, axial shift control ring finished in chrome.
Front cap	#14184
Rear cap	#14162
Case #98281	holds lens with hood attached
Weight	10.2 ounces
Length	2" (less hood), 2¾" (with hood)
Maximum diameter	2¾" (less hood), 3⅛" (with hood)

This is a special wide-angle lens with parallel displacement to avoid converging verticals. It gives the LEICAFLEX some of the scope of a view camera with lens displacements and is, therefore, particularly useful for architectural photography and similar applications. It is, in fact, a lens with a built-in "rising front" in any direction.



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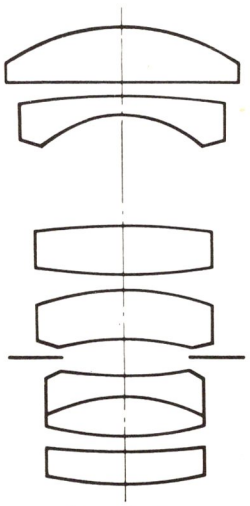
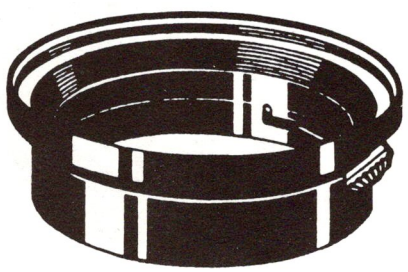


Cross Section



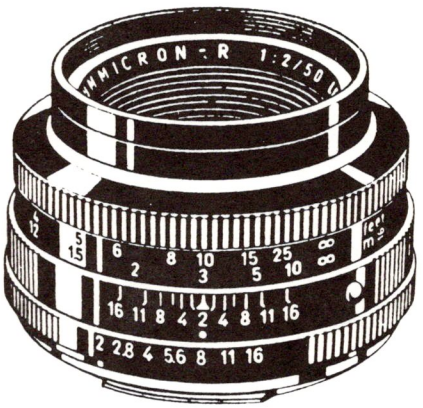
Lenshood #12514

Summicron-R 50mm f2.0 CATALOG #11228

Normal lens of large maximum aperture

This lens is a Gauss variant, consisting of 6 elements and 5 members. High contrast, good resolving power, and excellent flattening of the entire field of view add up to outstanding general performance. High picture quality at full aperture f / 2 is particularly fascinating. When Leitz ELPRO close-focusing achromats are attached, performance is preserved within the close-focusing range. The viewfinder magnification of the LEICAFLEX is 0.9x; the viewfinder image is therefore, almost natural size.

Catalog number	11228
Angle of view	45°
Number of elements	6
Filter	Series 6 held by filter retaining ring #14160. Use polarizing filter #13358.
Lenshood #12564	supplied with lens
Diaphragm	fully automatic
Smallest aperture	f16-lens equipped with full and half click stops
Focusing range	infinity to 20"
Smallest field covered	7¼" x 10¾"
Elpro close-up lenses	VIa 7¼" x 10⅞" (1:7.7) to 3⅝" x 5 7/16" (1:3.8)
	VIb 3 11/16" x 5 9/16" (1:3.9) to 2 7/16" x 3 11/16" (1:2.6)
Divisible ring #14158	2" x 3" (1:2) - half life size
	#14158 plus tube #14135 1" x 1½" (1:1) - life size
Finish	black
Front cap #14163	fits over reversed lenshood #12564
Rear cap	#14162
Case #98282	holds lens with hood reversed
Weight	12 ounces
Length	1½" (less hood), 2⅜" (with hood)
Maximum diameter	2 7/16" (less hood), 2 9/16" (with hood)



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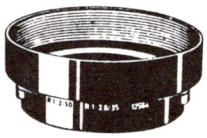
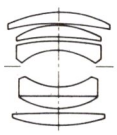


Lenshood #12564



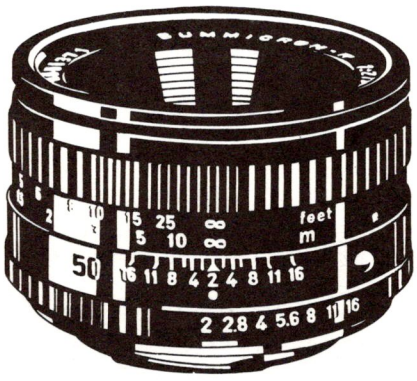
Summicron-R 50mm f2.0 CATALOG #11215

Normal lens of large maximum aperture

This is the standard lens supplied with the LEICA R3 - including the aperture coupling element for LEICA R3 exposure automation, and it can also be used with any previous LEICAFLEX model.

Compared with its previous version, the new 50mm SUMMICRON-R f/2 offers better image contrast and a flatter field at the largest apertures. At full aperture of f/2, the image quality of the new lens is comparable to that of the previous lens at f/2.8. The new lens is slightly smaller than the older one and offers the convenience of a built-in collapsible lenshood. Close focusing distortion is negligible, and the color rendition matches that of all other LEITZ-R lenses.

Catalog number	11215
Angle of view	45°
Number of elements	6
Filter	E 55 (M55 X 0.75) Use polarizing filter 425541
Lenshood	Built-in collapsible
Diaphragm	fully automatic
Smallest aperture	f16-lens equipped with full and half click stops
Focusing range	infinity to 20"
Smallest field covered	7¼" x 10¾"
Elpro close-up lenses	#1 . . . 16541
	#2 . . . 16542
Divisible ring #14158	2" x 3" (1:2) - half life size
	#14158 plus tube #14135 1" x 1½" (1:1) - life size
Finish	black
Rear cap	14162
Case	98282
Weight	8.8 oz.
Length	1.6 in.



#11215

Retaining Ring for Series 7 filters

Summilux-R 50mm f1.4 CATALOG #11875

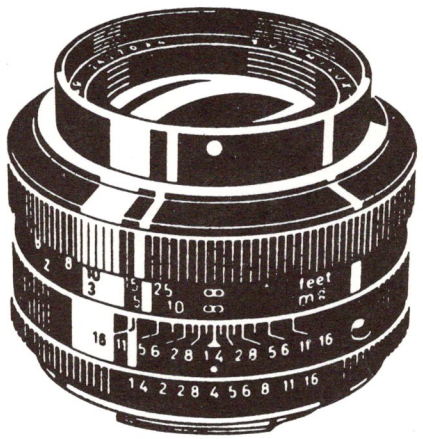
Normal lens of very large maximum aperture

This is the fastest normal focal length LEICAFLEX lens available. As a standard focal length, it is a universal lens with the additional versatility of extreme maximum aperture. Image performance and contrast are exceptionally high at full aperture and further increase on stopping down to f / 2 to 2.8. With its outstanding overall definition in all distance ranges, this should become the preferred lens for sports, feature and available-light photography. In addition, the largest aperture (a real f / 1.4) offers special creative scope with selective focusing, i.e., restricted depth of field.

The SUMMILUX-R is remarkably free from flare, so that even strong light sources in the picture itself cause neither ghost images nor loss of background detail. Coma — often a nuisance with high-speed lenses — is practically eliminated.

This lens uses highly refractive glasses and is a 7-element symmetrical Gauss type. As an ultra-speed standard lens for the LEICAFLEX, it is primarily intended for photography in poor light. But in spite of the greater back focus required to accommodate the LEICAFLEX mirror system, lens definition at full aperture is comparable with that of the 50mm SUMMILUX f / 1.4 lens for the LEICA.

Catalog number	11875
Angle of view	45°
Number of elements	7
Filter	Series 7 held by lenshood #12508. Lens accepts E-48 screw-in filter directly. Use polarizing filter #13370 in lenshood #12508.
Lenshood #12508	supplied with lens. Use leather case #14621 for lenshood #12508.
Diaphragm	fully automatic
Smallest aperture	f16-lens equipped with full and half click stops
Focusing range	infinity to 20″
Smallest field covered	7¼″ x 10¾″
Finish	black
Front cap #14171	fits over reversed lenshood #12508.
Front cap #14172	fits lens directly
Rear cap	#14162
Case #98281	holds lens with hood reversed
Weight	16.2 ounces
Length	1⅞″ (less hood), 3″ (with hood)
Maximum diameter	2½″ (less hood), 2¾″ (with hood)



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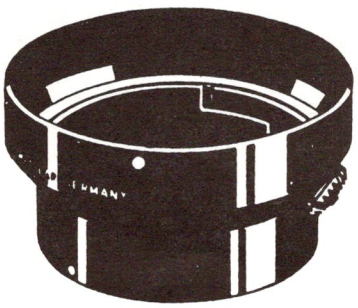
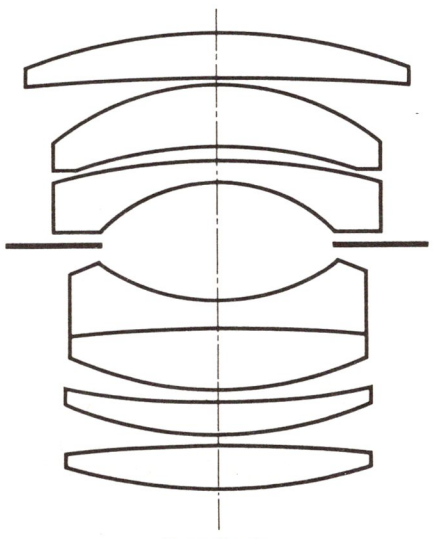


Lenshood #12508



Cross Section

Macro-Elmarit-R 60mm f2.8 CATALOG #11203

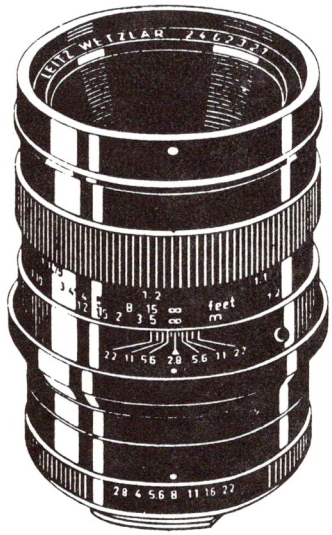
Normal lens with infinity to lifesize focusing range.

The 60mm f2.8 Macro-Elmarit-R lens can be considered a universally applicable lens of near normal focal length. The most outstanding advantage of the Macro-Elmarit-R lens is its ability to focus from infinity to ½ life size without accessories. Fully automatic diaphragm operation is maintained through this focusing range. The Leicaflex SL behind-the-lens metering system compensates for exposure increase factors; exposure measurement is of course by the full aperture method.

A 1:2 to 1:1 reproduction ratio range is obtainable with the intermediate tube supplied with the lens. In this range diaphragm operation is automatic and exposure measurement is at full aperture.

For the Leicaflex owner who desires ultimate flexibility, the 60mm f2.8 Macro-Elmarit-R lens is the preferred choice.

Catalog number	11203
Angle of view	39°
Number of elements	6
Filter	Series 8 held by lenshood #12514. Use polarizing filter #13372 in lenshood #12514
Lenshood #12514	(available as an accessory)
Diaphragm	fully automatic throughout full focusing range
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range	lens only - infinity to 1:2; lens plus ring - 1:2 to 1:1
Smallest field covered	lens only - 2″ x 3″; lens plus ring - 1″ x 1½″
Finish	black
Front cap	#14184
Rear cap	#14162
Case #98286	holds lens with ring and hood attached
Weight	16 ounces (lens only), 22 ounces (lens plus ring)
Length	2⅝″ (lens only), 3⅞″ (lens plus ring), 4½″ (lens, ring, and hood)
Maximum diameter	2¾″ (less hood), 3⅛″ (with hood)
Intermediate tube for 1:2 to 1:1 ratio	#14198
Lens without intermediate tube	#11205



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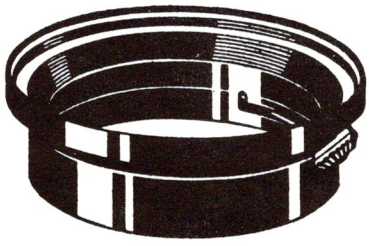
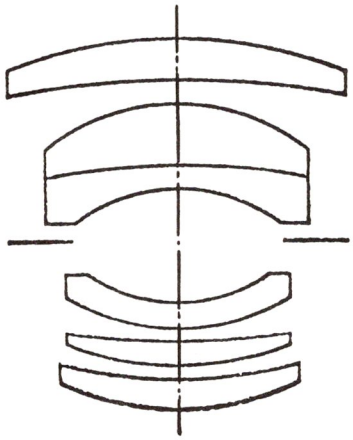


Lenshood #12514



Cross Section

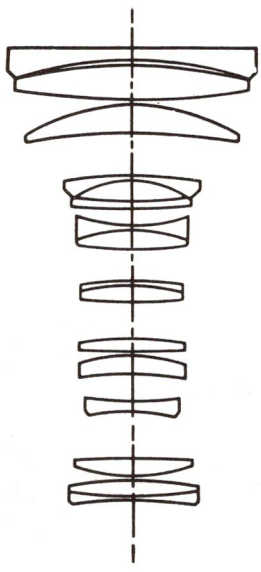
Angenieux-R 45-90mm f / 2.8 CATALOG #98000

Zoom lens of large maximum aperture

The Leicaflex owner who desires ultimate flexibility in the normal to short telephoto focal length range will be well served by the 45-90mm f2.8 Angenieux zoom lens. The 45-90mm f2.8 zoom lens is especially appreciated by the color transparency worker as this lens permits "cropping" in the camera.

Catalog number	98,000
Angle of view	27° - 51°
Number of elements	15
Filter	Series 8 held by lenshood
Lenshood	Supplied with lens
Diaphragm	fully automatic
Smallest aperture	f / 22 - lens equipped with half and full click stops
Focusing range	infinity to 3′ 3″
Smallest field covered	15″ x 23″ (45mm) to 8″ x 12″ (90mm)
With close-up lens	#98,001
Focusing range	41″ to 24″
At 45mm - field coverage	20″ x 30″ to 8″ x 12″
At 90mm - field coverage	10″ x 15″ to 4″ x 6″
Finish	Black
Front cap #44352C	(available from Repair Department as replacement)
Rear cap	#14,162
Case #98,286	holds lens with hood attached
Weight	28 ounces
Length	5⅝″
Maximum diameter	3 1/16″

98,000



Cross Section

Vario-Elmar-R 80-200mm f4.5 CATALOG #11224

Zoom lens featuring 2.5:1 focal length range and single touch focusing and zooming control.

This lens has a 2.5x zoom ratio which supplements the range of medium tele-photo lenses. It is relatively small, light-weight and suitable for hand holding. Zooming and focusing are controlled by a single knurled adjustment ring: backward and forward movement adjusts the focal length; rotation, as usual, the focusing.
Its outstanding optical performance and the fact that it can be used with an accessory attachment for close-up photography makes it very suitable for scientific and technical photography.

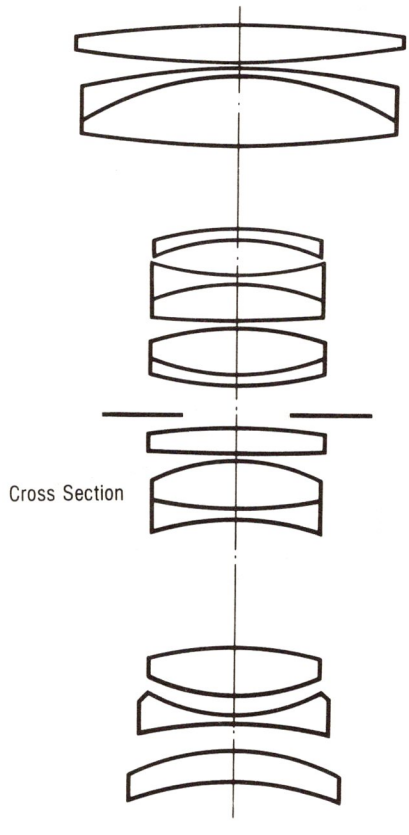
Catalog number:	11224
Angle of view:	30° to 12°
Number of elements:	14
Filter:	55 mm screw-in
Lenshood:	built-in
Diaphragm:	fully automatic
Smallest aperture:	f22-lens equipped with full and half click stops
Focusing range:	infinity to 6'
Smallest field covered:	16.3''x24.2'' (80mm) to 6.8''x9.9'' (200mm)
Finish:	black
Front cap:	14044
Rear cap:	14162
Case:	98287 (#7)
Weight:	25 ounces
Length:	6.18''
Maximum diameter:	2.83''

SPECIAL NOTE: The 80-200 mm f4.5 Vario-Elmar-R lens is intended for use only on the Leicaflex SL2 and SL2 Mot.

For use on the Vario-Elmar-R f4.5 80-200mm: Achromatic front lens by Minolta, type O for extending the focusing range from 0.86 to 1.28m (about 35 to 51 inches).

Object field 70x102mm to 302x445mm (2⅞x4⅛" to 12x17⅞")
Minolta Code No. 1475.

