



LEICA R4

Multi-Mode

Two Exposure Measuring Methods



**Leitz means precision.
World-wide.**



LEICA[®]

always fascinating

For more than 50 years the LEICA has been the criterion of excellence for amateur and professional photographers – worldwide. As the prototype of the modern 35mm camera it revolutionized the current face of photography. The LEICA is the yardstick for precision and reliability, top quality, optical performance, long life, and easy operation.

Photojournalists whose job it is to record unique events all over the world, and keen amateurs who want to obtain perfect pictures without having to cope with technical problems have had in common, as owners of a LEICA, a camera which never fails to make photography a fascinating and pleasurable experience.

The LEICA R4 is the 4th-generation S.L.R. camera. Full use has been made of electronics to simplify its operation and increase its instant readiness. To the photographer this means perfect pictures without having to solve any technical problems. The well proven automatic exposure measuring methods for both integral and selective measurement, unique in LEICA-R models, give them a distinct advantage in achieving perfect exposures. Coupled with the instant choice of automatic shutter priority, aperture-priority, program or flash modes, the basis for optimum versatility and application to the situation is formed for a simple, practical approach to perfect photography. The

design and configuration of the LEICA R4 is elegant, compact and functional; and the camera fits comfortably in the hand. Outstanding operation convenience, reliability, optical performance and its worldwide service organization make it the most attractive choice for the professional photographer, the sophisticated amateur or quality-conscious novice. The camera feature of greatest importance to the LEICA user is the end result. All of this is due to almost 150 years of Leitz experience in the manufacture of precision instruments in metrology and high-quality research microscopes. No other manufacturer can bring more experience in precision machining, high quality optical systems, and technical perfection to a camera than Leitz. This is why the LEICA R4 is able to meet the most stringent demands.

Like the LEICA R3-MOT, it is manufactured in the Leitz factory in Portugal using the well-proven Leitz production specifications. Conveyor belt production is ruled out, as is any compromise in favor of higher production and assembly.

Lenses of focal lengths from 15mm to 800mm are available for the LEICA R4 system. In addition to the well established facilities in Wetzlar, Germany, many of the world famous LEICA lenses are manufactured in the Leitz factory in Canada.

The Leitz quality seal backed by the international Leitz warranty assures optimum performance and long life.



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The outstanding advantages of the LEICA R4

The beautiful design and compact form are distinctly LEICA styling and reflect its quality and ease of handling.

● **The flawless Leitz black chromium finish** assures a like-new appearance after years of constant use.

● **Balanced proportions** along with greatest operating convenience make the LEICA R4 a pleasure to handle. It is conducive to effortless, quick and reliable photography under any condition.

● **The choice of integral or selective exposure measuring methods** combined with its multiple modes, automatically meet any photographic requirement – simply. Electronics insure easy, reliable, and accurate exposure.

● **The metal multi-blade focal-plane shutter** of the LEICA R4 makes winding smooth and easy, and the electro-magnetic shutter release permits vibration-free, quiet performance.

● **Interchangeable focusing screens** permit the LEICA R4 to compose and be focused to the highest degree of accuracy possible. The primary semi-transparent mirror is coated with seventeen deposition technique dichroic coatings which reflect 70% of the light transmitted by the lens; resulting in an extremely brilliant viewfinder image.

● **Motor Winder and Motor Drive** greatly extend the range of dynamic photography. The LEICA R4 is the **nucleus of a universal system**. Lenses from 15mm to 800mm focal length cover every photographic need. All current lenses of the LEICA R3/R3-MOT can be used on the LEICA R4 without modification.

● **The large reliable LEICA R bayonet lens mount** permits quick lens change. Even with prolonged and frequent use, the precise and secure seating dimensions are retained after many years of constant use.

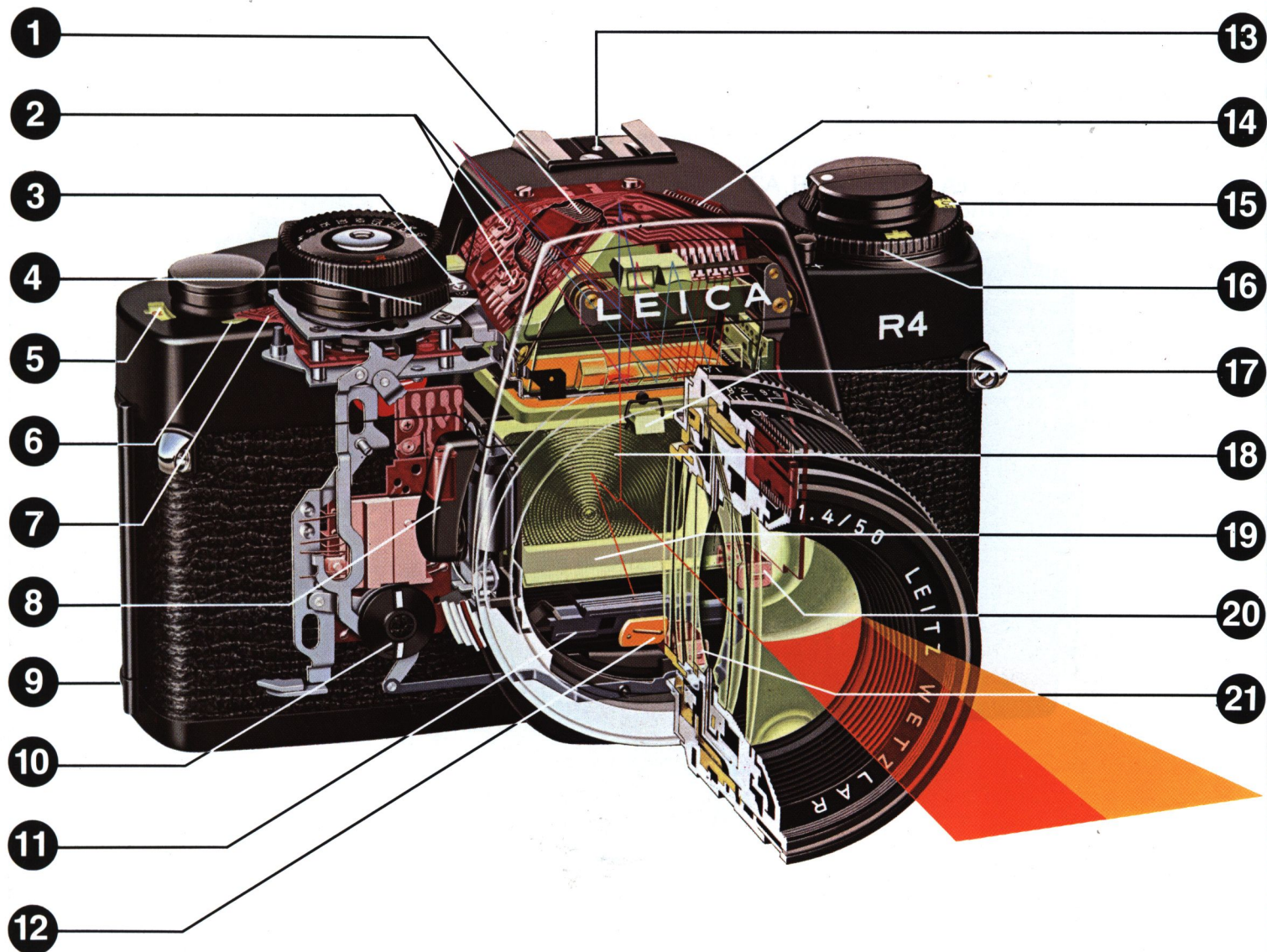
● **The world-wide warranty** assures a quick diagnosis, maintenance and repair, backed up by 120 Leitz agencies and a worldwide franchised dealer network.



The picture illustrates the LEICA R4, actual size.

The LEICA R4

Modern technology for successful photography



1 Integrated circuit for exposure measurement and shutter control

This integrated circuit matrix contains the complex electronics controlling the shutter speeds.

2 Exposure balancing potentiometer

This balancing potentiometer ensures identical exposures in identical lighting conditions with any of the program modes selected.

3 Program indication

The selected program can be identified at a glance on the outside, without the need to switch the camera on.

4 Program selector

In the LEICA R4 the two exposure measuring modes, integrating and selective, can be combined with the operating modes into five different programs which can be instantly set by a slight finger touch on the program selector.

5 Automatic frame counter

The frame counter counts forward and automatically returns to zero when the camera back is opened.

6 Film transport control

The LEICA R4 enables a precise monitoring of the status of the film transport and the rewinding procedure. As the film is properly transported, the black field in this window changes progressively to a white field and vice-versa upon rewinding.

7 Integrated circuit board for program selection

Depending on the preselected program, the 6 switches in the circuit board transpose the values produced by the exposure meter into corresponding control signals for shutter speed, aperture, and the correlated viewfinder displays.

8 Depth-of-field preview lever

When the depth-of-field preview lever

is pressed, the lens aperture closes to the preselected value enabling the photographer to check the approximate depth-of-field in the viewfinder.

9 Interchangeable camera back

The easily removable camera back can be replaced by a data recording back or a 250 exposure back (10M).

10 Switch for the electronic selftimer

The selftimer functions at all shutter speeds. Its delay is about 8 seconds.

11 Slider for integral/selective exposure measurement

When any mode has been set, the proper exposure is precisely measured by means of a collecting lens automatically positioned by this internal slider.

12 Silicon photo diode

The silicon photo diode of the LEICA R4 is matched for the average color sensitivity of the most widely used films. Therefore the precise exposure is not affected by the color of the subject.

13 Contact for automatic flash mode

System-compatible electronic flash units control the electronics of the LEICA R4 and eliminate prior adjustments normally required.

14 Integrated circuit for data processing, lens aperture, and warning systems

This electronic component has many different functions. It mainly ensures the proper coupling and uncoupling of the various warning functions and processes the measured and preselected values.

15 Override for exposure corrections

This feature permits overriding the automatically established exposure setting by plus or minus two values under unusual or extreme lighting conditions.