#11224



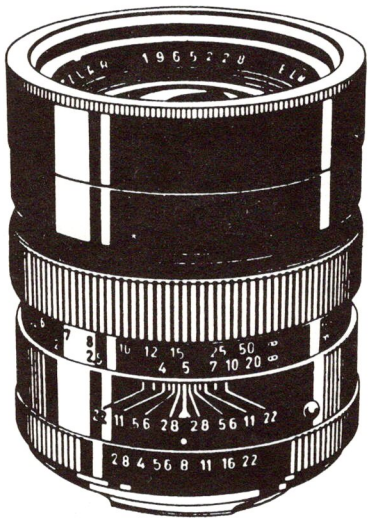
Cross Section

Elmarit-R 90mm f2.8 CATALOG #11239

Telephoto lens of large maximum aperture

The ELMARIT-R is a variant of the Gauss type; it consists of 5 elements and 4 members. Even at full aperture its performance is excellent. It has good contrast and sharpness into the corners, with an optimum aperture of f/4. In combination with close-focusing achromats, image quality is maintained right into the close-focusing range of 1:3.
The 90mm ELMARIT-R could be classed as the standard LEICAFLEX lens. It is from this focal length that the single lens reflex camera really comes into its own. If you value a snapshot lens and good pictorial composition in the view-finder, you should have this lens for your LEICAFLEX, It is handy and can be rapidly and accurately focused because of the larger measuring base. (The viewfinder magnification in the LEICAFLEX is 1.5x; in the M5, 0.7x). The effective measuring base is 28.5mm (M5, 48mm). Excellent optical performance even at full aperture f/2.8 makes the ELMARIT-R a brilliant reportage lens, even for work in poor lighting conditions.

Catalog number	11239
Angle of view	27°
Number of elements	5
Filter	Series 7 held by filter retaining ring #14161. Use polarizing filter #13354 (Roto) in place of 14161.
Lenshood	built-in, collapsible
Diaphragm	fully automatic
Smallest aperture	f22 - lens equipped with full and half click stops
Focusing range	infinity to 28"
Smallest field covered	5¾" x 8½"
Elpro close-up lens VIIa	$6\frac{11}{16}$" x 9½" (1:6.7) to 2⅞" x 4 " (1:3)
Divisible ring #14158	1:2.2
Finish	black
Front cap	#14089
Rear cap	#14162
Case	#98284
Weight	18.2 ounces
Length	2⅞"
Maximum diameter	$2\frac{9}{16}$"



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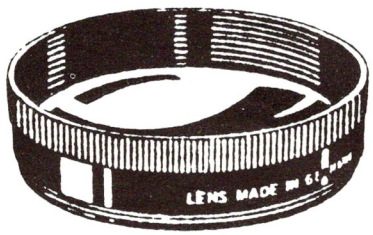
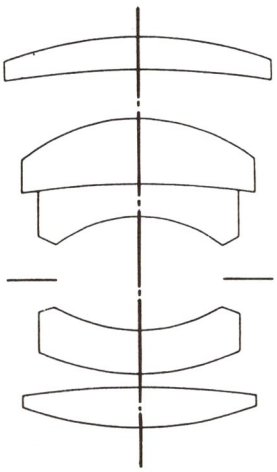


Elpro VIIa #16533



Cross Section

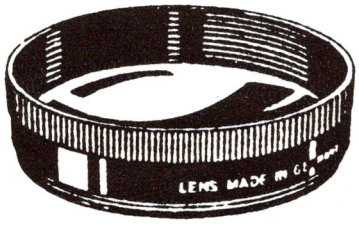
Summicron-R 90mm f2.0 CATALOG #11219

Telephoto lens of large maximum aperture

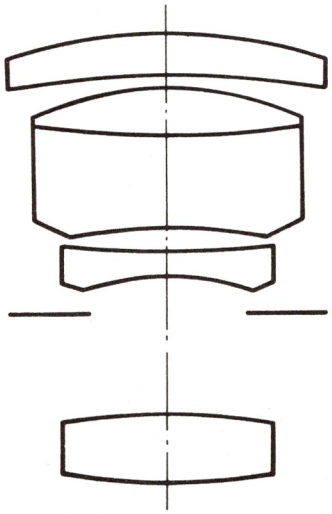
The 90mm SUMMICRON-R f/2 brings high lens speed into the medium long focus LEICAFLEX lens range. At the same time, it is a high performance lens of remarkably handy dimensions — with an overall length of approximately 2.4″ it is hardly larger than the standard 50mm SUMMICRON-R, In performance, it closely resembles the famous LEICA lens of the same focal length, with outstanding resolving power and high contrast reproduction (i.e., a very favorable contrast transfer function, in terms of current scientific criterion). It goes without saying that this makes the lens particularly useful for available light photography.
The 90mm SUMMICRON-R is a 5-element system and focuses down to 28″ with the smallest subject field of approximately 6″ x 9″.

Catalog number	11219
Angle of view	27°
Number of elements	5
Filter	Series 7 held by filter retaining ring #14161. Use polarizing filter #13354 (Roto) in place of 14161.
Lenshood	built in, collapsible
Diaphragm	fully automatic
Smallest aperture	f16 - lens equipped with full and half click stops
Focusing range	infinity to 28″
Smallest field covered	5¾″ x 8½″
Elpro close-up lens VIIa	$6\frac{11}{16}$″ x 9½″ (1:6.7) to 2⅞″ x 4″ (1:3)
Divisible ring #14158	1:2.2
Finish	black
Front cap	#14144
Rear cap	#14162
Case	#98284
Weight	19.8 ounces
Length	2⅜″
Maximum diameter	2¾″

#11219



Elpro VIIa #16533



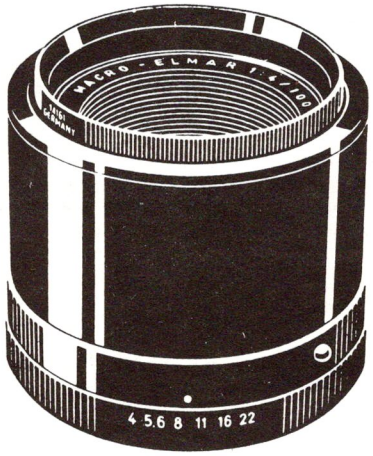
Cross Section

Macro-Elmar 100mm f4.0 CATALOG #11230

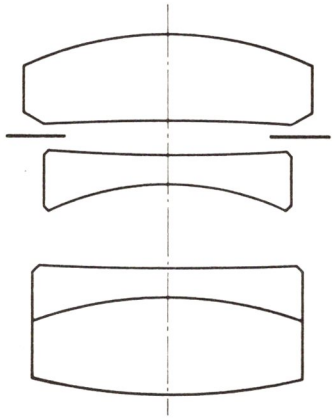
Long focus lens designed for Bellows-R. Provides infinity to life-size focusing range.

This 4 element, 3 member triplet variant of the ELMAR type has been computed for a reproduction ratio of 1:8. It is, therefore, a macro lens with superior optical performance within a very large working range. In the Universal Focusing Bellows-R, it can be focused from infinity to 1:1. When stopped down to f/5.6 or 8, a further increase in contrast and image quality occurs.
In combination with the Universal Focusing Bellows-R and the semi-automatic diaphragm, this lens is ideal for medium closeups and macro-photography including live subjects.

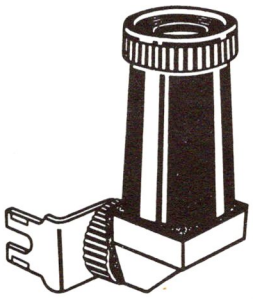
Catalog number	11230
Angle of view	24.5°
Number of elements	4
Filter	Series 7 held by filter retaining ring #14161. Use polarizing filter #13354 (Roto)
Lenshood	built-in, collapsible
Diaphragm	semi-automatic, controlled by finger pressure or by double cable release #16494.
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range	infinity to 1:1 - life size
Smallest field covered	1″ x 1½″ - life size
Divisible ring #14158	and tube #14135 can be used between Macro Elmar lens and Bellows-R to extend close focus range.
Finish	black
Front cap	#14089
Rear cap	#14162
Case	#98284
Weight	12.9 ounces
Length	2 5/16″
Maximum diameter	2⅝″



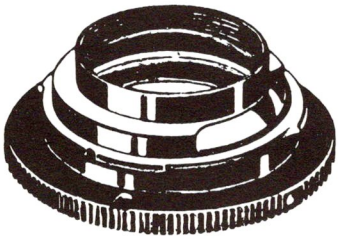
#11230



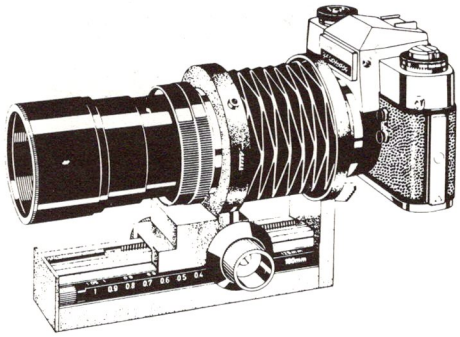
Cross Section



#14186 - 90° finder



Adapter #16863
Permits use of Visoflex
lenses #11162, #11026 and #11852



Bellows-R, 100mm f4.0 Macro-Elmar,
and Leicaflex SL/SL2 body.

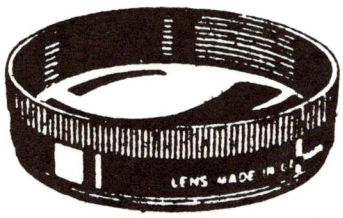
Elmarit-R 135mm f2.8 CATALOG #11211

Telephoto lens of large maximum aperture

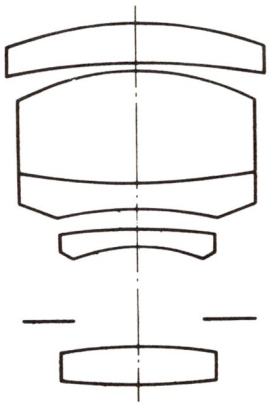
This long focal length lens of telephoto design has 5 elements and 4 members. Its very good resolving power at full aperture reaches optimum performance at f / 4. Excellent image quality also at close distances and little flare from objects of high luminous density in front of a dark surrounding field are remarkable at full aperture f / 2.8.
The viewfinder magnification in the LEICAFLEX is 2.3x (M5 with 135mm ELMARIT f / 2.8 with viewfinder attachment - 1x), and the effective measuring base is 64mm (M5 - 67mm). This produces very high focusing reliability in addition to an impressive viewfinder image in the LEICAFLEX. Although compared with the 90mm ELMARIT-R, the 135 ELMARIT-R f / 2.8 is slightly larger and heavier, the difference in focal length offers advantages in its application. At close focusing distances, this lens offers a long free working distance which is especially advantageous when photographing small living subjects.

Catalog number	11211
Angle of view	18°
Number of elements	5
Filter	Series 7 held by filter retaining ring #14161. Use polarizing filter #13354 (Roto)
Lenshood	built-in, collapsible
Diaphragm	fully automatic
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range	infinity to 5′
Smallest field covered	8¼″ x 13¼″
Elpro close-up lenses	
VIIb	9⅝″ x 14″ (1:9.9) to 4¼″ x 6⅜″ (1:4.5)
VIIa	4¼″ x 6⅜″ (1:4.5) to 2⅝″x 3⅝″ (1:2.8)
Divisible ring	#14158 - 1:3.3
Finish	black
Front cap	#14089
Rear cap	#14162
Case	#98283
Weight	26 ounces
Length	3⅝″
Maximum diameter	2⅝″

#11211



Elpro VIIa #16533
or VIIb #16534



Cross Section

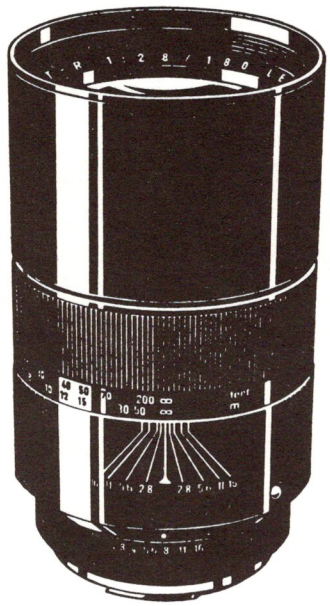
Elmarit-R 180mm f2.8 CATALOG #11919

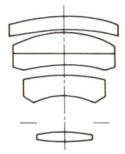
Telephoto lens of large maximum aperture

The ELMARIT-R is a telephoto system with 5 elements and 4 members. Even at full aperture f / 2.8, it offers uniform performance and very good contrast. When stopped down to f / 4, optimum image quality is achieved. The viewfinder magnification is 3x, the effective measuring base 98mm. Because of the bright LEICAFLEX viewfinder and the large maximum aperture, this lens can be used very effectively even in poor lighting conditions. Its long focal length and automatic diaphragm permit one to photograph unobtrusively from a long distance. High viewfinder magnification and good contrast permit critical and rapid focusing.

Catalog number	11919
Angle of view	14°
Number of elements	5
Filter	Series 8 held by filter retaining ring #14165
Lenshood	built-in, collapsible
Diaphragm	fully automatic
Smallest aperture	f16 - lens equipped with full and half click stops
Focusing range	infinity to 6'8"
Smallest field covered	8½" x 12¾"
Finish	black
Front cap	#14166
Rear cap	#14162
Case	#98286
Weight	3 pounds (approx.)
Length	5⅜"
Maximum diameter	3¼"
Polarizer	13372

(In Roto Adapter 98170 screwed into rear section of Retaining Ring 14165).





#11919

ELMAR-R 180mm f/4 CATALOG # 11922

For photographers who prefer compactness and less bulk where lens speed is not an important criterion, LEITZ now offers the compact 180mm ELMAR-R f/4, for the LEICA R-3 and all other LEICAFLEX models.

The 180mm ELMAR-R gives its best performance at distances of more than 3 meters and matches the 180mm Elmarit-R optical performance.

The new lens focuses very close - the magnification at the closest - 1.8 meter (6 feet) distances is slightly greater than that of the standard 50mm lens at its closest focusing distance. You can focus still closer by using the new ELPRO 3 and 4 close-up lenses.

Catalog number	11922
Angle of view	14°
Number of elements	5
Filter	M55X0.75 (E55) SER. 7 Retaining Ring
Lenshood	built-in, collapsible
Diaphragm	fully automatic
Smallest aperture	f16 - lens equipped with full and half click stops
Focusing range	infinity to 6'
Smallest field covered	6.9" x 10.3"
Finish	black
Length	4"
Polarizer	425541
Elpro #3	16543
Elpro #4	16544
Weight	18.5 oz.

#11922

APO Telyt-R 180mm f3.4 CATALOG #11240

Telephoto lens of extreme resolution & color correction

This lens is outstanding for its color rendition through the use of special glasses developed by Leitz Wetzlar which enable all colors of the visible spectrum and the near infrared to be brought to a common focus within much closer limits than previously achieved. This means that the visual focus will always correspond to the best photographic focus, regardless of the film material used, including infrared. Lenses having this feature are generally known as Apochromats and produce pictures of exceptional brilliance and resolution. The compact design and light weight will also be appreciated by professional and amateur photographers alike.

Catalog number	11240
Angle of view	13.30
Number of elements	7
Lenshood	built-in, collapsible
Diaphragm	fully automatic
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range	infinity to 8.2 ft.
Smallest field covered	10.4''x16.3''
Finish	black
Front cap	(as replacement) #14089
Rear cap	#14162
Case	#98285
Weight	1 lb. 10.5 oz.
Length	(with caps) 153mm - 6''
Maximum diameter	65mm - 2¾''

11240

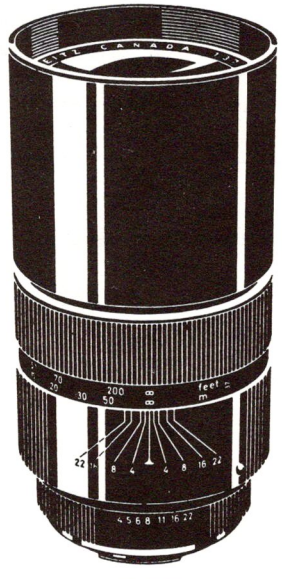
Cross Section

Telyt-R 250mm f4.0 CATALOG #11920

Telephoto lens of large maximum aperture

The new 250mm TELYT-R is unique in a number of respects. First, it becomes the longest focal length LEICAFLEX lens with automatic aperture control, and, with the through-the-lens metering system of the LEICAFLEX-SL, offers full aperture readings. Apart from that, it is a comparatively fast long focus lens of true telephoto design. This means a short overall length so that it can still carry automatic aperture preselection.
Its obvious application is in long-distance feature photography, architectural details, wildlife, etc. The image scale is 5 times as large as that of the standard 50mm lens; high image magnification in the finder and high contrast on the brilliant LEICAFLEX reflex screen permit precise and rapid focusing even in poor light. The 250mm TELYT-R performs singularly well at full aperture and reaches optimum at f / 5.6.

Catalog number	11920
Angle of view	10°
Number of elements	6
Filter	Series 8 held by filter retaining ring #14165
Lenshood	built-in, collapsible
Diaphragm	fully automatic
Smallest aperture	f22-lens equipped with full and half click stops
Focusing range	infinity to 15′
Smallest field covered	14¼″ x 22″
Finish	black
Front cap	#14166
Rear cap	#14162
Case	#98286
Weight	3 pounds (approx.)
Length	6¼″
Maximum diameter	3¼″



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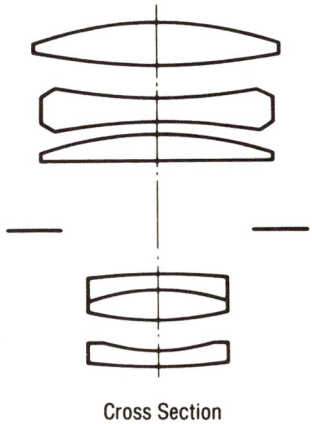


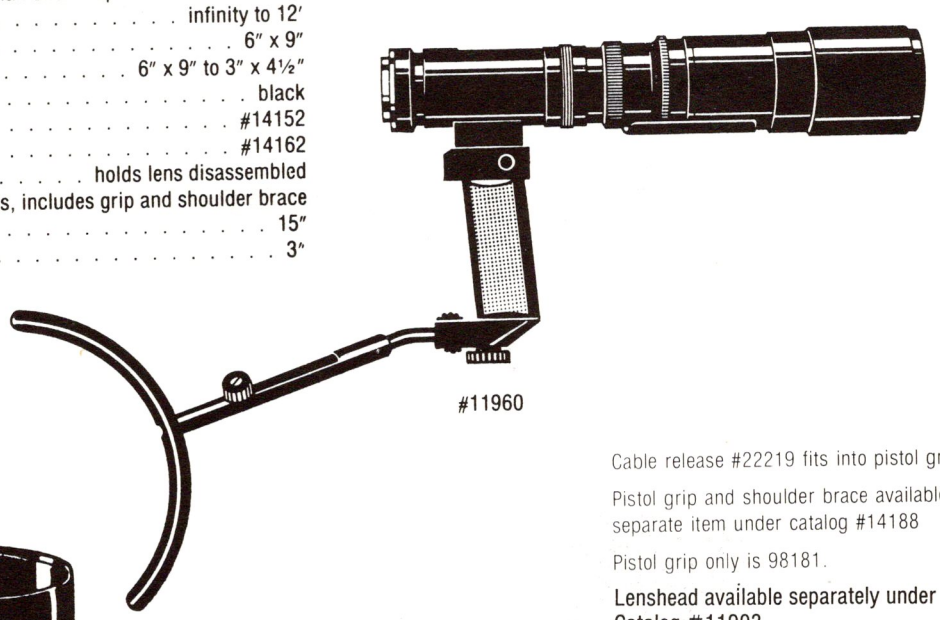
Cross Section

Telyt-R 400mm f6.8 CATALOG #11960

Rapid focusing lens of long focal length

The lightweight, rapid focusing Telyt-R 400mm f6.8 long focus lens has become the favorite of sports, nature and wildlife photographers. Focusing is accomplished by sliding the lens head along the lens axis. The 2 element cemented achromat design with only 2 air-to-glass surfaces delivers high contrast even at maximum aperture. A pistol grip / shoulder brace assembly permits hand holding the 400mm f6.8 Telyt at reasonable shutter speeds. Near life-size reproduction ratios are obtained by using extension tubes; this feature can be used by the photographer / scientist for photographing small difficult to approach living creatures such as butterflies.

Catalog number	11960
Angle of view	6°
Number of elements	2
Filter	Series 7 in special filter compartment. Series 8 held by filter retaining ring #14165 (ring#14165 is available as an accessory)
Lenshood	built-in, collapsible
Diaphragm	manual
Smallest aperture	f32-lens equipped with full click stops (half click stops between f8 and f16)
Focusing range	infinity to 12′
Smallest field covered	6″ x 9″
Extension tube #14182	6″ x 9″ to 3″ x 4½″
Finish	black
Front cap	#14152
Rear cap	#14162
Case #98288	holds lens disassembled
Weight	4 pounds, includes grip and shoulder brace
Length	15″
Maximum diameter	3″



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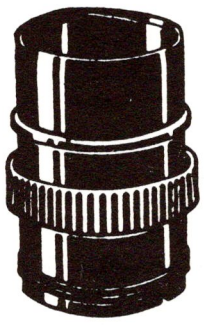


Extension Tube #14182

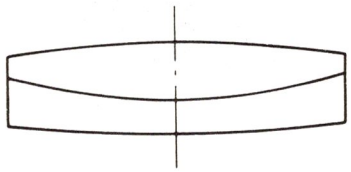
Cable release #22219 fits into pistol grip.

Pistol grip and shoulder brace available as separate item under catalog #14188

Pistol grip only is 98181.

Lenshead available separately under Catalog #11903.

Leicaflex mounting tube available separately under Catalog #11906.



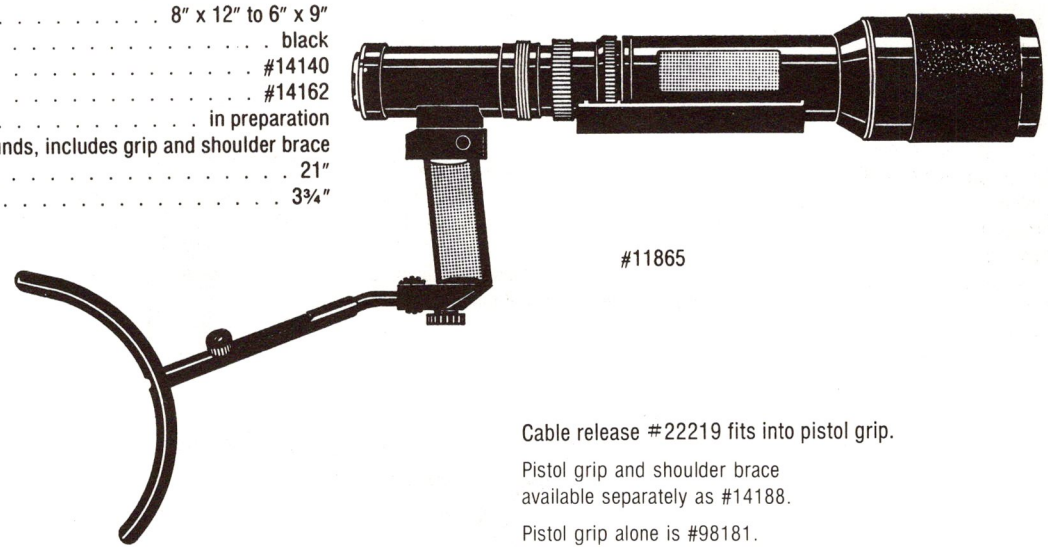
Cross Section

Telyt-R 560mm f6.8 CATALOG #11865

Rapid focusing lens of long focal length

The 560mm f6.8 Telyt-R lens is similar in design to the 400mm f6.8 Telyt-R and is excellent for sports, nature, wildlife, and surveillance photography. When a high magnification yet portable, lightweight lens is required, the 560mm Telyt-R is ideal. It is advisable with the 560mm f6.8 Telyt-R to use a tripod, unipod, or other support for optimum performance. Frame filling close-ups are possible from as close as 21′; extension tubes extend the close-focus range further.

Catalog number	11865
Angle of view	4.3°
Number of elements	2
Filter	Series 7 in special filter compartment
Lenshood	built-in, collapsible
Diaphragm	manual
Smallest aperture	f32 - lens equipped with full click stops (half click stops between f8 and f16)
Focusing range	infinity to 21′
Smallest field covered	8″ x 12″
Extension tube #14182	8″ x 12″ to 6″ x 9″
Finish	black
Front cap	#14140
Rear cap	#14162
Case	in preparation
Weight	5½ pounds, includes grip and shoulder brace
Length	21″
Maximum diameter	3¾″



#11865

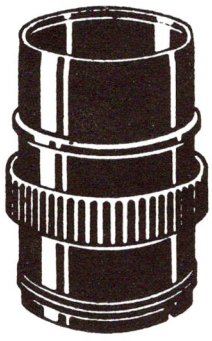
Cable release #22219 fits into pistol grip.

Pistol grip and shoulder brace available separately as #14188.

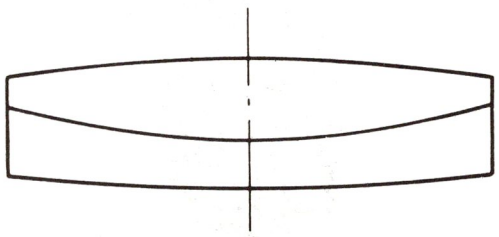
Pistol grip alone is #98181.

Lenshead available separately under Catalog #11907.

Leicaflex mounting tube available separately under Catalog #11906.



Extension Tube #14182



Cross Section

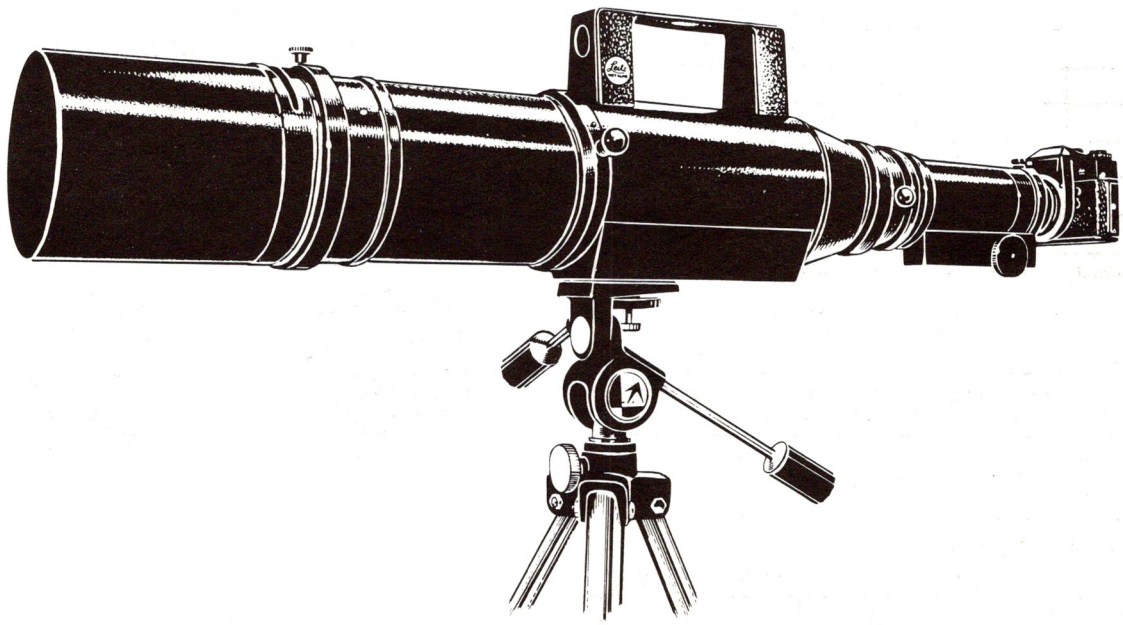
Telyt-S 800mm f6.3 CATALOG #11921

Extreme long focus lens of large maximum aperture

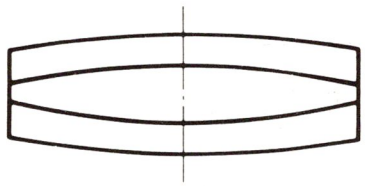
The very long focal length lenses have, until now, experienced residual color abberations which became more prominent with increasing focal length. The use of crystalline optical elements such as calcium fluorite has heretofore been one of the most successful methods of reducing these errors; but the crystalline elements are more fragile than glass and have a rather high coefficient of thermal expansion, making them difficult to use. The new Leitz glass possesses the desirable qualities of the crystalline elements, without the shortcomings. This significant technical advance will be of particular interest to sports photographers, nature photographers, government, and space agencies who are the major users of extremely long lenses.

Weighing approximately 15 pounds and measuring just over 31″ in length and 5.9″ diameter, the 800mm lens consists of one three-element group with 3° angle of field and a focusing range of 41′ to infinity. Smallest aperture is f/32; smallest object field is 12⅝″ x 18⅞″. The filter slot accommodates series 7 filters. A high precision sportsfinder gunsight aiming device is built into the lens carrying handle. While the lens can be supported by a single sturdy tripod coupled to the primary tripod bushing located at the center of balance, an additional ¼″ tripod socket mounted in an auxiliary ring for optional use, can be inserted when extra stability is required. Supplied with the lens is a styrofoam lined aluminum carrying case measuring 22″ x 16″ x 7¾″, with molded compartments for the three disassembled lens parts, the auxiliary tripod socket ring, and a Leicaflex camera body.

Catalog number	11921
Angle of view	3°
Number of elements	3
Filter	Series 7 held in special filter slot
Lenshood	supplied with lens
Smallest aperture	f32 - lens supplied with click stops
Diaphragm	pre-set
Focusing range	infinity to 41 feet
Smallest field covered	12″ x 18″ (approximately)
Finish	black
Case	supplied with lens, has compartment for camera body
Weight	15 pounds
Length	31″ without lenshood
Maximum diameter	5.9″



Telyt-S 800mm f6.3 lens with Leicaflex body



Cross Section

The 800mm Telyt-S "R" f6.3 utilizes a unique new glass developed by Leitz, Wetzlar, which reduces residual aberration and unsharpness to less than ⅓ of the values for normal optical glass, giving greatly improved contrast, resolution, and color differentiation.

Leitz®
E.LEITZ,INC.
ROCKLEIGH
N.J. 07647

PHOTAR LENSES

Photar Lenses

The Photar lenses are macro lenses corrected for use in the close-up and macro ranges. They are available in the following focal lengths and maximum apertures:

CATALOGUE #	FOCAL LENGTH	APERTURE
549017	12.5mm	f / 1.9
549018	25 mm	f / 2.5
549019	50 mm	f / 4
549020	50 mm	f / 2.8
549021	80 mm	f / 4.5
549022	120 mm	f / 5.6

The first three lenses listed above may be used on the Bellows-R for the Leicaflex by means of two adapter rings, catalog numbers 500935 and 542151. The last three lenses listed require only adapter #500935. The first three lenses listed also will fit directly into the nosepiece of Leitz microscopes. The best performance range for each of these lenses is as follows:

FOCAL LENGTH	REPRODUCTION RANGE
12.5mm	from approx. 15:1 to over 30:1
25 mm	from approx. 7:1 to over 16:1
50 mm	from approx. 3:1 to over 8:1
80 mm	from approx. 1:1 to over 4:1
120 mm	from approx. 1:2 to over 2:1

ADAPTER #	PURPOSE
500935	Permits use of 120,80, and 50mm f2.8 Photar lenses on Bellows-R
542046	Permits use of 120,80 and 50mm f2.8 Photar lenses on Bellows I and II. Screws into Bellows I-II adapter #16590.
542151	Permits use of 12.5, 25, and 50mm f4.0 Photar lenses on Bellows-R (screws into ring 500935)
98203	Permits use of 12.5, 25, and 50 mm f4.0 Photar lenses on Bellows I and II. Screws into Bellows I and II adapter #16590.

BELLOWS-R WITH PHOTAR LENSES

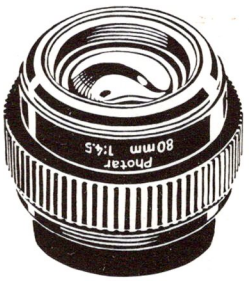
LENS	REPRODUCTION RANGE	WORKING DISTANCE
120mm	∞ to 1:1.5	∞ to 12″
80mm	1:4 to 1.5:1	17″ to 5″
50mm	1:1 to 3:1	3½″ to 2¼″
25mm	3:1 to 7:1	1¼″ to ¾″
12.5mm	8:1 to 18:1	½″ to ⅓″

BELLOWS-R WITH LEICAFLEX LENSES

LENS	REPRODUCTION RANGE	WORKING DISTANCE
50mm	1:1 to 3:1	2¾″ to 1″
90mm	1:2 to 1.75:1	9″ to 3¾″
100mm	∞ to 1:1	∞ to 6″
135mm	1:3.2 to 1.2:1	23″ to 10¾″

The photographer who seldom requires reproduction ratios larger than about 3:1 or 4:1 can do very nicely with his normal Leicaflex lenses on the Bellows-R. The user who does much work in these and higher ranges can certainly benefit from the higher reproduction ratios and superior performance offered by the Photar lenses for photomacrography.

#549022



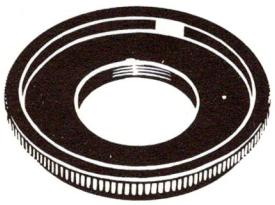
#549021

#549020

#549019

#549018

#549017


Adapter 542185

LEITZ TABLE TRIPOD

"The multi-purpose pocketable table tripod."

Once in a while even the steadiest among us is faced with shooting a picture in "available darkness" at a slow shutter speed, or simply resigning ourselves to telling about "the one that got away" because we didn't have our tripod handy.

- Highly portable.
- Pocketable.
- All-Purpose.
- 4½" high.
- Available with a choice of two heads.
- Provides rock-steady camera support.
- Versatile positions.
- Lets you travel light.