16 Film speed setting

The first prerequisite of establishing the proper exposure is the setting of the film speed. This large convenient ring automatically permits settings covering a range from ISO 12/12° (ASA 12/DIN 12) to ISO-3200/36° (ASA 3600/DIN 36).

17 Interchangeable focusing screen

The LEICA R4 is supplied with a universal screen. There are four additional interchangeable focusing screens available.

18 Fresnel reflector

A unique fresnel reflector composed of 1,345 tiny concave spherical reflectors especially developed by Leitz (a Leitz patent) assures the accuracy of both the integral and selective modes and permits the use of just one silicon photo diode for both methods.

19 Semi-transparent hinged mirror

For both the integral and selective exposure measuring modes, 30% of the light is transmitted to the single silicon photo diode installed in the bottom of the camera by means of a semi-transparent primary mirror and focused by the fresnel reflector. A total of 17 dichroic coatings assures an extremely bright and contrasty viewfinder image even in poor light conditions.

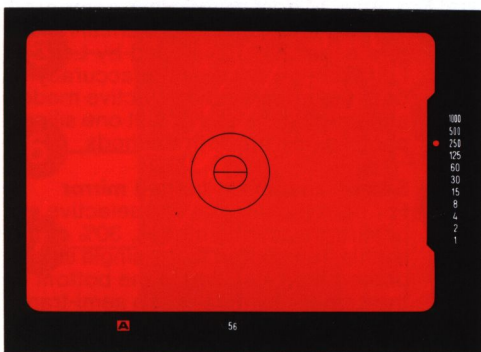
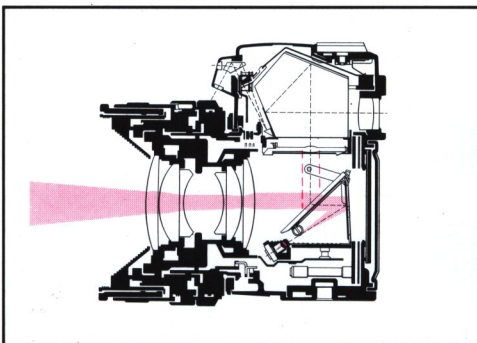
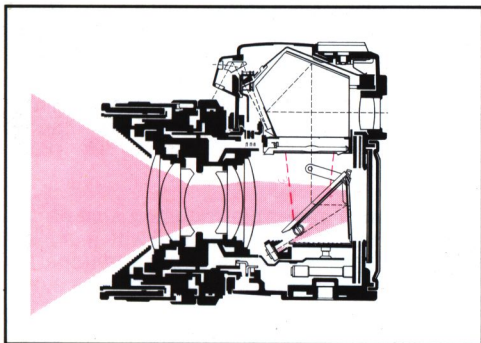
20 Diaphragm magnet

In order to assure exact, stepless diaphragm settings in the aperture priority mode a magnetic brake is used.

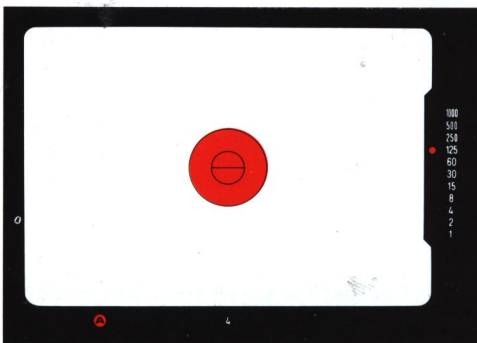
21 Release magnet

The electro-magnetic shutter release works smoothly and without jerking. Even relatively slow shutter speeds can be used with a minimum of camera vibration. The release magnet functions practically without any time delay thereby increasing the camera's readiness and speed of use.

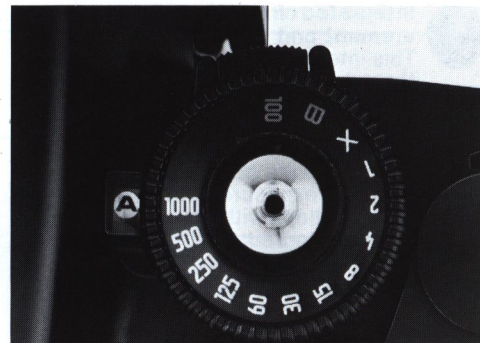
Integrating and selective – a guarantee for successful exposures



Schematic drawing of the Leitz largefield integrating measuring method.



Schematic drawing of the Leitz selective measuring method.



Without taking the eye from the camera, a quick change-over from one measuring method to another may be accomplished.

Every photographer knows the problems "What would be the correct exposure?"

A never to be repeated event, against the light, showing dramatic shadows in the left foreground, one must react in a fraction of a second and measure the exposure accurately... and yet the question remains: should the automatic setting expose at will? Or is it neces-

sary to expose one or even two stops above or below normal?... or, was not there something else to consider? In this way many a picture is lost.

Automatic exposure determination is nothing new anymore. That is as it should be. The less the photographer is involved in technical details, the more he can concentrate in the scene.

However, a simple automatic system

cannot deal successfully with every lighting condition; special conditions require special measuring methods.

Therefore, the LEICA R4 camera has two exposure measuring methods:

A center weighted large field integrating method for all scenes with normal lighting conditions.

And, as something extra, the Leitz selective measuring method, which allows measuring a specific, important portion of the scene, and is thus able to deal with even difficult lighting conditions.

Photography with ease using the largefield integrating measuring method

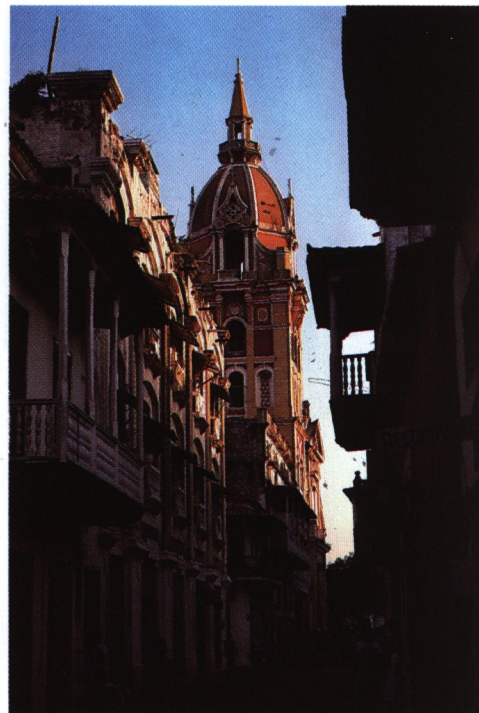


In many cases the integrating method is the correct and dependable one. True in all cases if there are no extreme light- and color contrasts, no heavy shadows and when the bright and dark portions in the image plane are about even. The exposure meter now registers the result of the entire image area. Since usually the important detail is in the center, the measurement is center-weighted.

Measuring range:

0,25 cd/m² to 63.000 cd/m² at f/1.4 and ISO 100/21°. Exposure values of +1 EV to +19 EV or opening f 1.4/1 sec. to f 22/1/1000 sec.

Even difficult lighting conditions can be mastered with the selective measuring method



Unusual photos are generally made under uncommon and difficult lighting conditions – against the light scenes, side light, spotlighted scenes – etc. This is the strong point of the Leitz selective measurement method. Scenes before a bright or very dark background, a portrait against the light, the view through an arched gate, open light sources – these are no problems for the LEICA R4. The measurement area corresponds to the central circle in the viewfinder. Use this circle to aim for the im-

portant image portion and release the shutter. The exposure time will consider in its exposure determination only that portion which lies within the circle, regardless of what occurs within the rest of the viewfinder area.

Measuring range:

1 cd/m² to 63.000 cd/m² at f 1.4 and ISO 100/21°. Exposure values from + 3 EV to 19 EV or opening f1.4/¼ sec. to f22/1/1000 sec.

Optimum picture framing with measured value storage



The selective measurement method, per se, is an excellent feature, but this is not all. Frequently, the selectively measured detail does not really belong in the middle. It is for this reason that the measured value can be stored for 30 seconds by depressing the shutter release button until the mode symbol at the lower left is extinguished. Thereafter the desired picture frame may be chosen in good time and the shutter released under the predetermined exposure value.

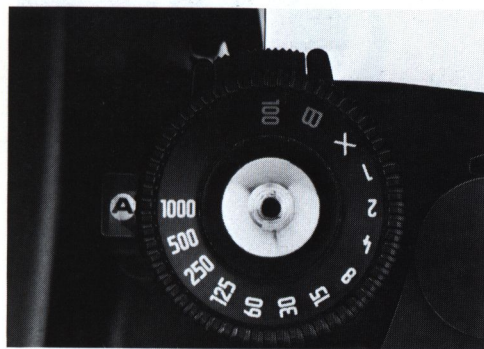
Measuring selectively, value storage, determination of the desired picture area and shutter release are done so quickly and easily with the LEICA R4 that the photographer can carry out these functions after a short time almost unconsciously. Obviously, this is the best prerequisite for optimum picture composition and perfect exposure without technical problems.

The programs of the LEICA R4

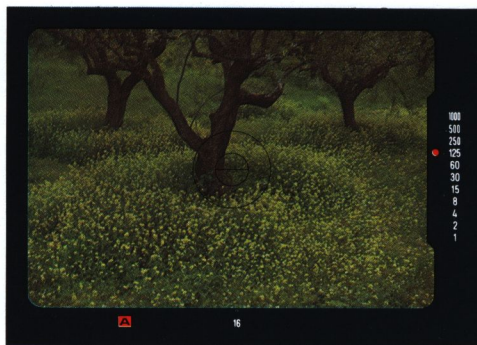
The simple way to perfect pictures

The programs of the LEICA R4 are designed to master any photographic situation. Their operation is so simple and reliable that the photographer can fully concentrate on the subject. The camera automatically takes care of all the technical aspects.

However, the shutter speeds and aperture can also be set manually in the event of very unusual photo-



graphic circumstances or applications. Setting the specific program is extremely simple. The program selector is changed without having to take the camera away from the eye. The symbol of the selected program appears in the viewfinder frame. All other data of importance is also visible in the viewfinder. The LEICA R4 permits instant accommodation for any photographic situation. These programs have been developed as the result of years of photographic experience. The following examples show the application of each program.