14100 . . . . . TABLE TRIPOD
14119. . . . . SMALL BALL & SOCKET HEAD
14168. . . . . LARGE BALL & SOCKET HEAD

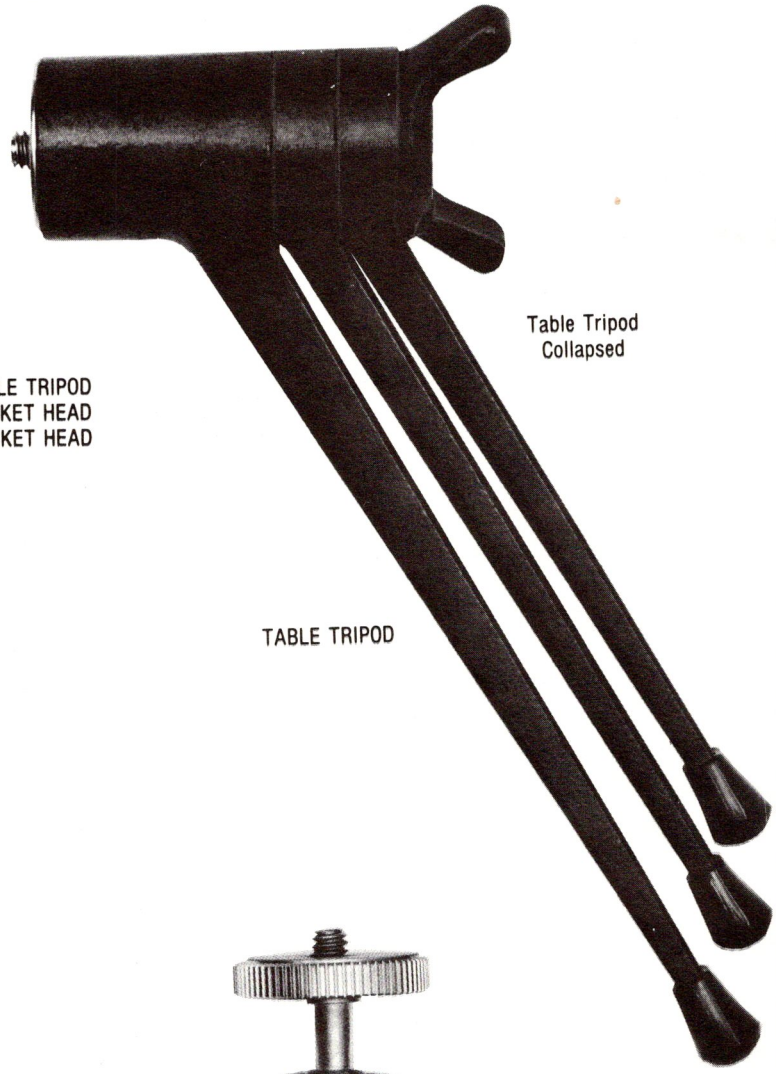
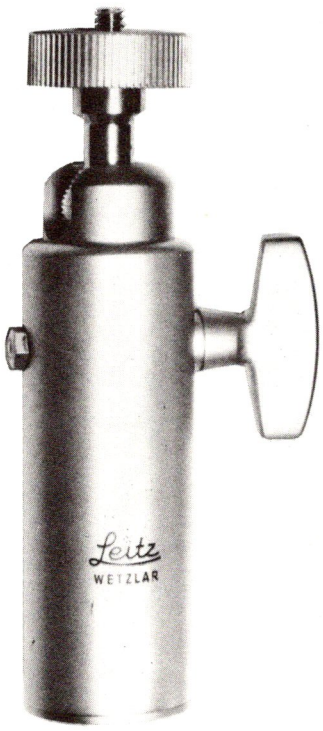


Table Tripod
Collapsed

TABLE TRIPOD



Large Tripod
Head

Small Tripod
Head

LEITZ TILTALL® TRIPOD

"Quality and Reliability."

If you have invested in fine photographic equipment, it's only natural that you should compliment this equipment with a precision built Tiltall Tripod. Here's a moderate-cost tripod that's built a solid reputation as a professional quality instrument on its own merits. If you have any doubts, simply ask any one who has known Tiltall.

- Construction of heat treated aluminum alloy for greatest strength, with brass and steel parts at critical points.
- Compact; 30" closed, 70" extended.
- Lightweight (5¾ lbs.)
- Head tilts 90° forward and 45° backward.
- Camera platform tilts 90° to the left, and 45° to the right.
- Quick-lock system requires only ¼ turn of handles to lock in adjustments.
- Smooth 360° panning action-excellent for movies.
- Center post non-geared for smoother action.
- Center post bearing 6¼" long eliminates wobble at any extension of the center post, even to a full 12".
- Rubber feet with retractable spikes.
- Guaranteed for 1 year.
- Produced and backed by the famous Leitz reputation for quality and reliability.

Tiltall Tripod
with Camera

#98327
Black matte
Electrostatic finish.

FILTERS

A filter, properly used, is a creative optical tool which can lift your pictures out of the ordinary and infuse them with drama. But, like a quality lens, a filter must be precisely made — from finest optical glass, carefully ground and polished. Most important of all, it must be thin, with plane-parallel surfaces to avoid disturbing the high correction of the camera lens. A cheap, poorly made filter can cancel out the skills of even the finest lensmakers.

Leitz filters for black-and-white photography are made from solid optical glass and ground thin (average: .066") to produce maximum sharpness. Polarizing and color-photography filters are laminated. This must be done to achieve the precise transmission characteristics necessary for color work.

BLACK-AND-WHITE FILTERS

Generally speaking, filters for black-and-white photography are used to control contrast and the rendition of colors as tones of gray in the final print. Scene colors complementary to that of the filter are rendered dark on the final print. Colors similar to that of the filter become a lighter gray than they would otherwise be. Thus, a yellow filter renders blue skies as a darker gray than they would be in a photo made without the filter. Orange and red filters act like the yellow filters but with increased effect, the red producing nearly black skies in a print.

A special filter like the infra-red is too dark for use with ordinary film and are used only with films sensitive to infra-red. The UVa filter is used to reduce the effect of ultra-violet. All film is sensitive to these short wavelengths of light; without a filter, pictures made of distant scenes, or at high altitudes, lose contrast, because of scattered ultra-violet light. Other filters also absorb ultra-violet, but the UVa is colorless and needs no extra exposure.

The blue filter is used principally for copying to darken yellowed, faded writing or photographic images and thus to restore contrast. It has little use in general photography.

COLOR FILTERS

Filters for color photography are of two general types: correction filters and conversion filters. The former are used to correct excess reddishness or bluishness when the light source is other than that for which the film is balanced. For instance, a picture made by the light of a clear flash bulb on Type "A" Kodachrome (which is balanced for photoflood lamps) would require a Leitz "Flash" filter to correct the relatively bluish flashlight to the response of the Type "A" film.

Conversion filters "convert" the light for use with film normally intended for use under different lighting conditions. An example of this would be the use of the Leitz Type "A" filter when Type "A" film is used outdoors in daylight. Leitz filters for color photography are:

CONVERSION:
Type "A": Used with Kodachrome Professional Type "A" film for photography outdoors in daylight.
Photoflood: Used with daylight type films when the light source is photo-flood bulbs.

CORRECTION:
Flash: Used when Type "A" film is exposed by clear flash bulbs.
Skylight or UVa. Used with daylight color films to absorb excessive blue found at high altitudes, at the shore and in open shade.

POLARIZING FILTERS

Polarizing filters can be used for either color or black-and-white photography, since they are neutral in color.

With a polarizing filter, you can minimize or even eliminate reflections from the surfaces of water, show windows, furniture, etc. This type of filter is the only one which will darken the blue sky in color photographs without altering the color or tone in the rest of the scene.

REPLACEMENT PARTS FOR SERIES FILTERS

CATALOG NUMBER	ITEM
14,160	Filter retaining ring for Leica, Leicaflex and Leicina lenses, accepting series 6 filters
14,161	Filter retaining ring for Leica, Leicaflex and Leicina lenses, accepting series 7 filters
14,165	Filter retaining ring for Leica, Leicaflex and Leicina lenses, accepting series 8 filters
14,169	Filter retaining ring for 280mm Telyt, accepting series 8 filters

FOR LEICA AND LEICAFLEX LENSES

	FILTER FACTORS[3]	90mm Tele-Elmarit f2.8[15] 40mm Summicron-C f2[6] 90mm Elmar-C f4[6] 10mm Macro-Cinegon f1.8[6]	35mm Elmarit-R f2.8[10] 50mm Summicron-R f2 65mm Elmar f3.5 #11,162[9]	8-64mm Leicina Vario f1.9[6] 21mm Super Angulon f3.4[4] 28mm Elmarit f2.8[4] 28mm Elmarit-R f2.8[4] 35mm Summilux f1.4[1] 35mm Elmarit-R f2.8[4] 35mm Summicron-R f2[4] 35mm Summicron[2] 50mm Summilux-R f1.4[6] 90mm Elmarit-R f2.8 90mm Summicron-R f2 100mm Macro-Elmar f4 135mm Elmarit-R f2.8 135mm Elmarit f2.8 400mm Telyt f6.8[7] 400mm Telyt f5.6[5] 560mm Telyt f5.6[5] 560mm Telyt f6.8[7] 800mm Telyt-S f6.3[7]	21mm Super Angulon-R f3.4[6] 35mm PA Curtagon f4[8] 45-90mm Angenieux-R f2.8[6] 50mm Noctilux f1.2[6] 60mm Macro-Elmarit-R f2.8[8] 180mm Elmarit-R f2.8[11] 250mm Telyt-R f4[11] 280mm Telyt #11,914 400mm Telyt-R f6.8[11]	6-66mm Optivaron f1.8[6] 21mm Auto-Aperture Super Angulon-R f4[6]
		Series 5.5	Series 6	Series 7	Series 8	Series 8½
Yellow	2	98,152	13,013	13,006	13,019	13,022
Yellow-Green	2-3		13,014	13,007	13,021	
Orange	3-5	98,153	13,011	13,008	13,017	13,023
UVa	1.2	98,150	13,012	13,009	13,018	13,024
Polarizing Circular	4	Note 12	13,353	13,354[13] 13,370	13,372[14]	
Skylight	—	98,151				
Green	4-6	98,154				
Red	8	98,155				
85	1.6	98,156				
85B	1.6	98,157				

NOTES:

1. Lenses above 2,166,700 accept series 7 filter in lens hood.
   Lenses below 2,166,701 use E-41 filters.
2. Lenses above 2,316,000 accept series 7 filter in lens hood.
   Lenses below 2,316,001 use E-39 filters.
3. For panchromatic films; factors will vary with the light source and are only intended as guides.
4. Lens Hood accepts series filters. E-48 filters may also be used, except for 21mm Super Angulon-R f3.4 lenses.
5. Fits in filter slot of Televit mount.
6. Fits in lens hood.
7. Fits in special filter slot.
8. Held by lens hood 12,514.
9. Lenses under 2,378,901 use E-41 filters, 13,360 polarizing filter.
10. Below Serial No. 2,517,851 use series 6 filters, lenses above 2,517,851 use series 7.
11. Held by retaining ring 14,165.
12. Polarizer 13,352 fits 90mm Elmar-C adapts to 40mm Summicron-C using adapter 98,183.
13. Circular polarizer in roto mount for 90,100, 135mm lenses listed for series 7.
14. Roto mount 98,170 holds 13,372 for use on 180, 250, 400mm lenses listed.
15. Series 5.5 when rubber hood #11250 is used.

FOR LEICA AND LEICAFLEX LENSES

		E-39	E-41	E-43	E-48	E-58
	FILTER FACTORS[5]	21mm Super Angulon f4 35mm Summicron[4] 35mm Summaron[3] 50mm Elmar[3] 50mm Summicron 90mm Elmar[3] 90mm Elmarit 90mm Tele-Elmarit[10] 135mm Hektor[3] 135mm Elmar f4 135mm Tele-Elmar f4	35mm Summilux[1] 50mm Summarit 65mm Elmar #11,062	50mm Summilux	21mm Super Angulon f3.4[7] 28mm Elmarit f2.8[7] 28mm Elmarit-R f2.8[7] 35mm Summicron-R[7] 35mm Elmarit-R f2.8[8] 50mm Summilux-R f1.4[7] 90mm Summicron 90mm Thambar 200mm Telyt f4.5	85mm Summarex 125mm Hektor 200mm Telyt f4 280mm Telyt #11,912
Yellow I (medium)	1.5-2	13,086	13,160	13,161	13,295	13,235
Yellow-Green (medium)	2-3	13,096		13,171	13,305	13,245
Blue (medium)	1.5	13,098	13,172	13,173	13,307	
Orange (medium dark)	3-5	13,101		13,176	13,310	13,250
Red (dark)	6-25	13,116	13,190	13,191	13,315	13,255
Infrared (dark)	6-100[6]	13,126	13,200	13,196	13,325	
UVa Absorption (colorless)	1.2	13,131	13,205	13,206	13,330	13,270
Photoflood		13,141				
Type "A"		13,136	13,215	13,218	13,335	13,275
Flash		13,146	13,225	13,228	13,345	13,285
Skylight		13,151	13,220	13,221	13,340	13,280
Polarizing (engraved mount)	2.5-3		13,360[9]			
Polarizing (swing-out mount)	2.5-3	13,352[2]		13,351		

1. With serial numbers below 2,166,701; serial numbers above 2,166,700 accept series 7 filters in lens hood and Polarizing Filter #13,352.
2. Cannot be used with 28mm or 21mm lenses, with or without adapter. These filters mount with clamping screws.
3. With 42mm flange diameter.
4. With serial numbers below 2,316,001; serial numbers above 2,316,000 accept series 7 filters.
5. For Panchromatic films; factors will vary with the light source and intended only as guides.
6. The amount of infrared light present in daylight varies continually. Several exposures of varying lengths should be made of each scene.
7. Lens hood also accepts series 7 filters.
8. With serial numbers below 2,517,851 use series 6 filters. Serial numbers above 2,517,851 use series 7 filters.
9. Discontinued. Limited supply available.
10. Uses series 5.5 rubber hood #11250 is used.

"Carry-all" Cases

Carry-all Case #98270
Snap-on Pocket #98278
Optional Strap #98267

The new Carry-all case is a rigid all leather case lined with a soft velvet-like material. Dimensions are 13½" wide, 7½" deep, 9½" high. The case is a 2 level case, the bottom level being partitioned from the top level with a hinged flap. The case comes complete with shoulder strap and is lockable. One long divider and two short dividers are included with each case. Accessory snap-on pockets (#98278) are easily attached to either end of the Carry-all case for additional equipment such as the Leica CL with 40mm and 90mm lenses, several rolls of film, filters etc.

The multi-purpose snap-on-pocket #98278 is designed with a belt-loop for belt attachment. When equipped with optional strap #98267, it is an excellent over-the-shoulder case for the Leica CL with 40mm and 90mm lenses.

FEATURES:
- All leather construction
- Rigid
- Lined with a soft velvet-like material
- Lockable
- Quality construction
- Accepts two snap-on pockets for increased equipment requirements
- Dimensions: 13½" wide, 7½" deep, 9½" high
- Weight 5 lbs, 10 oz.

Carry-all case #98270
CASE #1

Carry-all case #98270
with 2 snap-on pockets #98278

Additional camera cradle #98273
Long divider #98276
Short divider #98274

Snap-on pocket #98278

Carry-all case #98270
inside view (top level)

"Carry-all" Cases

Carry-all Case #98271
Snap-on Pocket #98278
Optional Strap #98267

The new Carry-all case is a rigid all leather case lined with a soft velvet-like material. Dimensions are 17" wide, 9½" deep, 10" high. The case is a 2 level case, the bottom level being partitioned from the top level with a hinged flap. The case comes complete with shoulder strap and is lockable. Accessory snap-on pockets (#98278) are easily attached to either end of the Carry-all case for additional equipment such as the Leica CL with 40mm and 90mm lenses, several rolls of film, filters etc.

FEATURES:
- All leather construction
- Rigid
- Lined with a soft velvet-like material
- Lockable
- Quality construction
- Accepts two snap-on pockets for increased equipment requirements
- Dimensions: 17" wide, 9½" deep, 10" high
- Weight 7 lbs, 3 oz.

Carry-all case #98271
CASE #2

Carry-all case #98271
with 2 snap-on pockets #98278
Optional strap for pocket
used as small case #98267

Carry-all case #98271 inside view (bottom level)

The Carry-all case # 98271 was designed specifically for the long lens user. Cradles are permanently installed in the bottom half for the 400mm f / 6.8 Telyt with mounting tube and the 560mm f / 6.8 head.

Lower lens compartment 4½" x 14½" x 8"

Leitz®
E.LEITZ,INC.
ROCKLEIGH
N.J. 07647

UNIVERSAL CARRYING CASE III FOR LEICA "M" AND LEICAFLEX

14807 Universal Carrying Case III with insert 1, for 2 Leica cameras and accessories as follows: (Includes coupling ring 98205).

1. M5 body only; will also accept M1, M2, M3, M4 body without MR meter.
2. M5 body; (or M1, M2, M3, M4 body with MR meter) with following lenses (hood attached) 21mm f3.4, 28mm f2.8, 35mm f1.4, 50mm f2.0, 50mm f1.4, 50mm f1.2, also 90mm f2.8 Tele-Elmarit (hood reversed).
3. lens combinations (hood attached) 35mm f2.0, 35mm f1.4, 50mm f2.0, or 50mm f1.4 coupled to 90mm f2.8 Tele-Elmarit via adapter 98205.
4. following lenses (hood attached) 21mm f3.4, 28mm f2.8, 35mm f1.4, 35mm f2.0, 50mm f2.0, 50mm f1.4, 90mm f2.8 Elmarit, 90mm f2.8 Tele-Elmarit.
5. with insert sleeve in position
   a. 90mm f2.8 Elmarit, 90mm f2.8 Tele-Elmarit or 135mm f4.0 Tele-Elmar (hood attached).
   b. 35mm f2.0, 35mm f1.4, 50mm f2.0, 50mm f1.4, coupled via 98205 to 90mm f2.8 Elmarit (hood reversed).
   c. combinations listed for Compartment 3 without insert sleeve 90mm f2.0 or 135mm f2.8 - 135mm f2.8 fits front down with finder system to right filters.
6. Filters.

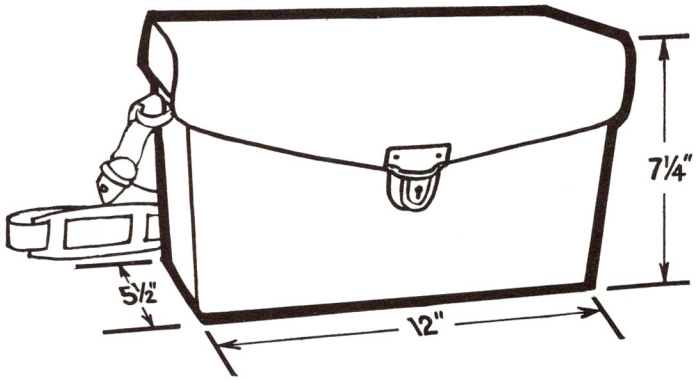
14809 Universal Carrying Case III with insert III and coupling ring 98204
For Leicaflex SL and Leicaflex Standard equipment, accommodating the following:
1 - Accepts 35mm f2.0 (less hood), 90mm f2.8, or 90mm f2.0 coupled via 98204 to 28mm f2.8 (less hood), 50mm f1.4 (less hood), 35mm f4.0 PA (less hood), 35mm f2.8 (hood reversed), or 50mm f2.0 (hood reversed).
2 - with inner sleeve in place accepts 90mm f2.8 or 135mm f2.8 coupled via 98204 to 28mm f2.8 (less hood), 35mm f2.8 (hood reversed), or 50mm f2.0 (hood reversed).
2 - without inner sleeve accepts 135mm f2.8 coupled via 98204 to 21mm f4.0 (less hood), 35mm f4.0 PA (less hood), or 50mm f1.4 (less hood). Also accepts combinations listed under 2 (with sleeve). Other possible combinations include:

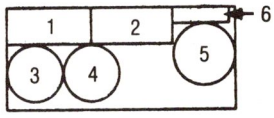
90mm f2.0 or 90mm f2.8 with 35mm f2.0 (less hood)
90mm f2.0 or 90mm f2.8 with 50mm f1.4 (hood reversed)
60mm f2.8 (with ring, less hood) with 21mm f4.0 (less hood), 28mm f2.8 (less hood), 50mm f1.4 (less hood), 35mm f2.8 (hood reversed), or 50mm f2.0 (hood reversed).

Accepts 45-90mm f2.8 (with hood), 180mm f2.8, or 250mm f4.0
3 - Accepts Leicaflex SL or Leicaflex Standard body with mounted lens; 21mm f4.0 (with hood), 28mm f2.8 (with hood), 35mm f4.0 PA (less hood) 35mm f2.8 (with hood), 35mm f2.0 (less hood), 50mm f2.0 (with hood), 50mm f1.4 (hood reversed), or 90mm f2.0.
4 - Four Elpro close-up lenses, each in its leather case
5 - other accessories

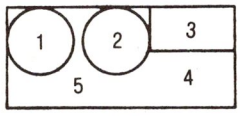
98094 Shoulder Grip for strap of Universal Case

14815 Universal Carrying Case III without insert





14817
Insert I for Universal Carrying Case III



14819
Insert III for Universal Carrying Case III

COMBINATION CASES

CARRYING CASES

CASE

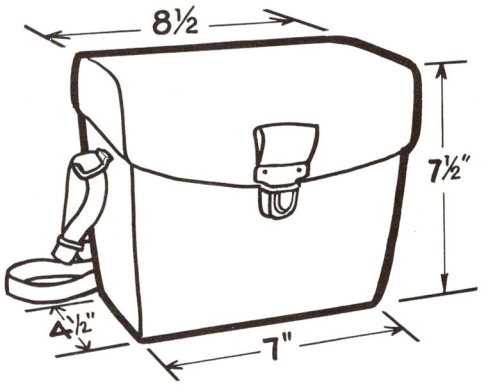
14823 **Small Combination Case in sturdy black vinyl for Leica M5 (or M1, M2, M3, M4 with MR or MR-4 meter attached). Holds all M bodies with 21-135mm lenses mounted. Lower compartment holds 90mm f2.8 Elmarit, 90mm f2.0 Summicron, or 135mm f4.0 Tele-Elmar . . . also 90mm f2.8 Tele-Elmarit with non-RF 35mm lenses or 90mm f2.8 Tele-Elmarit with 50mm lenses via adapter 98205 (not included)**

14824 Small Combination Case in sturdy black vinyl for Leicaflex SL or Leicaflex Standard
Holds Leicaflex SL or Standard with 21 - 135mm-R lenses mounted; also with mounted 45-90mm f2.8 zoom lens (without hood). Lower compartment holds lenses 21-135mm or 45-90mm f2.8 (without hood). The following combinations can be accommodated in the lower compartment by using coupler 98204 (not included):

50mm f2.0 (with hood)+28mm f2.8 (less hood)
50mm f2.0 (hood reversed)+35mm f2.8 (hood reversed)
50mm f1.4 (hood reversed)+35mm f2.8 (hood reversed)
50mm f1.4 (hood reversed)+28mm f2.8 (less hood)
35mm f2.8 (with hood)+28mm f2.8 (less hood)
90mm f2.0+35mm f2.8 (hood reversed)
90mm f2.0+28mm f2.8 (less hood)
90mm f2.0+50mm f2.0 (hood reversed)

14823 - 14824

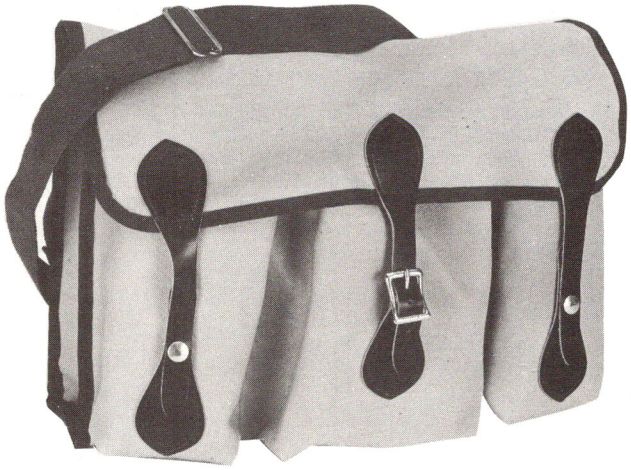
14825 Small combination case in sturdy black vinyl for Leica CL. Holds Leica CL camera with 40mm lens attached. Has storage compartment for 90mm lens with space for extra film and filters.
6¼'' high, 7¼'' wide, 3½'' deep



98204 **Coupling Ring holds 2 Leicaflex lenses back to back for storage in carrying case** . . . . . .

98205 Lens Coupling Ring, holds two bayonet-mounted Leica lenses back to back for storage in carrying case

98280 Collapsible Camera Bag . . . . . .
Handsome new Leica photo equipment tot bag, lightweight, durable, and waterproof, is constructed of natural tan duck outer surface, drill interior surface-both Scotchguard treated and laminated to a rubber core. The braid binding and wide, bronze rivet reinforced adjustable shoulder strap are olive green. Overall bag size is 10½" by 14½", with a flat outside back pocket which will accommodate a note pad up to 9" x 13", and three deep outside front pockets with velcro fasteners to secure the flap in fast-work situations. Three adjustable brown leather strap closings fasten with solid brass buckle and snaps. A roomy inside pocket will hold a camera with mounted lens, and a long wrapping tongue attached to the inside wall affords adjustable separation protection for equipment. The bag offers a large carrying capacity for several cameras, a number of lenses, flash equipment, miscellaneous accessories, and film.



98280
Collapsible Camera Bag

Leitz®
E.LEITZ,INC.
ROCKLEIGH
N.J. 07647

LEATHER LENS CASES

CARRYING CASES

(outside dimensions)

CASE #	DIAMETER	HEIGHT	WIDTH	FRONT TO BACK
98281 (#1)		4″	4¼″	3¾″
98282 (#2)	3¼″	3⅝″		
98283 (#3)	3¾″	5⅝″		
98284 (#4)	3⅜″	5⅜″		
98285 (#5)	3⅜″	8″		
98286 (#6)	4″	7⅝″		
98287 (#7)	3⅝″	8⅜″		
98288 (#8)		9¾″	9″	4¼″
98291 (#11)	3''	3½''		
98292 (#12)	2¾''	5½''		
98293 (#13)		6″	4⅝″	3⅞″
98294 (#14)	3″	8″		


#1


#2


#4


#5


#8


#13

VISOFLEX LENS CASES

LENS	CASE #
65mm f3.5 Elmar 11162 in mount 16464	98282 (#2)
90mm f2.8 Elmarit 11026 in mount 16464	98282 (#2)
90mm f2.0 Summicron 11133 in mount 16462	98281 (#1)
135mm f4.0 Tele-Elmar 11852 in mount 16464	98281 (#1)
135mm f2.8 Elmarit 11828 in mount 16462	98281 (#1)
200mm f4.0 Telyt 11063 with adapter 16466	98286 (#6)
280mm f4.8 Telyt 11914	98287 (#7)
400mm f6.8 Telyt 11966	98288 (#8)
560mm f6.8 Telyt 11864	in preparation

INDIVIDUAL LEICA LENS CASES

LENS	CASE #
15mm f8.0 Hologon 11003	98281 (#1)
21mm f3.4 Super Angulon 11103 (with hood)	98281 (#1)
28mm f2.8 Elmarit 11801 (with hood)	98281 (#1)
35mm f2.0 Summicron 11309 (with hood)	98281 (#1)
35mm f1.4 Summilux 11870 (with hood)	98281 (#1)
50mm f2.0 Summicron 11817 (hood reversed)	98282 (#2)
50mm f1.4 Summilux 11114 (hood reversed)	98282 (#2)
50mm f1.2 Noctilux 11820 (with hood)	98283 (#3)
90mm f2.8 Tele-Elmarit 11800 (with hood)	98292 (#12)
90mm f2.8 Elmarit 11129 (hood reversed)	98292 (#12)
90mm f2.0 Summicron 11123	98283 (#3)
135mm f4.0 Tele-Elmar 11851 (with hood)	98285 (#5)
135mm f2.8 Elmarit 11829	98293 (#13)

LEATHER LENS CASES

CARRYING CASES

LEICAFLEX LENS CASES

LENS	CASE #
16 mm f 2.8 Fisheye Elmarit-R lens	98281 (#1)
21mm f4.0 Super-Angulon-R 11813 (with hood)	98281 (#1)
24 mm f 2.8 Elmarit-R	98281 (#1)
28mm f2.8 Elmarit-R 11204 (with hood)	98281 (#1)
35mm f2.8 Elmarit-R 11201 (hood reversed)	98282 (#2)
35mm f2.0 Summicron-R 11227 (with hood)	98283 (#3)
35mm f4.0 PA Curtagon-R 11202 (with hood)	98281 (#1)
50mm f2.0 Summicron-R 11228 (hood reversed)	98282 (#2)
50mm f1.4 Summilux-R 11875 (hood reversed)	98281 (#1)
60mm f2.8 Macro-Elmarit-R 11203 (with hood)	98286 (#6)
45-90mm f2.8 Angenieux-R 98000 (with hood)	98286 (#6)
80-200 mm f 4.5 Vario-Elmar-R	98287 (#7)
90mm f2.8 Elmarit-R 11239	98284 (#4)
90mm f2.0 Summicron-R 11219	98284 (#4)
100mm f4.0 Macro-Elmar 11230	98284 (#4)
135mm f2.8 Elmarit-R 11211	98283 (#3)
180mm f2.8 Elmarit-R 11919	98286 (#6)
180 mm f3.4 APO Telyt-R 11240	98285 (#5)
250mm f4.0 Telyt-R 11920	98286 (#6)
400mm f6.8 Telyt-R 11960	98288 (#8)
560 f6.8 Telyt-R 11865	in preparation
800mm f6.3 Telyt-S 11921	supplied with lens (metal case)

SPECIAL NOTE:
intended for use only on the Leicaflex SL2 and SL2 Mot.

Fisheye-Elmarit-R 16mm f2.8

Elmarit-R 24mm f2.8

Vario-Elmar-R 80-200mm f4.5

CASES HOLDING 2 LEICAFLEX LENSES

CASE #	LENS PAIR HELD
98283 (#3)	Use coupler 98204. 35mm f2.8 (hood reversed) plus 28mm f2.8 less hood 50mm f2.0 (hood reversed) plus 28mm f2.8 less hood 50mm f2.0 (hood reversed) plus 35mm f2.8 (hood reversed) 50mm f2.0 (hood reversed) plus 21mm f4.0 less hood 35mm f2.8 (hood reversed) plus 21mm f4.0 less hood 28mm f2.8 (less hood) plus 21mm f4.0 (less hood) 35mm f4.0 PA (less hood) plus 28mm f2.8 (less hood) 35mm f4.0 PA (less hood) plus 50mm f2.0 (hood reversed) 35mm f4.0 PA (less hood) plus 35mm f2.8 (hood reversed) 35mm f4.0 PA (less hood) plus 21mm f4.0 (less hood)
98285 (#5)	Use coupler 98204. 135mm f2.8 plus 28mm f2.8 (less hood) 135mm f2.8 plus 50mm f2.0 (hood reversed) 135mm f2.8 plus 35mm f2.8 (hood reversed) 90mm f2.8 or f2.0 plus 50mm f2.0 with hood 90mm f2.8 or f2.0 plus 35mm f2.8 with hood 90mm f2.8 or f2.0 plus 28mm f2.8 (less hood) 90mm f2.8 or f2.0 plus 35mm f2.0 (less hood) 90mm f2.8 or f2.0 plus 50mm f1.4 (hood reversed) 90mm f2.8 or f2.0 plus 35mm f4.0 PA (less hood)
98287 (#7)	Use coupler 98204. 90mm f2.8 plus 135mm f2.8 90mm f2.0 plus 135mm f2.8 35mm f2.0 (less hood) plus 135mm f2.8 50mm f2.0 with hood plus 135mm f2.8 35mm f2.8 with hood plus 135mm f2.8 35mm f4.0 PA with hood plus 135mm f2.8 28mm f2.8 with hood plus 135mm f2.8 50mm f1.4 with hood plus 135mm f2.8 21mm f4.0 (less hood) plus 135mm f2.8

CASES HOLDING 2 LEICA LENSES

98284 (#4) Use coupler 98205
50mm f2.0 (hood reversed) plus 35mm f1.4 with hood
50mm f2.0 (hood reversed) plus 35mm f2.0 with hood
50mm f1.4 (hood reversed) plus 35mm f2.0 with hood
50mm f1.4 (hood reversed) plus 35mm f1.4 with hood

98285 (#5) Use coupler 98205
90mm f2.0 plus 35mm f1.4 with hood
90mm f2.0 plus 35mm f2.0 with hood
90mm f2.0 plus 50mm f2.0 (hood reversed)
90mm f2.0 plus 50mm f1.4 (hood reversed)
135mm f4.0 Tele-Elmar (hood reversed) plus 50mm f1.4 (hood reversed)
135mm f4.0 Tele-Elmar (hood reversed) plus 50mm f2.0 (hood reversed)
135mm f4.0 Tele-Elmar (hood reversed) plus 35mm f1.4 with hood
135mm f4.0 Tele-Elmar (hood reversed) plus 35mm f2.0 with hood

98294 (#14) Use coupler 98205
90mm f2.8 Tele-Elmarit (hood reversed) plus 35mm f2.0 with hood
90mm f2.8 Tele-Elmarit (hood reversed) plus 35mm f1.4 with hood
90mm f2.8 Elmarit (hood reversed) plus 35mm f2.0 with hood
90mm f2.8 Elmarit (hood reversed) plus 35mm f1.4 with hood
90mm f2.8 Tele-Elmarit (hood reversed) plus 50mm f2.0 (hood reversed)
90mm f2.8 Elmarit (hood reversed) plus 50mm f2.0 (hood reversed)
135mm f4.0 Tele-Elmar (hood reversed) plus 35mm f1.4 with hood
135mm f4.0 Tele-Elmar (hood reversed) plus 35mm f2.0 with hood
135mm f4.0 Tele-Elmar (hood reversed) plus 50mm f2.0 (hood reversed)

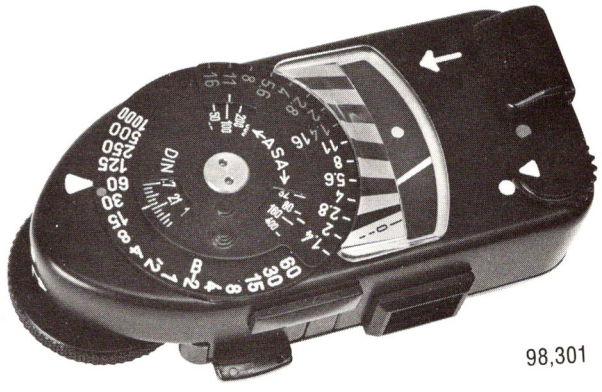
EXPOSURE METERS

LIGHT METERS

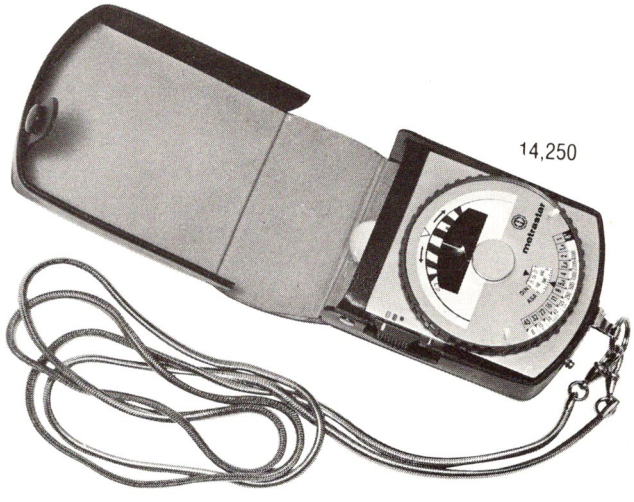
One of the most important secrets of successful photography is correct exposure. The best way to guarantee proper exposure is to use a photo-electric exposure meter.