A This type of subject requires the greatest depth of field possible. Select program **A** and choose the required lens aperture. The camera will now establish the correct exposure time automatically and steplessly from 1/1000 to about 8 sec. The selected aperture is displayed in the viewfinder frame as well as the shutter speed chosen for it by the automatic exposure system.

As all the details in this subject are the result of correct exposure, the automatic exposure measures in accordance with the Leitz full-field integral measuring. Therefore, the symbol for this is a rectangle. Program **A** means aperture priority by preselection of the aperture coupled to the Leitz automatic integral measurement.



A In this example, shallow depth of field and bright back-light are the elements of composition. Both can be mastered with program **A** easily. The lens is fully open and the camera will select the proper shutter speed automatically and continuously within a range of 1/1000 to about 8 sec. The important feature of this program is that it enables the photographer to take a selective reading of the area of primary importance in the full field. Simply line up the measuring circle in the viewfinder with that part of the subject and press the release button lightly. The exposure measuring value is now stored and the final picture area can now be composed leisurely. The measuring method for program **A** is symbolized by a circle. This method is called aperture-priority with aperture preselection and Leitz selective measurement.



T In this example, motion is the deciding element. For high-speed subjects the shutter speed is the element of importance. Simply set the program to **T** and preselect the desired shutter speed. For instance, 1/1000th sec. for freezing the movement or a slower speed when the camera is panned to follow the subject in order to blur the background. Regardless of whatever shutter speed is chosen, the camera will select the correct aperture automatically. The **T** means **auto-**
matic shutter priority with shutter speed preselection and Leitz full-field integral measurement.

P There are some situations, such as a grab snapshot, when there is no time available for setting the aperture or shutter speed, or many occasions when the photographer simply wants to take pictures without concern for the technical requirements, especially when the situation does not dictate a choice. The LEICA R4 offers an easy solution for such situations, namely **P**. Whether fast action or a quiet landscape, rain or shine, bright or dark – the camera automatically selects the right shutter speed and aperture combination depending on the brightness of the subject.

It is always ready for action. All the photographer has to do is focus and press the release button.

The rectangle indicates that the measurement is integral. **P** stands for: **Automatic Program Mode** with Leitz full-field integral measurement.

m Professionals and specialists know when the shutter speed and aperture must be set manually: For example, when they want to experiment with deliberate under- or over-exposure or take photographs through special effect attachments, trick filters, infrared-films etc.

For this purpose, the **m** setting is chosen which disengages the automatic control. Now it is possible to preselect both the shutter and the aperture as desired. At the **m** setting, measurement can only be done selectively so that the photographer can handle even the most difficult lighting situations.

In order to make it simple, the camera electronics switch the shutter speed to X sync, as soon as a system-compatible flash is in the ready mode which is indicated in the viewfinder. The automatic flash capability functions regardless of the selected program.



1000
500
250
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1

A

4

The viewfinder – your control center for perfect pictorial composition

At a single glance the viewfinder of the LEICA R4 shows all the information necessary for the composition and accurate focusing of the subject. The viewfinder image is clear and brilliant even under poor lighting conditions.

Interchangeable focusing screens permit rapid and precise focusing for just about every photographic application.

This is the most important criterion for the full utilization of the outstanding optical performance of a LEICA-R lens.

The area surrounding the image field in the viewfinder window shows all

pertinent information about the camera functions in use.

For the subject of the left, program **A**, aperture priority with automatic shutter speed selection and Leitz full-field integral measurement is the best. The **A** at the lower left corner is illuminated and the rectangular frame around the **A** reminds the photographer that the exposure is measured with the Leitz full-field integral method. At the bottom center of the viewfinder frame the preselected aperture is shown.

In the lower right-hand margin of the viewfinder an LED indicates the

shutter speed automatically determined for the preselected aperture. It reacts continuously and with sufficient sensitivity to produce, if need be, a reading in between the illuminated shutter speed as 1/99 sec. In this case, two diodes will light up, one for 1/60 and the other for 1/125 sec. If lighting conditions are too bright or too dark for the chosen aperture, a triangular LED will appear above or below the shutter speed scale indicating either over- or underexposure. In that event the lens diaphragm should be either stopped down or opened up as required.

The pictures at the left and below show the universal focusing screen.



Split wedge

When the picture is incorrectly focused, the vertical edges or lines of the subject are not aligned in the horizontal split wedge image.



Microprism collar

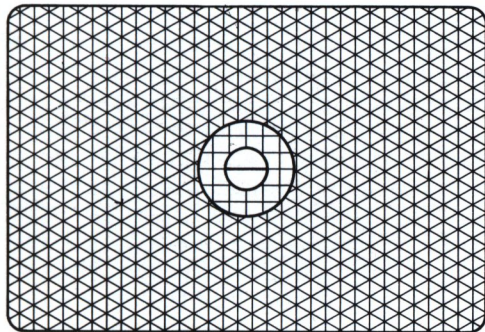
The central split wedge is surrounded by a collar with a screen of rectangular micro prisms. If it flickers, the image within is unsharp.



Microprism focusing screen

The surrounding area consists of fine triangular micro prisms which produce a ground glass screen effect. The surrounding field is used mainly for focusing with long-focal-length lenses or in the close-up range.

Interchangeable focusing screens for every application

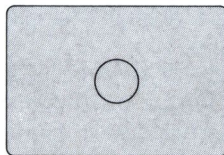


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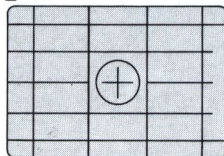
The LEICA R4 is basically supplied with the **universal focusing screen**.

(1). This screen offers three focusing aids: A fine triangular micro prism field covers the entire viewfinder field except for a 7mm diameter collar with large rectangular micro prisms and a central split wedge rangefinder of 3mm diameter. The 7mm ring also indicates the limits of the measuring field in the Leitz selective measuring method.

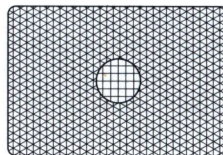
This universal focusing screen is the practical choice for the majority of the camera applications. Special applications require special screens for fast and precise work, therefore, four additional focusing screens are available as accessories. They can be interchanged easily and quickly with the aid of a special clip which is supplied with each screen.



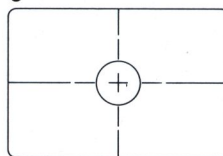
2



4



3



5

2.

For close-up photography or with long focus lenses a uniform **ground-glass screen** is ideal. Sharpness can be checked over the entire viewfinder field. The circle in the center outlines the measuring field of the selective measuring method.

3.

Without the split-image rangefinder of the universal focusing screen the **micro prism screen** provides an undisturbed evaluation of the pictorial composition. Also, the micro prisms indicate the sharpness/unsharpness range more clearly and produce a brilliant, contrasty and clear viewfinder image.

4.

For panorama pictures, architectural photography and flat reproduction copies the camera must be aligned precisely. The **ground glass screen with superimposed grid** is particularly suitable for these and other applications. Using the reticle divisions, 10mm apart, the reproduction ratios can easily be determined.

5.

For photomicrography and cosmic photos the **clear glass screen** is recommended. This focusing aid is ideal for using the LEICA R4 on optical magnifying instruments such as microscopes and astronomical telescopes.

Technical details

Type of camera

Electronically controlled 35mm s.l.r. camera with alternative measuring methods through the lens: LEITZ selective measurement or LEITZ largefield integrating measurement, combined with multiple automatic modes.

Body

All-metal body with detachable back, length 138.5mm, height 88.1mm, depth 60mm, weight 630g. A1/4 (1/4in) tripod bush. LEICA R rapid changing bayonet.

Viewfinder

Built-in pentaprism, interchangeable focusing screens, LED display in the viewfinder, viewfinder magnification about 0.85x with 50mm lens, the viewfinder image corresponds to 92% of the film area (= picture area of a mounted slide).

Shutter

Vertically-acting metal-blade focal-plane shutter with electronically and continuously adjusted speeds from 1/1000 to about 8sec with automatic mode. Manual settings: 1/1000, 1/500, 1/250, 1/125, 1/60, 1/30, 1/15, 1/8, 1/4, 1/2, 1 sec.

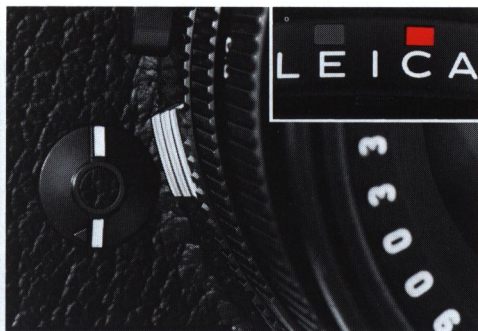
Mechanically controlled speeds

X (1/100 sec), 100 (1/100sec), B. 100 and B function also without batteries. Electronic flash synchronisation 1/100 sec. Automatic switch-over when system-compatible flash units are used.

Current supply

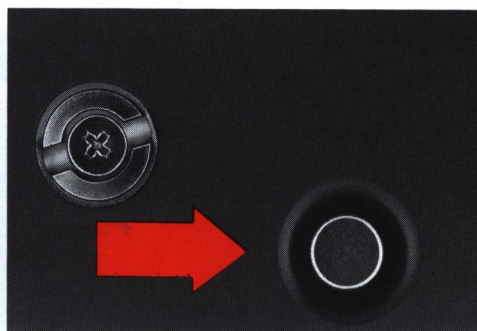
Two 1.55v silver oxide button cells for the exposure meter and the shutter.

Special technical details of the LEICA R4



Electronic self timer

The delay time of the self-timer is about 8 sec. A blinking light indicates that it is operating. This changes to a steady light signal about 2 seconds before the shutter is released.



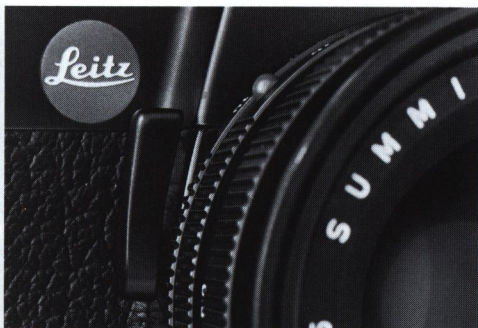
Double and multiple exposures

When the rewind button is depressed the film transport is disengaged. The shutter can now be wound by means of the rapid winding lever without the film transporting. At the end of the travel of the lever the rewind button automatically resets. If more than two exposures are to be made on a single frame, the rewind button must be pressed again before the shutter is wound.



Databack DB LEICA R4

The databack enables the user to record data directly on the film. Negatives or transparencies may be given letter or numerical codes; for instance, when one wishes to serialize a group of photographs. The data may also be an important factor to reconstruct the specific phases or events that were in effect at the time the pictures were taken. The opportunities are manifold. Whether one takes family photos or one wishes to photograph various stages during building of a home, or for experimental photography in the laboratory, the databack allows the identification of the photograph with security and convenience. Databack DB R4 can be inserted in place of the back of the LEICA R4 and connected by means of a cable to the flash contact of the camera.



Depth-of-field preview lever

For the determination of the depth-of-field at a preselected aperture a conveniently arranged depth-of-field preview lever is depressed. This closes the lens aperture to the preselected value.



Film and battery test

A window in the camera back shows clearly if and with what film the camera is loaded. For testing the battery condition, simply depress the test button. If the red control lamp lights up the batteries are ok.

Flatness of the film

The outstanding flatness of the film in the LEICA R4 must also be emphasized: It is absolutely essential for the optimum utilization of lens performance and that excellent sharpness is maintained over the entire picture area.



The motorized LEICA R4 – for action, sequence, and remote release photos

In many situations, constant readiness for action and follow-up photos are essential for successful dynamic pictures. The Motor-Winder and the Motor-Drive for the LEICA R4 expand the possibilities of dynamic photography and of fully automatic image recording in many ways. With motor wind and film transport the LEICA R4 is better suited for quick single and sequence photos, exposures by remote electronic control units, cable or radio releases.

Photo sequences of 2 frames per second are possible with the Motor-Winder R4. The Motor-Drive R4 has 4 frame per second capability but can also be switched to 2 frames per second or single exposures. A convenient switch can select the 2 frame per second sequence while exposing. All shutter speeds can be used. The Motor-Winder uses six, the Motor-Drive ten, standard alkaline batteries or rechargeable NiCad batteries. The battery housings can be exchanged in seconds. In extreme cold, the housing can be kept body-warm and connected with the Motor-Winder or Motor-Drive with a remote connection. Also, it is of great advantage during very cold weather that the power supply of the Motor-Winder and Motor-Drive, when attached to the camera, furnish the supply current for the camera as well.

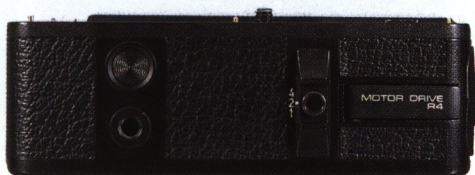
And yet another point: Even when the LEICA R4 is operated by Motor-Winder or the Motor-Drive R4, aside from the normal shutter and mirror

function they are hardly audible. Experienced photographers, particularly professionals, find this especially valuable.



Motor-Winder and Motor-Drive

Robust mechanism, easy handling



Motor-Winder and Motor-Drive are coupled to the LEICA R4 housing and merge into an integrated unit. Single exposures are released via the shutter release. Photos in series are released via the release button on the Motor-Winder or Motor-Drive alternatively via electrical cable release or remote control. The system shuts off automatically after 36 exposures via Motor-Winder.

Handgrip for hand-held photos

The handgrip can be screwed on to the LEICA R4 with the Motor-Drive or the Motor-Winder attached. The release button is conveniently located for series-shots with the Motor-Winder and for series and single shots with the Motor-Drive. The leather strap is individually adjustable. Accidental tripping of the shutter is eliminated by means of a release switch.



Tripod holder

Used for holding the LEICA R4 with long lenses and Motor-Winder steady on a tripod. Rigid design with two convenient connecting screws.



Adapter for external supply

The battery/rechargeable battery-housing of the Motor-Winder and the Motor-Drive are instantly interchangeable. A replacement housing provides additional security when used frequently. (Continuous use, cold, expeditions.)

When it is very cold, the current supply for the winder, the drive and the camera may take place via an adapter ("out of pocket"), while the batteries/NC are kept warm via body temperature.

Motor-Winder and Motor-Drive in combination with the Remote Control-R unit

The electronic remote control unit RC LEICA R offers a number of very delightful possibilities. It serves as the remote release for the Motor-Winder and Motor-Drive and in conjunction with the automation of the LEICA R4 opens up new dimensions of photography. Many of its intriguing possibilities will be covered in the following pages. The control unit fits comfortably in one hand. It can be operated by the left hand equally well as with the right hand. All controls and the function displays are visible and available on the top.

The camera shutter can be released manually or automatically with the Remote Control. After release, a feedback from the camera becomes visible in a luminous digital display. The 9mm display clearly indicates when the exposure is complete. In addition, the number of the completed exposures can be checked in the same display. If exposures have already been made without the control unit, they can be entered with an input button. If, for instance, 12 exposures had been completed, the control unit will give a reading of 13 after the adjustment. In the automatic mode the range of release intervals is from one frame every 0.5 seconds to one frame every 10 minutes. The intervals can be adjusted continuously. With the "test" setting the desired time intervals can be deter-

mined without having to release the shutter. The release impulse is visible at the right-hand decimal point of the digital display.

Current supply of the control unit takes place via batteries or rechargeable batteries of Motor-Winder or Motor-Drive.



The many facets of the LEICA R4-System



Remote release with electric cable release

A 5m long cable, in combination with extension cables is the most simple remote release device and is recommended when **no** function control of the camera is required. It has a threaded plug and can be extended up to a length of 100m. The various accessories for remote release of the Motor-Winder and the Motor-Drive can be used in this manner.



Remote release

via remote control LEICA R

The electronic remote release with simultaneous function control and digital feedback display is the best solution for controlled remote release.



Automatic interval control

For pre-programmed shutter release, the RC LEICA R control unit is available. It offers intervals which can be varied between about 0.5 and 600 seconds; this is a very useful range for automatic shutter release; every half second or up to every 10 minutes.

Uses: Growth studies, such as the blossoming sequence of flowers, germination of seed, root development, traffic density documentation, capacity of escalators in department stores, railway stations, security surveillance of exhibits at conventions, customer flow in department stores, monitoring of machinery and its instruments, etc.





Multiple exposures

By using the LEICA R4 and the control unit, multiple exposures are no longer a problem. It is easy to record the various stages of the moon on one frame. All movement sequences which appear against a dark background are also suited for this capability, not to mention the interesting effects of double and multiple exposures of people which are popular with creative LEICA photographers.

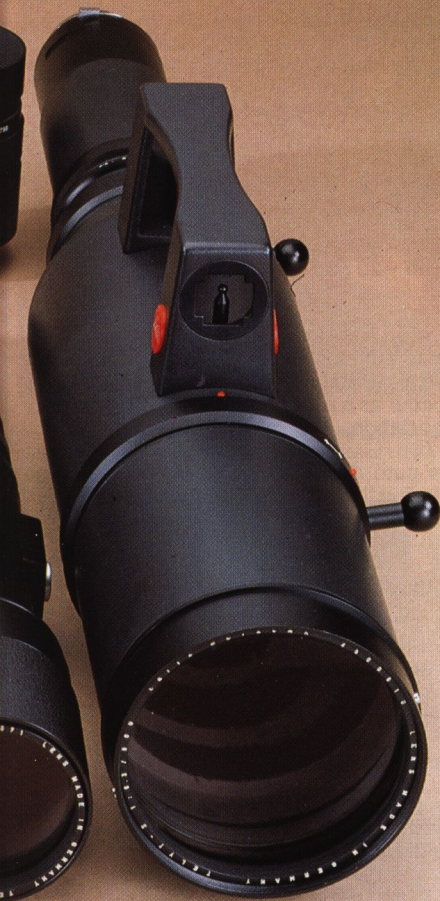




The LEICA R-system: The basis for optimal adaptation of a camera system to any task and situation

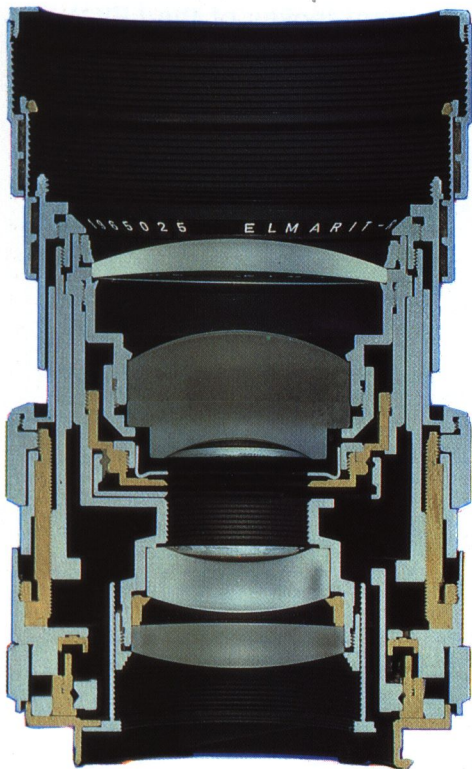
The LEICA R4 is the heart of the universal LEICA R-System. Its high quality lenses, systematically matched in focal length and speed are equally important. They are the result of many years of experience in the Leitz glass research laboratory and of more than 140 years of Leitz tradition in the manufacture of high-quality optical-mechanical precision instruments. Accessories for photomicrography, macro-photography and copying have also been developed to solve most problems and cope with all situations. The wide range of lenses extends from the Fisheye to the Vario lens; from the distortion-free 15mm ultra-wide angle lens to the 800mm tele lens. In science and industry, when used with night vision instruments or with the Universal Focusing Bellows – the LEICA R4 is easy and simple to operate.