Great accuracy and convenience are provided by the Leica-Meter MR-4, which couples to the shutter speed dial of Leica "M" models. It sets the correct shutter speed automatically as you line up the exposure dial for a preselected f / stop. The Leica-Meter MR-4 features a cadmium sulphide photo resistor with extreme sensitivity and has an angle of view which matches that of a 90mm lens. Thus, you can see exactly which part of the scene the meter is "reading" by looking through the 90mm bright-line frame of the Leica viewfinder.

The Metrastar CdS meter, made by Metrawatt of Nuernberg, W. Germany who also make the Leica-Meters, is an ultrasensitive, hand-held meter. It features a narrow (18°) measuring angle and a built-in reflex viewfinder to insure maximum accuracy in aiming the meter and reading the most important subject areas. Its extreme sensitivity range handles exposures at light levels ranging from moonlight to sunlight on the beach, by either the reflected or incident light method. A direct-reading dial provides fast, one-hand operation.



98,301



14,250

LIGHT METERS

Cat. No.	Item
14,217	Leica Meter MR-4, battery operated with CdS cell and self-locking indicator needle. Has 27° angle of acceptance. Couples to speed dial of Leica "M" models. Complete with Mallory PX 625 "button" battery.
98,301	Leica-Meter MR-4 in black chrome finish, otherwise same as #14,217.
14,250	Metrastar CdS Meter. Ultrasensitive, handheld exposure meter with extremely wide measuring range. Has selective 18° acceptance angle and matching built-in viewfinder for accurate aiming and reading. Battery operated, one-hand operation. Complete with brown leather eveready carrying case, 43" flexible metal carrying chain and Mallory PX 625 button battery.

REPLACEMENT AND ACCESSORY PARTS

14,213	Case for exposure meter MR-4.
14,128	Mallory PX625 battery (with white ring) for MR-4, MR, and Metrastar exposure meters (as replacement).

14,213

MR-4 meter mounted on a typical M camera such as the M4.

VISOFLEX III REFLEX HOUSING

Experts acknowledge that no one method of focusing is best for all photo situations. For general photography with wide angle and normal lenses, the rangefinder system is faster and more accurate than a reflex camera. For extreme close-ups and telephotography, however, a reflex system is a "must".

And so the Leica System has for many years made both focusing methods available in one camera by means of the Visoflex reflex housings.

The Leitz Visoflex III reflex housing converts the M Leica into a single lens reflex camera and is designed to accept Leitz lenses from 65mm to 560mm and the focusing Bellows II # 16556. Attaching the Visoflex to the Leica is as easy as mounting a lens. A 4x eye-level magnifier # 16499 provides an upright laterally correct image. A 5x vertical magnifier # 16461 provides an upright reversed image and is especially valuable when the Visoflex is mounted on a tripod (#14100, 98321, or 98322 plus 14119 or 14168) or a copystand (#16707).

VISOFLEX III

The Visoflex III is available for Leica "M" models only. It provides a selection of three mirror actions, any of which can be set quickly for best efficiency with varying types of photography:

- automatic quick-return, for sports or other action pictures
- soft upswing to minimize vibration for slow speeds and short time exposures
- mirror locked out of light path for long time exposures and scientific photography

A special lever-lock on the Visoflex III permits it to be attached to or removed from the camera even more quickly than a lens.

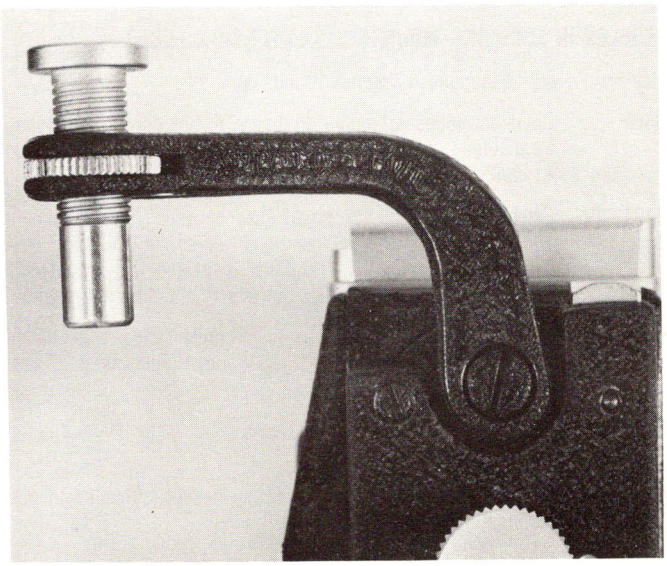
A 4X prism magnifier for eye-level use and a 5X straight magnifier for work with the camera below eye-level are available for the Visoflex III.

Catalog #	Item
16498	Visoflex III, bayonet mounting, with 4X magnifier
16497	Visoflex III, bayonet mounting without magnifier
16499	4X Eye-Level Magnifier for Visoflex III
16461	5X Standard Magnifier for Visoflex II or III

Earlier Visoflex III units can be modified to fit the M5 by Photo Repair.

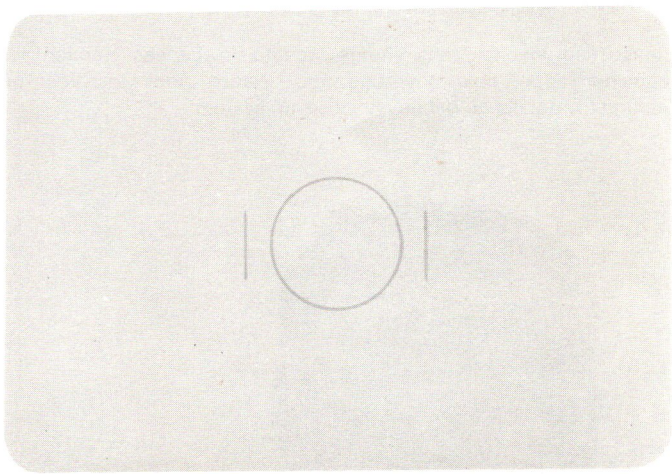
Visoflex III units modified to use with the CL must use double cable release #16494.

Eyesight correction lenses are available for Visoflex III magnifier #16,499 — please refer to Eyesight Correction Lens sheet located in Basic Camera Accessories Section.



Visoflex III Release Lever

New Release Lever. Extension tip used with all M cameras except M5. Unscrew when M5 is used.

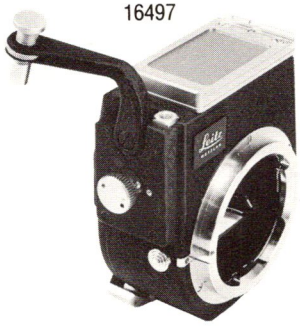


Ground glass focusing screen of the Visoflex III

The fine grained ground glass screen is inscribed with a centered 7mm wide circle which shows the area covered by the Leica M5 exposure meter. Two vertical lines spaced 10mm apart are also provided to make reproduction ratio measurements easier.

16498

16497



16499

16461

VISOFLEX III FOCUSING MOUNTS and EXTENSION TUBES

(Also usable with discontinued Visoflex II and IIa)

16464 Universal focusing mount in black finish used with 65mm f/3.5 Elmar lens # 11162, # 90mm f/2.8 Elmarit lenshead #11026, and 135mm f/4.0 Tele-Elmar lenshead # 11852.

16471 Extension Tube in black finish used between universal mount 16464 and 65mm f/3.5 Elmar lens, 90mm f/2.8 Elmarit lenshead, or 135mm f/4.0 Tele-Elmar lenshead. Several 16471 tubes can be used if higher reproduction ratios are required.

16462 Universal focusing mount in black finish used with 90mm f/2.0 Summicron lenshead # 11133 and 135mm f/2.8 Elmarit lenshead # 11828.

16466 22.5mm extension tube necessary for using 200mm f/4.0 Telyt lens # 11063 on Visoflex III.

16469 10mm bayonet extension tube fitting between Visoflex III and Visoflex lens.

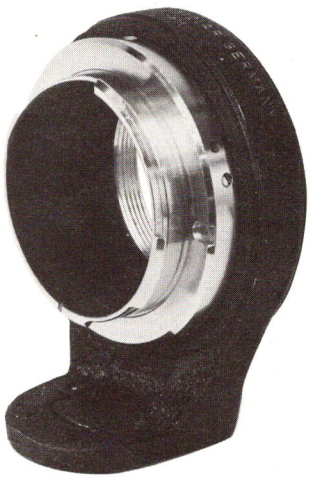
14020 15mm length Leica thread (39mm diameter, 1mm pitch) extension tube.

16615 26mm length Leica thread extension tube.

16617 44mm length Leica thread extension tube.

Please see Visoflex lens sheets located in Lenses Section for focusing range, field coverage, etc. Please refer to Close-up Section for details of Visoflex III close-up system.

16462



16466

16464

16469

16471

16615

VISOFLEX III CLOSE-UP

The Visoflex III with the 65mm Elmar lens #11162 in the Universal Focusing Mount 16464 is an extremely simple and flexible combination for close-up work. Focusing and framing are done on the ground glass of the Visoflex and the focusing range is from infinity down to a 1:2.25 ratio of reproduction. Simple extension tubes (16471) extend the close-up range still further.

The Visoflex III with Bellows II #16556, however, combines simplicity with extreme versatility. It offers continuously variable lens extension through a great focusing range, with ground glass focusing and framing. A choice of adapter rings permits the use of most Leica lenses or lens units on the Bellows II. Lenses from 65mm to 280mm (in proper adapters) will focus from infinity to the close-up range. Shorter focal lengths can be used with the Bellows II only in the close-up range.

The Visoflex III is a prime tool for close-up photography with the Leica. Used with the Bellows II it is both convenient and versatile, not only for close-up photography, but, with most Leica lenses, for general photography as well.

The lens units of Leica lenses from 65mm to 280mm (except the 135mm Elmarit and 90mm Tele-Elmarit and Summicron) will focus in the Bellows II from infinity down to ratios as large as 1.4:1, in the case of the 65mm lens.

For extreme close-ups within a limited range of focus, Leitz Photar lenses can also be adapted for use on the Bellows II.

The Bellows II is extremely rigid, and features backlash-free rack-and-pinion focusing. A second geared motion shifts Bellows II and Leica as a unit so that fine focusing can be done without changing the image or field-size on the negative.

An engraved data-scale shows reproduction ratios and corresponding exposure increases for the 90mm Elmarit lenshead. A second scale shows the actual Bellows extension in millimeters.

FOCUSING BELLOWS II

16556 Focusing Bellows II, with adapter ring #16558 for 65mm f/3.5 Elmar lens and lensheads of the 90mm Elmarit and Elmar, and 135mm Tele-Elmar.

16471 Extension tube fitting between adapter 16558 and 65mm Elmar lens and lensheads of the 90mm Elmarit and Elmar and 135mm Tele-Elmar. Extends lens approx. 26mm.

16596 Adapter ring for fitting bayonet-mounting 35mm and 50mm Leica lenses to Bellows II.

16469 10mm bayonet extension tube fitting between adapter 16596 and bayonet mount Leica lenses.

16590 Adapter ring for fitting screw-mounting 35mm and 50mm Leica lenses to Bellows II. Additional extension possible with tubes 14020, 16615, and 16617.

14020 15mm length Leica thread (39mm diameter - 1mm pitch) extension tube.

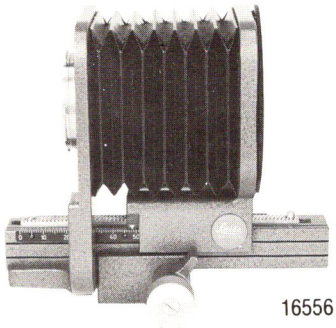
16615 26mm length Leica thread extension tube.

16617 44mm length Leica thread extension tube.

17672 Adapter fitting lens units of 50mm Dual-Range and rigid-mount Summicron lenses to Bellows. Used with Adapter Ring #16590.

16558 Adapter Ring for fitting lensheads of the 135mm Tele-Elmar, 90mm Elmarit or Elmar, and the 65mm Elmar lens to Bellows II. (This ring is supplied with the basic outfit).

16598 Adapter ring for fitting lensheads of the 90mm Summicron f/2, 135mm Elmarit f/2.8, 200mm Telyt f/4 and 280mm Telyt f/4.8 to Bellows II.



16556

16471

16596

16469

16590

16615

17672

16558

16598

Photar Lens

Leitz Photar lenses are macro lenses corrected for use in the close-up and macro ranges. Available in focal lengths 12.5mm to 120mm the Photars provide reproduction ratios from infinity to 12:1 when used on the Bellows II. Please refer to the Photar Lens Section for technical specifications.