All current lenses of the LEICA R3/ R3-MOT system can be used with the LEICA R4 without modification, therefore, all owners of these lenses have easy access to the most modern state of the art in camera technology.



The illustration to the left does not include everything available. For a complete listing please see page 46.

LEICA R-lenses



The design and development of a lens is an intriguing science. Large main frame computers have opened ways to optimize all properties of optical glass so that the limits of physical possibilities are now achievable. Careful "timing" of anti-reflection coatings to particular glass-types assures almost 100% light transmission within the entire visible spectral range. Special "Absorban" cement layers used in Leitz lenses causes

an effective cut-off of the ultraviolet rays of light. This also assures that all Leitz lenses maintain the same color balance.

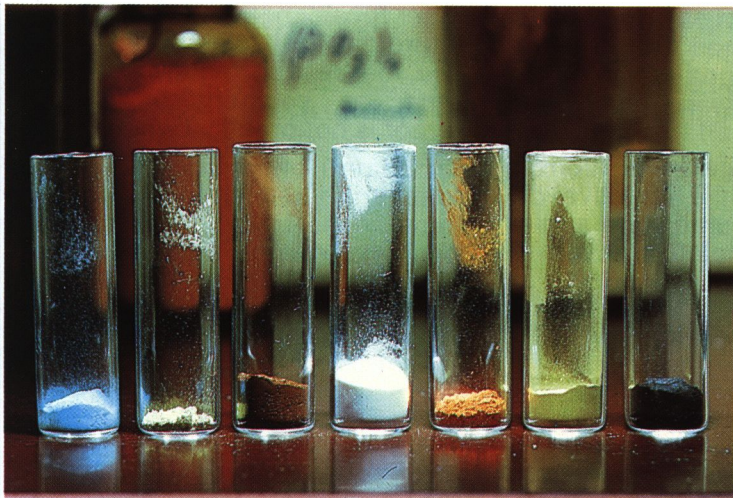
What does the photographer gain from this extra effort?

Keep the sun at your back, set the lens to f/8 and the exposure time to $1/125$ is an old recipe which is sometimes quite correct. But unusual photos are created differently. Shooting against the light, for instance, and with the lens fully open, so as to locate the area of sharpness accurately within millimeters. And now you will see what Leitz lenses are capable of. Sharpness "to the point", high contrast and great resolving power are the strengths of LEICA photos. The largest lens opening can be chosen without reservation, it is a fully useable working aperture.

The mechanical features of the lens do not trail behind the optics. The helical focusing mount, for instance, brass to aluminium, is individually grouped to one another. Therefore, a light, specially developed grease, spread thinly, is sufficient to allow smooth, jerkfree focusing even under unusual temperatures and hard daily use. Leitz lenses retain their efficiency and sure-function dependability for decades.

Common, outstanding features of all LEICA R-lenses:

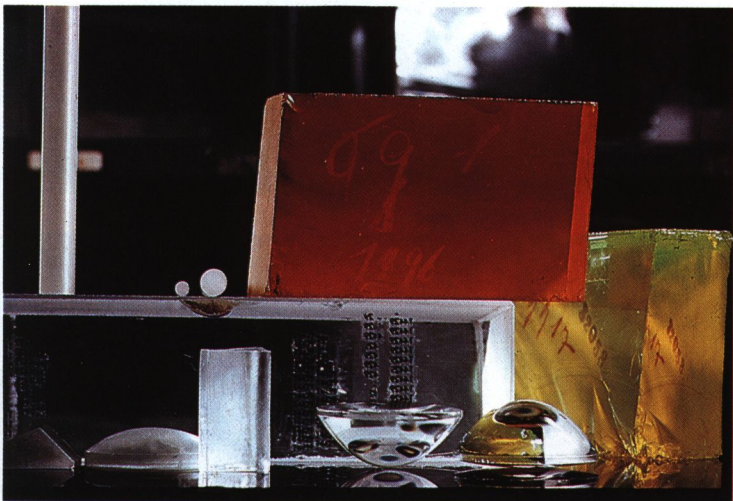
1. The rotation direction of the helical focusing mount of the lens and diaphragm click-stops are matched and adjusted for optimum control at extremely high or low temperatures.
2. Positioning is the same for all lenses.
3. All lens parts are protected against corrosion so as to function perfectly in all climatic conditions.
4. LEICA R-lenses can be used at temperatures between -25 and $+60$ degrees C without restriction.
5. To resist blows or impact, the lenses are designed to withstand up to $100 \times$ their gravitational force. This is equally important for blows which may occur as a result of the various methods of transportation.
6. The auto diaphragm runs on ball bearings. The closing time from full aperture to its smallest setting is maximum 40 milliseconds.
7. The auto diaphragm will show no noticeable wear after more than 50,000 releases.
8. The large LEICA bayonet is mechanically robust and guarantees instant and reliable seating of the lens.
9. All lenses may be placed upright without lens cover. There are no protruding control levers which could be bent out of shape.
10. All LEICA R-lenses are supplied routinely with front and back covers together with a lens hood made to fit individually.



The Leitz glass-research laboratory melts special glasses using rare earths, and is largely responsible for the excellent characteristics of LEICA lenses.



Ultra-purity is a prerequisite for melting superior optical glass. This melting crucible might well be one of the most valuable of its type. It is made of pure platinum.



Of the 600 world known types of glass for lenses, prisms and filters Leitz maintains 350 permanently in stock.



The carefully matched anti-reflection coatings for each of the highly refractive glasses used assures almost 100% light transmission within the entire visible spectral range.

Pictorial composition made easy by the comprehensive LEICA R4 system

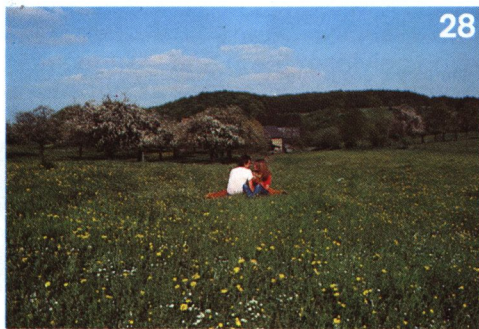
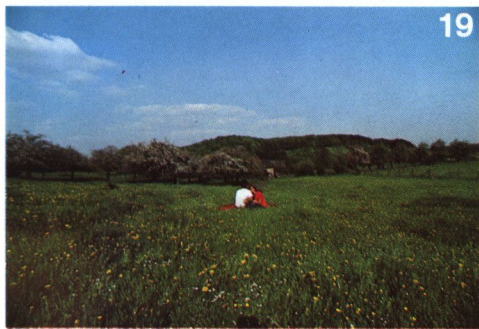
The range of the LEICA R-lenses extends from the 15mm ultra-wide angle to the 800mm tele-photo lens. With these lenses the photographer is able to select any segment of his subject from a given camera position or, by altering his position achieve perspective variation. These are two important criteria for creative pictorial composition.

Focal length comparison

From a given position only the subject field and image size are changed by changing focal lengths but not the perspective.

It is possible to enlarge any portion of a picture area from a negative or slide taken with an ultra-wide angle and obtain the same picture as with a

longer focal length but with a loss of picture quality. It is essential to compose the desired picture to the full frame, as segment enlargement thereof is not practical when making slides.



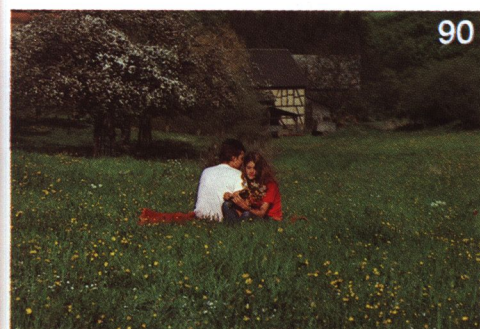
Perspective comparison

The 19mm lens extends the background further into the distance. The 400mm lens compacts it towards the foreground subject and creates a poster-like background. Perspective changes are particularly noticeable when extremely short or extremely long-focal-length lenses are used and the position of the camera is changed.

The upper row of pictures shows a **focal length comparison**. The position of the photographer was not changed. Therefore only the image size and field have changed; not the perspective relationship of subjects within the picture area.

The bottom row of the pictures shows the **perspective comparison** with the different focal lengths.

By changing the position, the primary subject is always the same size, and its relation to the background changes accordingly with the focal length of the lens.



LEICA R lenses: Meet all needs in any situation for any application.



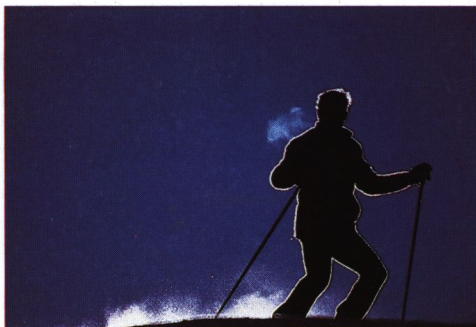
LEICA R4 with 50mm SUMMICRON-R f/2, aperture priority, selective metering.



LEICA R4 with 90mm SUMMICRON-R f/2, manual setting, selective metering.



LEICA R4 with 100mm MACRO-ELMAR-R f/4, aperture priority, selective metering.



LEICA R4 with 560mm TELYT-R f/6.8, aperture priority, selective metering.



LEICA R4 with 35mm ELMARIT-R f/2.8, aperture priority, integral metering.

LEICA R4 with 180mm ELMARIT-R f/2.8, shutter priority, integral metering.

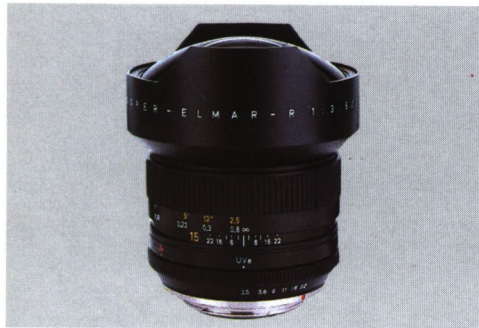


LEICA R4 with 70-210mm VARIO-ELMAR-R f/4, automatic program mode, integral metering.



LEICA R4 with 135mm ELMARIT-R f/2.8, aperture priority, selective metering.

The extreme wide-angle range



15mm SUPER-ELMAR-R f/3.5

Especially suited for landscapes, architectural and fashion photography, with unusual effects and for pictures of models which are to transmit an impression of realism.



16mm FISHEYE-ELMARIT-R f/2.8

For unusual image formation. Straight lines will be straight only as long as they run through the image center. The barrel distortion becomes the more pronounced the more the lines are located toward the edge. The entire picture frame is filled within the oblong camera format.



19mm ELMARIT®-R f/2.8

Using this high speed super wide-angle lens appreciably improves the picture content. The short focus distance of 30cm for close up pictures favors striking perspective conditions.



21mm SUPER-ANGULON®-R f/4

This lens exhibits excellent definition and even illumination over the entire picture area. It offers dramatic effects of composition with a prominent foreground, receding background and a broad horizon.



24mm ELMARIT-R f/2.8

Ideal for photo journalistic purposes within limited space and for pictures with unusual perspective. Its "floating elements" assure excellent image quality over the entire focusing range, especially close-up.



The conventional wide-angle range



28mm ELMARIT®-R f/2.8

Exceptionally compact design in spite of its fast speed is a characteristic of this lens. Only 40 mm long it weighs 275 g. The angle of view of 76° permits favorable picture composition without the ultra wide-angle perspective.



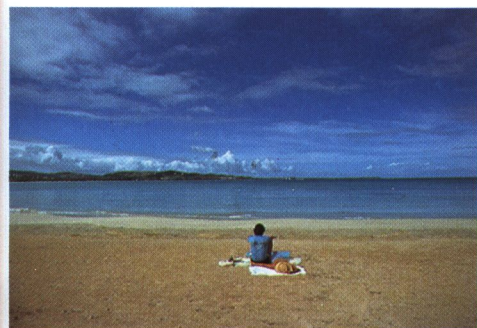
35mm SUMMILUX®-R f/1.4

A ultra-high speed lens with outstanding optical performance under extremely contrasty light. Its "floating elements" assure a flat image, even at the nearest focusing distance.



35mm SUMMICRON®-R f/2

This lens belongs to the top of the line of fast wide-angle lenses: it is ideal for the candid shot under poor light conditions. Its correction range extends from ∞ to 1.40m.



35mm ELMARIT-R f/2.8

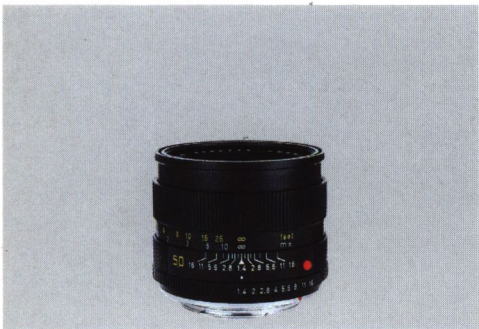
Superior optical performance with compact design; it offers the Leica Photographer those special advantages which he appreciates most. Even fully open, this lens delivers excellent flatness of field, high contrast and excellent resolution.



35mm PA-CURTAGON®-R f/4

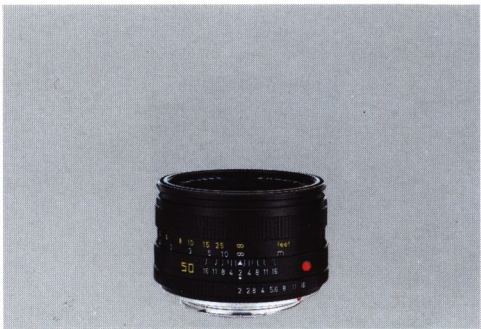
This is a special wide-angle lens for architectural and landscape photography. To compensate for the converging of vertical lines, the optical system can be displaced by 7 mm to either side, or top or bottom. By means of this perspective compensation the camera need not be inclined.

Standard focal lengths



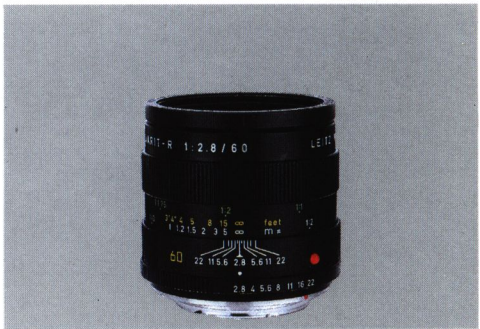
50mm SUMMILUX®-R f/1.4

High speed lens for the photo journalist. Extra good and contrasty image rendition – for such a high speed lens – is admired over the entire focusing range.



50mm SUMMICRON-R f/2

A universal lens with excellent overall definition including the close-up range. Already fully open, it exhibits maximum sharpness, high contrast and good detail rendition.

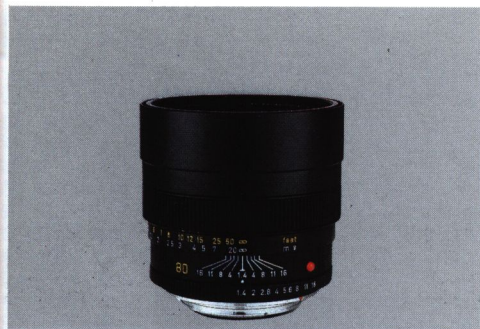


60mm MACRO-ELMARIT-R f/2.8

A universal lens with the great advantage of a focusing range from ∞ to 27 cm (1:2). Using the Macro-Adapter-R permits operating within the additional macro-range from 1:2 to 1:1.

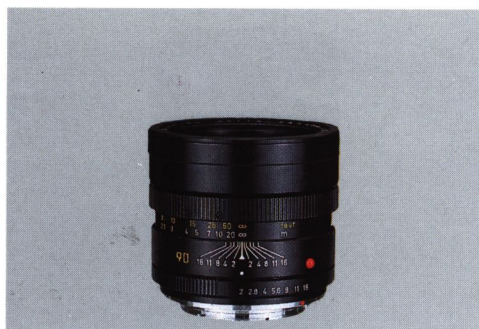


The versatile short and medium telephoto range



80mm SUMMILUX-R f/1.4

Under extremely contrasty light, whether in the theater or at the circus, during indoor sports or photo journalism, the special advantage of this lens are freedom from reflexes and rendition of finely tuned nuances in tonal values, when taking "available light" photos.



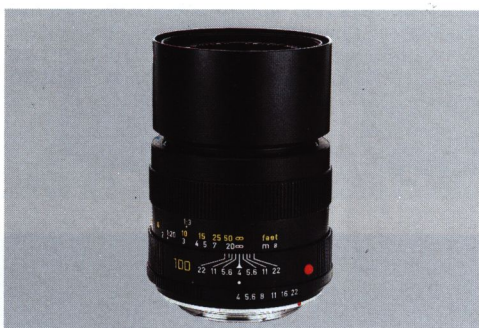
90mm SUMMICRON-R f/2

The ideal lens for the candid shot when a discreet distance must be maintained. The high speed of this lens is doubly advantageous because it allows for short exposures and, when left wide open, with limited depth of field, the principal subject will "detach" itself with plasticity from the background.



90mm ELMARIT-R f/2.8

A remarkably compact, very handy tele lens with high contrast and definition over the entire picture area while fully open. Image quality reaches its maximum at f/4 which is retained including the close focusing range when the auxiliary lens ELPRO 3 is in use.



100mm MACRO-ELMAR-R f/4

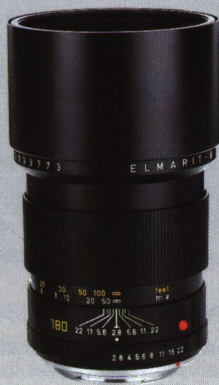
Equally well suited for landscapes, portraiture or close-up work. It shows its optimum quality within the range of 1:5 to 1:10. The Macro-Adapter-R opens up the macro-range to 1:1.6.



135mm ELMARIT-R f/2.8

In spite of its focal length this lens is built strikingly short, therefore easy to use. It is ideal when rendering assertive detail in concentrated form.

The extended telephoto range



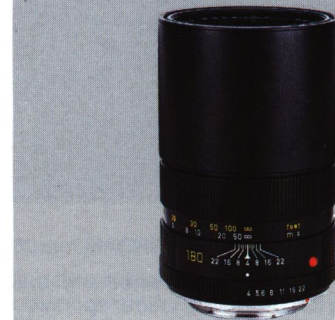
180mm ELMARIT-R f/2.8

Many photographers don't want to be without this lens. Using newly developed optical glass it remains light and compact yet superior in its optical performance. Even under poor light conditions focusing sharply is sure and quick and the exposure times may remain relatively short.



180mm APO-TELYT-R f/3.4

A special lens, developed to include the secondary spectrum into the lens correction in order to achieve ultra high contrast. The pictures show detail-richness and vibrant image brilliance not heretofore known for long focal lengths lenses. The superior performance begins at full aperture and hardly increases as the lens is stopped down.



180mm ELMAR[®]-R f/4

A lens for the travelling photographer, who can get along without high speed but wants to travel light. Only 100 mm long, the lens fits easily into a camera bag and adds only 540g to its weight. The close focusing range of 1.8m surpasses even that of a 50 mm lens when used at its shortest focus distance.



The classic telephoto range

250mm TELYT®-R f/4

350mm TELYT-R f/4.8

High resolution and excellent contrast together with short focusing travel support quick focusing even when light conditions are poor or during fast action required for wildlife and sports pictures.

As an accessory, a universal hand-grip with shoulder harness is available which supports these lenses without fatigue and allows the camera to be released without vibration even when the exposure times are long. An ideal combination is the use of the motor winder or motor drive. Both lenses have a tripod support, which can be switched from horizontal to vertical formats.