Photar Lens	Reproduction Ratio Range	Working Distance
120mm	∞ to 0.6:1	∞ to 13″
80 mm	0.2:1 to 1.5:1	17″ 5″
50 mm	1.2:1 to 3.4:1	3½″ 2″
25mm	3.4:1 to 8:1	¾″ ¾″
12.5mm	8:1 to 12:1	⅜″ ⅜″

Leica-Leicaflex Copying Stand

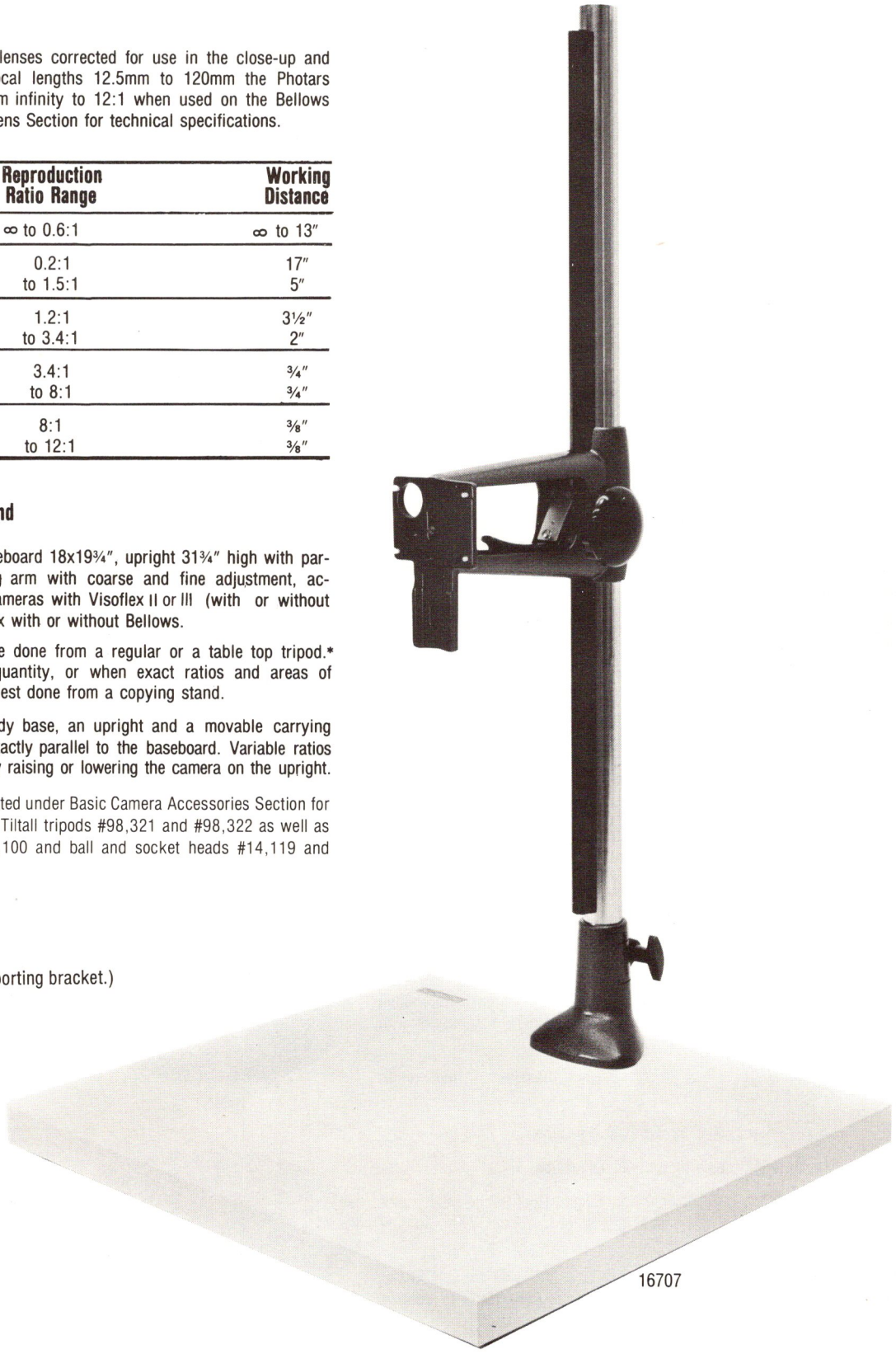
16707 Copying Stand, baseboard 18x19¾″, upright 31¾″ high with parallel guide, carrying arm with coarse and fine adjustment, accepting all Leica cameras with Visoflex II or III (with or without Bellows II), Leicaflex with or without Bellows.

Ordinary close-up work can be done from a regular or a table top tripod.* But copying work, either in quantity, or when exact ratios and areas of reproduction are involved, is best done from a copying stand.

A copy stand includes a sturdy base, an upright and a movable carrying arm which holds the camera exactly parallel to the baseboard. Variable ratios of reproduction are achieved by raising or lowering the camera on the upright.

*Please refer to Tripod sheet located under Basic Camera Accessories Section for detailed information on the Leitz Tiltall tripods #98,321 and #98,322 as well as the Leitz Table Top tripod #14,100 and ball and socket heads #14,119 and #14,168.

NOTE:
#16707 is composed of:
Baseboard—98305
Upright—98306 (Includes supporting bracket.)
Carry arm—98307



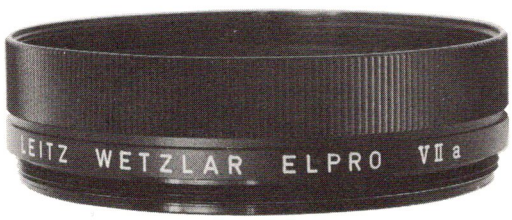
16707

LEICAFLEX CLOSE-UP EQUIPMENT

ELPRO CLOSE-UP LENSES

The Elpro close-up lenses for the Leicaflex are two-element achromats especially designed for the prime lenses with which they are used. They are threaded into the front of the basic lens.

The Elpros retain the superb performance of the Leicaflex lenses in the close-up area and also permit the automatic diaphragm of the lenses to function. And, since there is no bellows extension, Elpro-close-up photography requires no increase in exposure.



16,533
Elpro VIIa

14,553
Case for one Elpro lens

ELPRO CLOSE-UP LENSES

Leicaflex Lens	Elpro	Catalog No.	Distance Scale Setting	Approximate Distance (in inches) Subject to film	Subject to Elpro	Field covered (in inches)	Reproduction ratio	f/8	Depth of Field (in inches) f/11	f/16
50mm Summicron-R f/2	VIa	16,531	∞	19 1/16	16 1/16	7 1/4 x 10 7/8	1:7.7	1 3/8	1 7/8	2 3/4
			20″	12 1/8	8 1/4	3 5/8 x 5 7/16	1:3.8	25/64	9/16	25/32
	VIb	16,532	∞	11 7/8	8 3/16	3 11/16 x 5 9/16	1:3.9	13/32	9/16	13/16
			20″	9 1/2	5 9/16	2 7/16 x 3 11/16	1:2.6	3/16	9/32	3/8
90mm Elmarit-R f2.8 and 90mm Summicron-R f2.0	VIIa	16,533	∞	29 1/16	24 1/16	6 5/16 x 9 1/2	1:6.7	1 1/16	1 1/2	2 1/8
			28″	17 7/16	11 13/16	2 7/8 x 4 5/16	1:3.0	17/64	3/8	17/32
135mm Elmarit-R f/2.8	VIIb	16,534	∞	59	53 1/4	9 5/16 x 14	1:9.9	2 1/4	3 1/8	4 1/2
			5′	33 1/2	27 3/16	4 1/4 x 6 3/8	1:4.5	17/32	23/32	1 1/16
	VIIa	16,533	∞	29 13/16	24 1/16	4 1/4 x 6 3/8	1:4.5	17/32	23/32	1 1/16
			5′	23 1/8	16 13/16	2 5/8 x 3 15/16	1:2.8	7/32	5/16	7/16

Focusing data are given for ∞ and the shortest engraved distance setting of the Leicaflex lenses. Since the lenses can slightly exceed these engraved settings, somewhat higher reproduction ratios can be obtained than are shown in this table. All figures are approximate, having been rounded off for convenience.

DIVISIBLE EXTENSION RING

Cat. No.	Item
14,158	Divisible Extension Ring for close-up photography with the Leicaflex system with semi-automatic spring-loaded aperture coupling — for lenses from 50mm to 135mm; used with double cable release #16,494 or finger pressure that closes down the aperture to pre-selected position before release of shutter. Two-piece ring has 25mm thickness. 50mm Lens reproduction ratio 1:2 90mm Lens reproduction ratio 1:2.2 135mm Lens reproduction ratio 1:3.3
14,135	Extension Tube for 14,158 increasing lens extension so as to focus as close as 7 15/16″ ratio 1:1 with 50mm lens. Fits between two rings of #14,158; has thickness of 25mm.
14,159	14,158 plus 14,135
16,494	Double Cable Release

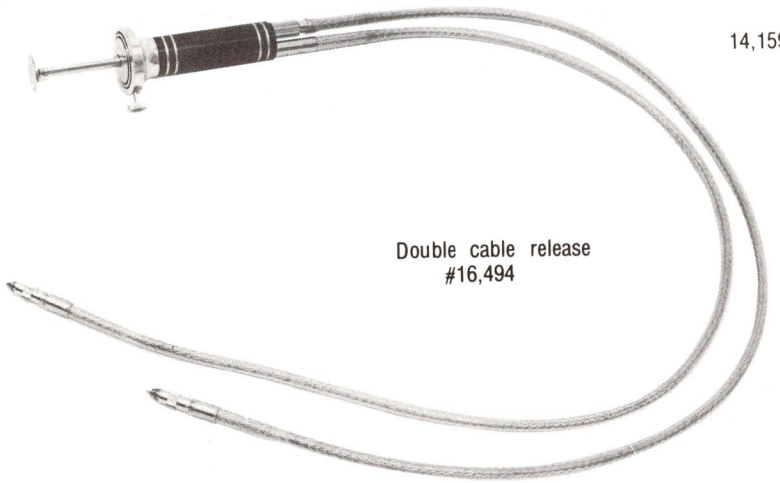
SPECIAL NOTE: 14,158 is composed of 14,158-1 plus 14,158-2.

14,158-1

14,159

14,135

14,158-2



Double cable release
#16,494

Three-piece combination ring for the Leicaflex with 50mm Summicron-R f / 2 lens

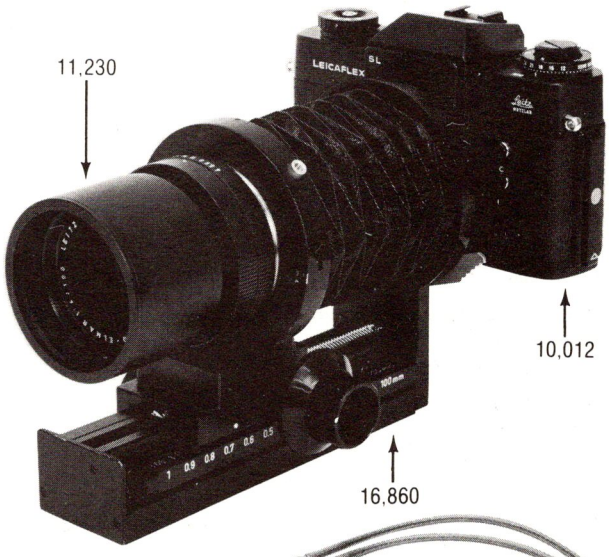
Ring combinations	Distance Scale	Subject-Film Distance	Reproduction Ratio	Exposure Increase Factor
14,158-1 + 14,158-2	∞ ∞	231mm 9.09″	1:2.08	2.0
14,158-1 + 14,158-2	0.5 m 20″	215mm 8.46″	1:1.63	2.4
14,158-1 + 14,158-2 + Elpro VIa	∞ ∞	212mm 8.35″	1:1.64	2.0
14,158-1 + 14,158-2 + Elpro VIa	0.5m 20″	203mm 8.03″	1:1.35	2.4
14,158-1 + 14,158-2 + Elpro VIb	∞ ∞	196mm 7.72″	1:1.35	2.0
14,158-1 + 14,158-2 + Elpro VIb	0.5m 20″	192mm 7.56″	1:1.14	2.4
14,158-1 + 14,135 + 14,158-2	1.5m 5′	202mm 7.95″	1:1	3.6
14,158-1 + 14,135 + 14,158-2 + Elpro VIa	∞ ∞	199mm 7.83″	1.09:1	3.5
14,158-1 + 14,135 + 14,158-2 + Elpro VIb	∞ ∞	194mm 7.64″	1.23:1	3.5

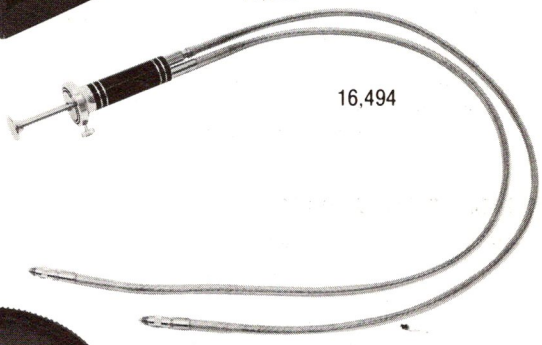
LEICAFLEX CLOSE-UP EQUIPMENT

BELLOWS FOR THE LEICAFLEX

The Bellows-R is used by amateur and professional alike to explore the fascinating world of close-up photography. Flowers, insects, coins, and stamps, for example are easily photographed with the Bellows-R and 100mm f4.0 Macro Elmar lens. Double cable release 16494 provides semi-automatic diaphragm operation with Leicaflex auto-aperture lenses. The Bellows-R features four extension scales on a rotatable rod and rack and pinion focusing movement.

Catalog Number	Item
16,860	Leicaflex Focusing Bellows-R, for use with the Leicaflex and Leicaflex SL. Permits close-ups with all Leicaflex lenses without adapters, intermediate rings, etc.
11,230	100mm Macro-Elmar f/4 lens, complete with series 7 retaining ring for use with Leicaflex Focusing Bellows-R. Can be focused from infinity to a ratio of 1:1
16,494	Double Cable Release for Leicaflex Bellows-R
16,863	Adapter Ring for Focusing Bellows-R, accepting lens head of 65mm Elmar, 90mm Elmarit, and 135mm Tele-Elmar (see Visoflex Lens Section).
14186	90° Finder for the Leicaflex, imarect type (right side up, left and right not reversed). An especially valuable accessory when using the Leicaflex / Bellows-R combination on a tripod or copy stand.
14188	Universal grip for use on Bellows-R. Uses #16,494 for release of lens diaphragm and camera shutter. Bellows-R must be modified by Leitz Photo Repair Department Rockleigh, N.J. 07647 to accept 14,188 grip.



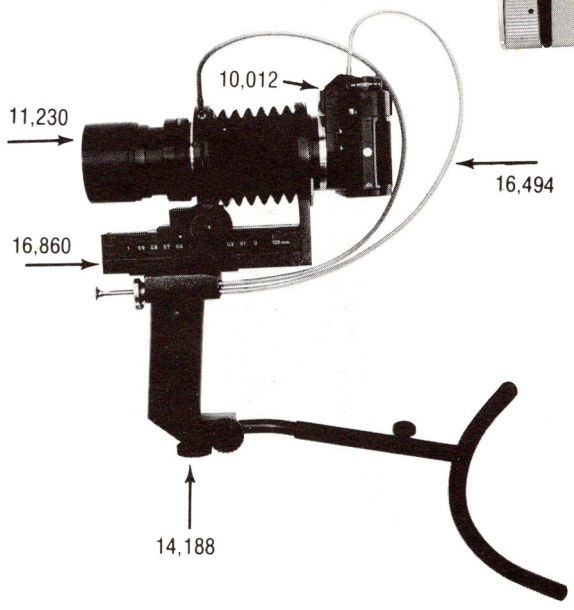


BELLOWS-R WITH LEICAFLEX LENSES

Leicaflex Lens	Reproduction Range	Working Distance
50mm	1:1 to 3:1	2¾″ to 1″
90mm	1:2 to 1.75:1	9″ to 3¾″
100mm	∞ to 1:1	∞ to 6″
135mm	1:3.2 to 1.2:1	23″ to 10¾″

PHOTAR LENSES ON THE BELLOWS-R

Photar Lens	Reproduction Range	Working Distance
120mm	∞ to 1:1.5	∞ to 12″
80mm	1:4 to 1.5:1	17″ to 5″
50mm	1:1 to 3:1	3½″ to 2¼″
25mm	3:1 to 7:1	1¼″ to ¾″
12.5mm	8:1 to 18:1	½″ to ⅓″



The photographer who seldom requires reproduction ratios larger than about 3:1 or 4:1 can do very nicely with his normal Leicaflex lenses on the Bellows-R. The user who does much work in these and higher ranges can certainly benefit from the higher reproduction ratios and superior performance offered by the Photar lenses for photomacrography.

Please refer to Lens Section for detailed information on Leitz Photar lenses.

LEICAFLEX CLOSE-UP EQUIPMENT

Cat. No.	Item
11,203	Macro-Elmarit-R 60mm f2.8

The 60mm f2.8 Macro-Elmarit-R lens can be considered a universally applicable lens of near normal focal length. The most outstanding advantage of the Macro-Elmarit-R lens is its ability to focus from infinity to ½ life size without accessories. Fully automatic diaphragm operation is maintained through this focusing range. The Leicaflex SL behind-the-lens metering system compensates for exposure increase factors; exposure measurement is of course by the full aperture method.

A 1:2 to 1:1 reproduction ratio range is obtainable with the intermediate tube supplied with the lens. In this range diaphragm operation is automatic and exposure measurement is at full aperature.

For the Leicaflex owner who desires ultimate flexibility, the 60mm f2.8 Macro-Elmarit-R lens is the preferred choice.
See Leicaflex Lens Section for technical specifications.

14,186	90° Finder for Leicaflex, imarect type, (right side up, left and right not reversed).

Finder 14,186 is especially valuable when using copy stand 16,707. Also excellent when the Leicaflex is employed at or near ground level as in flower photography. An accessory that is useful for all types of Leicaflex photography.