280mm APO-TELYT-R f/2.8

Many sports and wildlife photographers have waited for this high speed telephoto lens. Special high refracting glasses, whose optical properties resemble those of crystals, enable the 280mm APO-TELYT-R to open up photographic limiting regions.

Its outstanding performance begins at full aperture. Internal focusing improves the speed of photographic action. The tripod support can be switched from horizontal to vertical formats.



Reaching into the distance



500mm MR-TELYT-R f/8

A small and light mirror lens. One can take pictures at a safe distance and nonetheless seem to be in the middle of the action. Inherent in the design is outstanding chromatic correction. Contrast and definition are extraordinary.

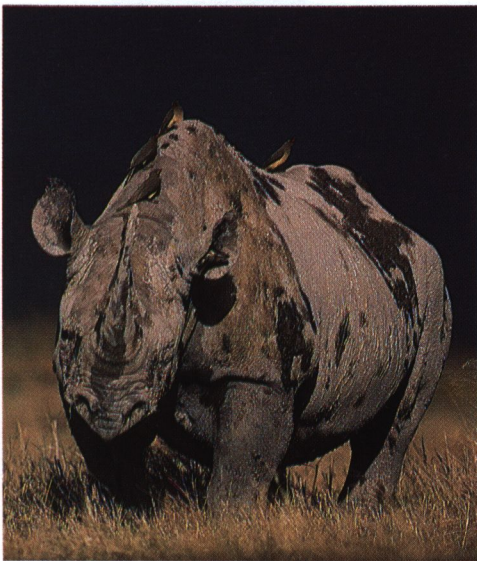
400mm TELYT-R f/6.8

560mm TELYT-R f/6.8

The rapid focus lenses

Highly corrected achromats make extremely vibrant photos possible. To achieve rapid focus, the front barrel slides precisely in a parallel guide mount. Of particular advantage for close-up shots of small animals under the proper escape distance is the wide focus range with a small object area of approx. 16 x 24 cm for the 400 mm lens and approx. 22 x 33 cm with the 560 mm lens which may be further reduced by means of an intermediate adaptor.

Both lenses are supplied with handgrip and shoulder harness and both have carriers for tripod mounting, switchable from horizontal to vertical formats.

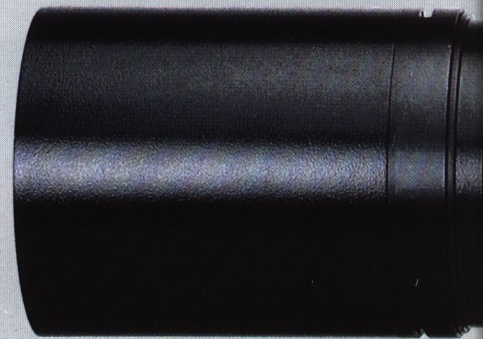


800mm TELYT-S f/6.3

Due to its 16x magnification when compared to the 50mm standard lens, very large distances can be bridged and the object of interest brought in close. The optical performance as to contrast, resolution and color differentiation excels through the use of specially computed and melted Leitz glasses.

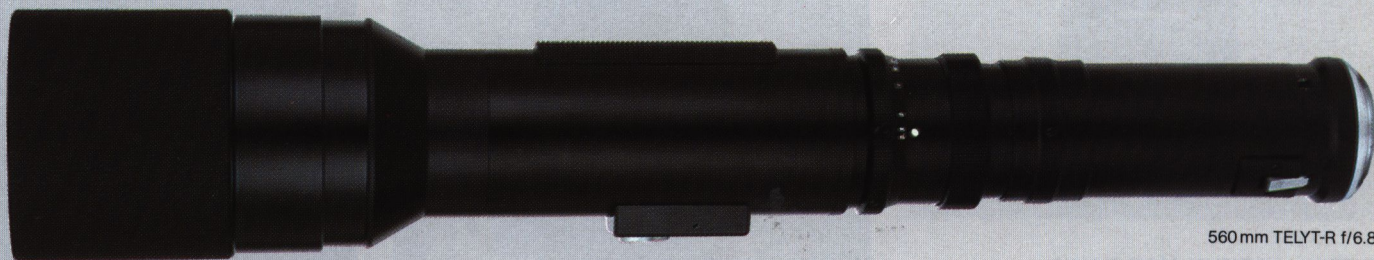


500mm MR-TELYT-R f/8

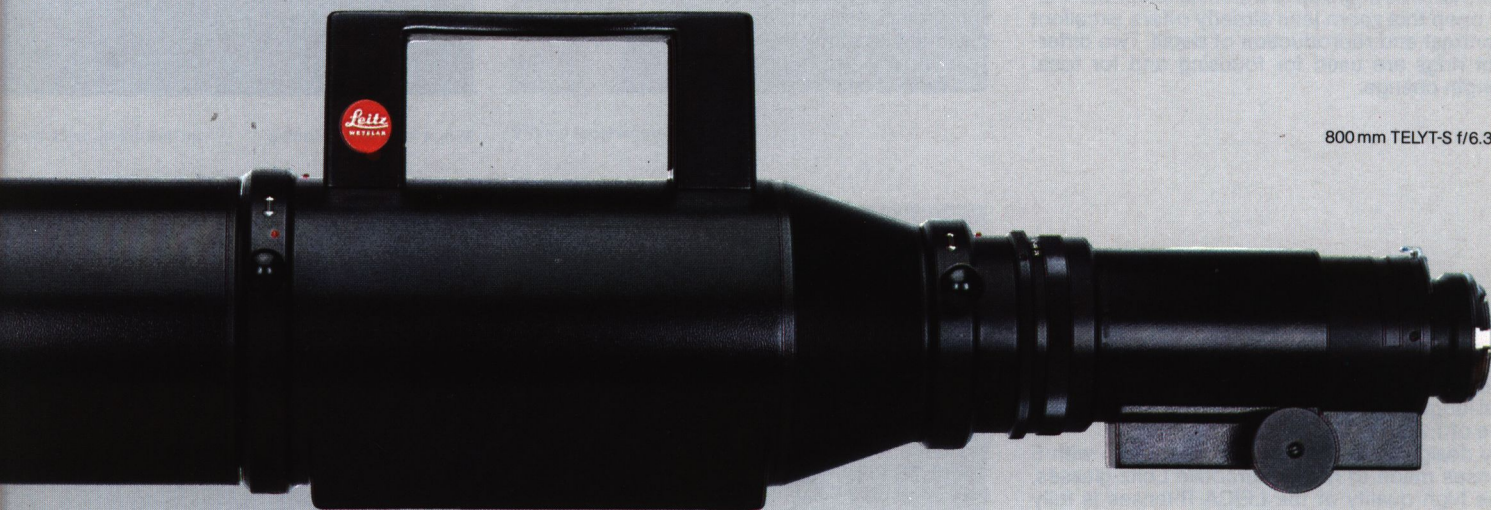




400 mm TELYT-R f/6.8



560 mm TELYT-R f/6.8



800 mm TELYT-S f/6.3

Zoom lenses / Extender



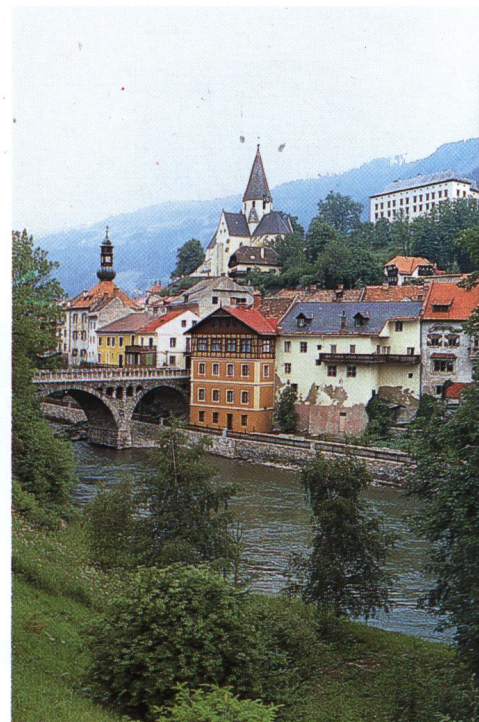
35-70mm VARIO-ELMAR-R f/3.5

A small, light and handy lens which covers the normal wide angle up to the small telephoto. Fully open this zoom lens already offers excellent contrast and reproduction of detail. Two different rings are used for focusing and for focal length change.



70-210mm VARIO-ELMAR-R f/4

A universal lens covering a major focal length range. Extremely low flare, so even the most adverse light conditions have no negative effect on the image quality. Single focus/zoom ring.



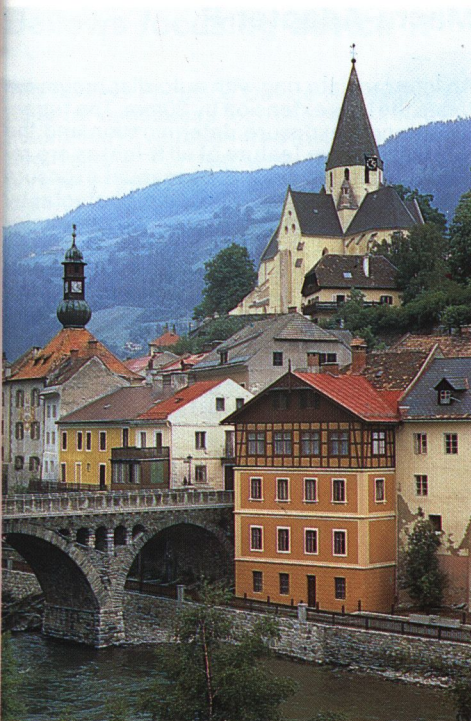
35mm focal length setting

Extender-R 2x

Designed for all LEICA R-lenses from 50mm focal length to 800mm and beginning with an f-value of 1:2.

By designing a complex optical system with 5 lenses made of highly refractive Leitz-glasses, the high quality of the LEICA R-lenses is fully maintained.