11,205 = Lens only

11,203

Normal lens with infinity to lifesize focusing range,
11,203 = 11,205 + 14,198

14,198 = Intermediate Ring only

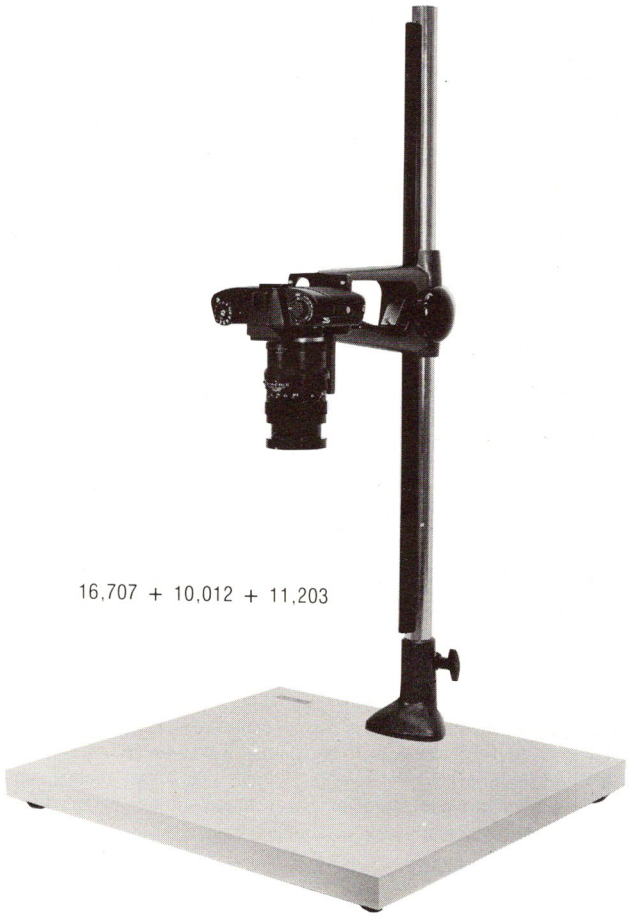
LEICA-LEICAFLEX COPYING STAND

16,707	Copying Stand, baseboard 18x19¾", upright 31¾" high with parallel guide, carrying arm with coarse and fine adjustment, accepting all Leica cameras with Visoflex II (with or without Bellows Device II), Leica "M" cameras with Visoflex III (with or without Bellows II), Leicaflex with or without Bellows.

Ordinary close-up work can be done from a regular or a table top tripod. But copying work, either in quantity, or when exact ratios and areas of reproduction are involved, is best done from a copying stand.

A copy stand includes a sturdy base, an upright and a movable carrying arm which holds the camera exactly parallel to the baseboard. Variable ratios of reproduction are achieved by raising or lowering the camera on the upright.

14,186



16,707 + 10,012 + 11,203

Leitz®
E.LEITZ,INC.
ROCKLEIGH
N.J. 07647

SLIDE PROJECTORS

No screen image — not even that of a Leica transparency — can have more quality than the projector which produces it. This is why Leitz projectors are made with the same attention to optical and mechanical precision that is lavished on the Leica itself.

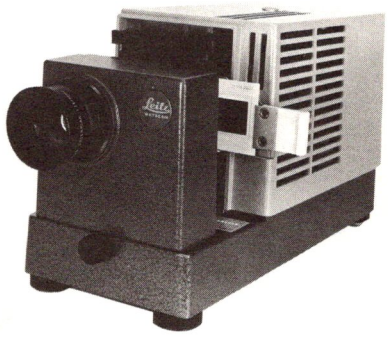
What's more, there is a Leitz projector to meet the needs of everyone from the professional lecturer to the man who just wants to show his snapshots to friends. All Leitz projectors share three characteristics — superb optical design, ruggedness and mechanical precision. Your first look at a slide screened with a Leitz projector will be a memorable experience.

The pages that follow list the various projectors in combination with lenses of many focal lengths, plus useful accessories which add even more versatility to the projectors.

Reducing the blackout: LEITZ PRADOVIT® C

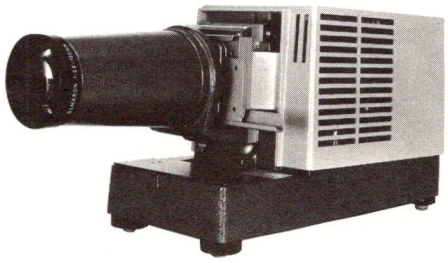
Modern slide projectors run smoothly, but the few seconds of darkness on the screen during every slide change produces disturbing breaks in the presentation. With the new LEITZ PRADOVIT C series, there are practically no dark periods at all. The picture on the screen disappears virtually the instant the next one appears. The PRADOVIT C does it with a novel multi-channel slide changer, and ingenious shutter system, that makes the show run much smoother with a significant reduction of elapsed time between slides.

Pradovit CA-2500

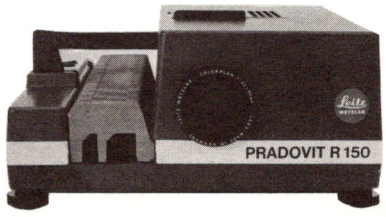


Prado-Universal
set up for 35mm

Pradovit Color 110



Prado-Universal
set up for 2¼ x 2¼



Pradovit R 150

ANIMATIC CONVAR DISSOLVE UNIT

The Animatic Convar unit, the most up-to-date and sophisticated electronic dissolve system available, yet simple to operate.

Complete slide and sound programs are easily achieved with the Animatic Convar. When you have planned your slide program, all slide changes and dissolves are programmed by use of the hand control. The hand control allows total freedom to vary effects on the screen. The time intervals of slide changes and dissolves are not fixed, as with other models available. The speed of moving the slider can produce fast dissolves or slow dissolves and the fastest movement will produce a snap-change. You can fade without slide-change to go from one slide to the other and back again; you can stop the slider mid-way to superimpose two slides and you can even flash a single slide onto a dark screen for dramatic effects.

A pulse is recorded directly on tape with the hand control, allowing exact replay of the program — so all you need is a tape recorder. To add commentary or sound, a stereo recorder with separate input and output for each channel is required.

The Animatic Convar can be used with Leitz Pradovit-C or Pradovit Color projectors, Kodak Ektagraphic or Carousel projectors.

A neat and unobtrusive modification to the Leitz Pradovit projectors is carried out in the Leitz Workshops in Rockleigh, New Jersey. Each projector is supplied with a shorting-plug so it may operate if desired as an individual normal projector. Modification of the Kodak Ektagraphic or Carousel projectors is not needed to work with the Convar unit.

FEATURES:

- Snap-changes
- Fast dissolves
- Superimposition
- Slide comparisons
- Single-slide flashes
- Full tape control
- Mono or stereo

The Animatic Convar dissolve unit is controlled by a varying frequency and not through synchronised pulses. No other accessory is required except a connecting cable between the tape recorder and Convar.

98830 Animatic Convar Mark IV dissolve unit complete with remote hand control and tape recorder leads.

98831 Mini Convar

DIMENSIONS (MARK IV):
76mm x 250mm x 250mm
(3'' x 9-7/8'' x 9-7/8'')

WEIGHT:
4 pounds

SIGNAL FREQUENCY:
1000 to 5000 Hz

98851 Conversion of one Pradovit Projector for use with the Animatic Convar Dissolve Unit.

For orders of complete sets consisting of one Animatic Convar Dissolve Unit and one or two Pradovit Projectors, there will be no conversion charge for the projector(s).

PRADOVIT R 150

SLIDE PROJECTORS

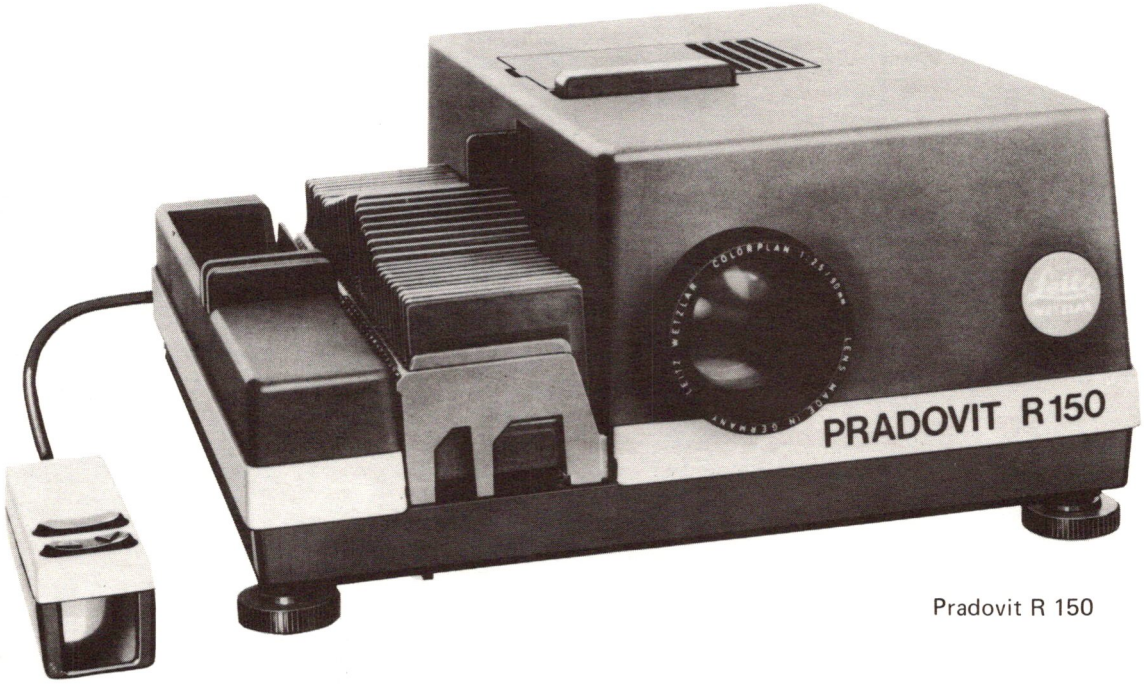
The Pradovit R 150 offers the same superb optical quality as the Pradovit C projectors, but is designed as a lower priced companion.

The Pradovit R features a 24 V, 150 W Halogen lamp, remote control through a cable that combines forward, reverse, and focus buttons, plus a light-pointer.

There are part and full-power switches for the lamp. Lenses available range from wide-angle 50mm through the 150mm lens for classroom use.

Features:

1. Interchangeable Leitz projection lenses (50, 85, 90, 120, 150mm)
2. Sturdiness and reliability in a timeless design
3. Convenient remote control operation
4. Smooth, safe slide transportation
5. Convenient projection of single slides
6. Lamp saving circuit



Pradovit R 150

When using extremely wide angle lenses, such as the 35mm and 50mm, the number of slides being projected may be limited due to the end of the slide tray entering the field of view.

COMPLETE UNITS

PRADOVIT R 150 with 24v/150W tungsten halogen lamp and lens

ELMARON	f/2.8	50mm	30 571
ELMARON	f/2.8	85mm	30 572
COLORPLAN	**f/2.5**	**90mm**	**30 573**
ELMARON	f/2.8	120mm	30 574
ELMARON	f/3.2	150mm	30 575

BASIC PRADOVIT R 150

Body with condenser for 60mm to 150mm and 24v/150W tungsten halogen lamp 30 570

Body with condenser for 50mm and 24v/150W tungsten halogen lamp 30 579

LENSES

Projector lenses (separate)

ELMARON	f/2.8	50mm	37 008
ELMARON	f/2.8	85mm	37 003
COLORPLAN	**f/2.5**	**90mm**	**30 005**
ELMARON	f/2.8	120mm	37 019
ELMARON	f/3.2	150mm	37 031

CONDENSERS

Condenser 60-150mm (replacement) 32 222
Condenser 50mm (replacement) 37 221

ACCESSORIES

Lamp for the light pointer (replacement) 37 737
Multiple plug for simultaneous connection of sound tape and separate remote-control cable 37 911
Separate remote-control cable, length 3m, with light pointer 37 953
Extension cable for remote-control, length 5m 37 931
Carrying case 37 954

TECHNICAL DATA

Height: 5.2 inches
Length: 11.0 inches
Width: 10.3 inches
Weight: 9.5 lbs.
Projection lamp:
Halogen lamp 24V/150W
Brightness: 580 lumens (measured with the COLORPLAN 90mm f/2.5 lens according to DIN standards)
Useable Format: 24 x 36mm
Remote control unit with light pointer permanently attached to the projector.

Slide Magazine for Leitz Projectors

37,844	36-Slide Magazine 2-Pack. Package of two 36-slide magazines and two slide retaining straps in stackable drawer-type storage box
37,845	Plastic Storage Box, stackable drawer-type, as supplied with #37,844
37,855	50-Slide Magazine 2-Pack. Package of two 50-slide magazines and two slide retaining straps in stackable drawer-type storage box
37,856	Plastic Storage Box, stackable drawer-type, as supplied with #37,855
98,230	One Box of Twelve Slide Retaining Straps for 30 slide magazine
98,236	One Box of Twelve Slide Retaining Straps for 36 slide magazine
98,250	One Box of Twelve Slide Retaining Straps for 50 slide magazine

When using extremely wide angle lenses, such as the 35mm and 50mm, the number of slides being projected may be limited due to the end of the slide tray entering the field of view.

ACCESSORIES FOR DISCONTINUED PRADOVIT-COLOR SERIES PROJECTORS

Lenses, Focusing Sleeves, And Field Condensers

Appropriate focusing sleeves and field condensers are listed to the right of each lens.

Lens	Focusing Sleeve	Field Condenser
35mm Elmaron f/2.8 Cat. #37,041	Cat. #37,119	Cat. #37,210
50mm Elmaron f/2.8 Cat. #37,051	Cat. #37,119	Cat. #37,210
60mm Elmaron f/2.8 Cat. # 37,004	Cat. #37,119	Cat. #37,217
85mm Elmaron f/2.8 Cat. #37,003	Cat. #37,119	Cat. #37,217
90mm Colorplan f/2.5 Cat. #37,005	Cat. #37,119	Cat. #37,217
120mm Elmaron f/2.8 Cat. #37,019	Cat. #37,119	Cat. #37,217
150mm Elmaron f/2.8 Cat. #37,030	Cat. #37,121	Cat. #37,212
150mm Elmaron f/3.2 Cat. #37,031	Cat. #37,119	Cat. #37,212
200mm Elmaron f/3.6 Cat. #37,062	Cat. #37,129	Cat. #37,212
250mm Elmaron f/4.0 Cat. #37,082	Cat. #37,130	Cat. #37,212

CORDS, COVERS, CASES, LAMPS

37,656 Line cord
37,934* Remote-Control cord, 10 ft. (Not for AF models)
37,941* Remote-Control cord, 10 ft. for AF models

37,931 16 ft. Extension for remote-control cord
37,932 50 ft. Extension for remote-control cord
37,930 Snap-on cover as replacement for Pradovit-Color projector equipped with lenses up to 120mm focus
37,952 Special Carrying Case, for Pradovit Color 150 and 150 Auto-Focus to accommodate all lenses up to and including 250mm focal length
37,962 Special Carrying Case, for Pradovit Color 250 and 250 Auto-Focus to accommodate all lenses up to and including 250mm focal length
37,717 Halogen low-voltage lamp, 24V, 150W
37,723 Halogen low-voltage lamp, 24V, 250W

***Note:** This remote-control cord is only for the PRADOVIT-COLOR. It must not be used on any Pradovit-N or FA projectors or damage to the projector will result. Likewise, the remote-control cord from the former Pradovits must never be used on the PRADOVIT-COLOR.

37,936 Special Light Pointer, attaches directly to remote control switch panel without requiring any special adjustments

37,721 Spare Bulb for Pradovit-Color Pointer (Catalog No. 37,936)

Pradovit Tape Synchronization Accessories

37,911 Multiple outlet (molded "Y") for Pradovit projectors. Permits connection of remote control cord and tape synchronizer. Useable on Pradovit projectors above 400,000 serial number.

FILM STRIP ATTACHMENT
(for 90, 100, 120mm lenses)

Holder to fit PRADOVIT body 37937
Holder with twin bars 32850
Lens bracket to fit twin bars 32404
Condenser 37200
Film strip holder 37868

PRADOVIT COLOR 110

SLIDE PROJECTORS

The new Leitz projector for the 110 format is fully entitled to the name Pradovit-Color, for it gives maximum performance in regard to practical handling, reliability in service, long life and worldwide after-sales service with the well known international Leitz Warranty.

The Pradovit Color 110 is equipped with a new Compact-magazine, which holds up to 60 slides secured inside the magazine against falling out. This results in simple manipulation and high operating safety.

The magazine can be inserted into the projector and taken out in any desired position. On insertion of the magazine, opening of the cover will automatically move the claw into starting position. Quick slide sequence: dark period only 1.3 seconds.

The Pradovit Color 110 provides remote control for slide change forward, backward, and focusing, as well as a light pointer, height adjustment, tape recorder coupling (also for cassette recorders), and single slide projection through a removable slide stage. Electrical safety is assured through an automatic thermoswitch, and by the overall design of the apparatus in accordance with established electrical safety standards.

The small, lightweight Pradovit Color 110 fits in any bookcase, blends with any room and can conveniently and safely be carried in an attache case for use away from home.

Catalog Number	Item
	Pradovit Color 110, remote-control cable with built-in light pointer, Compact magazine and lens, adjustable 110...240v, 50-60Hz, with
30,902	50mm COLORPLAN f/2.5.

ACCESSORIES

37,736	12v 75W halogen cold-light ellipsoid reflector lamp.
37,931	5m (17ft) extension for the remote-control cable.
37,948	Compact magazine 110.
37,911	Multiple plug (for simultaneous connection of tape and remote control cable).
37,737	3V, Light pointer lamp.
37,006	50mm Colorplan 110, f2.5.
37,949	Remote cable with light pointer.

30902
Pradovit Color 110