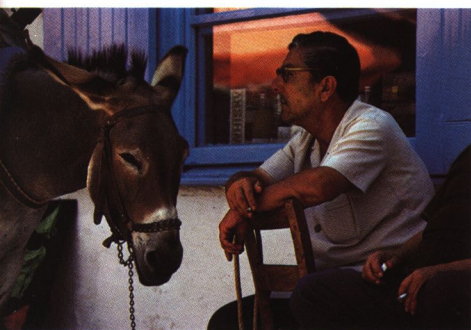




70mm focal length setting



210mm focal length setting



The Extender-R 2x doubles the focal length of the lens used and reduces the diaphragm opening by two stops. A 180mm f/2.8 lens becomes one of 360mm f/5.6.

Accessories for close-ups

ELPRO auxiliary close-up lenses

The ELPRO auxiliary close-up lenses are achromats and, as such, increase the optical image quality in the near focusing range. Medium lens openings provide for excellent sharpness. Camera technique including exposure determination are the same as in the normal range. ELPRO auxiliary near focusing lenses are supplied for 50mm SUMMICRON-R f/2, all 90mm lenses, the 100mm MACRO-ELMAR-R f/4, and the 135mm ELMARIT-R f/2.8.

Ring combinations for the close-up range

A three-part ring combination is used mainly in conjunction with the 50mm SUMMICRON-R f/2 standard lens and permits photographs within the ratio of reproduction of 1:2 to 1:1. Its range can be extended at will by means of inserting additional rings. Also applicable in connection with focal lengths 90/135/180/250mm.

A twin cable release serves to semi-automatically close the lens diaphragm.

Macro-Adapter-R

An intermediate ring with auto-diaphragm extends the lens extension by 30mm. The “open-diaphragm” exposure, determination and the auto-diaphragm feature of all R-lenses are retained. Aperture priority or manual exposure modes are preferred. Close-up photography with the Macro-Adapter-R is as easy as photography within the normal range.

Detailed information is contained in Cat. No. 160-023: The LEICA-R in the near focusing range.



Bellows focusing device-R

The Bellows Focusing Device-R is highly popular for continuous focusing from infinity to macro. Rigid, vibration-free design is its structural feature. For fast work the pre-set diaphragm of the LEICA-R lenses is closed to the desired value by means of a twin cable release. Exposure is determined through the working aperture. A rotating scale on the side of the bellows focusing device shows the reproduction ratios for lenses of 90, 100 and 135mm focal length and it contains a scale in millimeter graduations. All LEICA-R-lenses from 50mm to 250mm may be used without intermediate rings. The 100mm MACRO-ELMAR f/4 for the bellows focusing device is highly recommended.



Special macro lenses

Unlike the design of "standard-lenses" the Macro "PHOTAR" lenses are computed to magnify images. Macro photography, using these lenses, can achieve a magnification ratio of 16x on the film. This represents an object area of only 1.5 x 2.3mm. PHOTAR lenses, when used on the bellows device R, open an interesting field of stepless close-up photography to an extreme.



REPROVIT-R

The REPROVIT-R provides accurate right-angle positioning of camera film plane in relation to the subject to be photographed, such as documents, drawings, etc. The vertical height adjustment offers quick and precise focus of the camera for different object sizes.



Useful accessories for the LEICA R4s

Leitz special filters:
Plano-parallel,
optically flat and
highly polished.



The Leitz table top tripod is always
a handy aid. It can be folded and supplied
with a small or a large ball-and-socket head.

The cable release is a practical aid
in avoiding camera shake with photography
from a tripod.



Universal handgrip
with shoulder brace and carrying
strap. For the Motor-Winder or
Motor-Drive with an electric release.

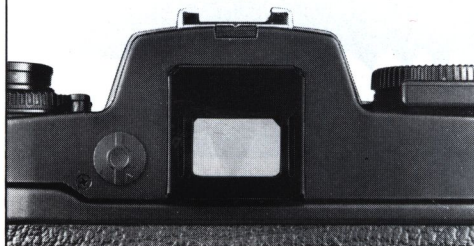
The flexible eyecup shields the eye from
stray light. Also, the viewfinder image
appears considerably more brilliant and
can be viewed more clearly.



Rotating 90° finder,
image erecting and
laterally correct.



Eyepiece correction lenses in steps
from +3 to -3 diopters.



Two everready cases with front flaps of
different sizes, two leather combination
cases, two heavy duty canvas-bags, a
universal holdall for extensive equip-
ment and the well-tried reporter case,
both made of genuine leather, can all be
supplied.

Cases



The complete LEICA R4 system

LEICA R4, black chromium finish	Code No.	Price
LEICA R4, silver chromium finish	10 043	_____
	10 041	_____

Accessories for the camera:

Eyesight correction lenses:		
Spherical + or - 0.5, 1, 1.5, 2, 3	14 240	_____
	to 14 249	_____

Interchangeable focusing screens:

in container, with brush and forceps		
Universal focusing screen (replacement)	14 303	_____
Groundglass screen	14 304	_____
Micro prism screen	14 305	_____
Groundglass screen with grid	14 306	_____
Clearglass screen with cross lines	14 307	_____
Eyecup	14 257	_____
Data-back DB LEICA R	14 297	_____

Motorized winders:

MOTOR-WINDER R4	14 282	_____
Adapter for external power source MW-R	14 278	_____
Holder for battery/rechargeable battery		
housing MW-R	14 279	_____
Replacement housing for above	14 280	_____
Extension cable 5 m MW-R for external supply	14 293	_____
MOTOR-DRIVE R4	14 309	_____
Adapter for external power source MD-R	14 323	_____
Replacement housing for battery/rechargeable battery MD-R	14 322	_____
Extension cable 5 m MD-R for external supply	14 325	_____

Accessories for MOTOR-WINDER/MOTOR-DRIVE:

Electronic remote control unit RC LEICA R	14 277	_____
Hand grip R4	14 283	_____
Tripod holder R4	14 284	_____
Electronic cable release 0.3m	14 237	_____
Electronic cable release 5m	14 272	_____
Cable release extension 25m for remote release	14 274	_____

Lens Accessories:

Lens extender R 2x for LEICA R	11 236	_____
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Filters:	E 55	E 60	E 67	E 77	Series 7	Series 8
UVA	13 373	13 381	13 386	13 337	13 009	13 018
Yellow	13 391	13 392	13 393	13 333	13 007	13 021
Orange	13 312	13 383	13 388	13 332	13 008	13 017
Circular-Pol.	13 357	13 376	13 377	13 334	13 370	13 372

Cable release, 25 cm	14 067	_____
Carrying strap for heavy equipment	14 130	_____
Table top tripod	14 100	_____
Small ball-and-socket head	14 119	_____
Large ball-and-socket head	14 110	_____
Universal handgrip with shoulder brace	14 239	_____

Accessories for the near-focusing range:

ELPRO, auxiliary lenses:	Code No.	Price
1 for R f 2/50mm	16 541	_____
2 for R f 2/50mm	16 542	_____
3 for R 90, f 4/100mm, f 2.8/135mm	16 543	_____
4 for R f 4/100mm, f 2.8/135mm	16 544	_____
Leather case for "ELPRO" lens	14 553	_____
Macro-Adapter-R	14 256	_____
Combination ring for the close focusing range	14 159	_____
Universal focusing bellows	16 860	_____
Twin cable release	16 494	_____
REPROVIT-R with		
220-250 v/300 W halogen lamps	16 717	_____
REPROVIT-R with		
115-120 v/650 W halogen lamps	16 718	_____
90° angle viewfinder	14 326	_____

Leitz "PHOTAR" lenses:

used with universal focusing bellows R via		
Intermediate rings	14 259	_____
12.5 mm PHOTAR f/2.4	549 025	_____
25 mm PHOTAR f/2	549 026	_____
50 mm PHOTAR f/4	549 027	_____

Carrying Cases:

Ever-ready case, genuine-leather, for		
LEICA R4 without winder/drive:		
with standard flap (for 50 mm lenses)	14 569	_____
with large flap (for R f 2.8/60 mm, R f 1.4/80mm		
and 90mm lenses)	14 568	_____
Combination case genuine-leather for		
LEICA R4 without winder/drive		
for use with up to four lenses	14 805	_____
for LEICA R4 with winder or drive		
for use with up to four lenses	14 833	_____
Safari combination case in canvas		
for LEICA R4 winder/drive		
for use with up to four lenses	14 837	_____
Universal hold-all case, genuine-leather,		
for LEICA R4 with or without winder-drive,		
for up to two cameras and up to six lenses	14 834	_____
Reporter case	14 830	_____

Recommended outfits

Which outfit to start with? And how to expand? These are the problems that confront anyone who buys a camera system for the first time or wants to develop an existing one.

Here's a tip that should make things easier. Simply think about what sort of pictures you want to take. If you can recognize your ambitions, the decision becomes so much easier. For example, the photographer who often works in poor light needs high speed lenses. The portrait photographer is best served by a short telephoto (which is, by the way, also excellent for impressive landscapes). And a motor winder is practically essential for photojournalism.

Here are some practical outfits for various needs which have proven themselves over the years.

1. The standard outfit

As standard lens, the 50mm SUMMICRON-R f2 or the 50mm SUMMILUX-R f1.4 are available. An interesting alternative is the 60mm MACRO-ELMARIT-R f2.8 with a focusing range stretching from infinity right down to 1:2 close-ups.

	Order No.	Price
LEICA R4 body, black chromium plated	10 041	_____
SUMMICRON-R 50mm f2	11 216	_____
or		
SUMMILUX-R 50mm f1.4	11 776	_____
Ever-ready case with normal front	14 569	_____
Alternative		
MACRO-ELMARIT-R 60mm f2.8	11 212	_____
Ever-ready case with large front	14 568	_____

2. Maximum versatility at lowest cost

Anyone who wants to be prepared for anything, but doesn't want to spend a fortune, chooses a wide-angle and a short telephoto, making do without the standard lens. The combination of 35mm and 90mm adequately covers areas such as landscapes, portraits and still-lives.

LEICA R4 body, black chromium plated	10 041	_____
ELMARIT-R 35mm f2.8	11 231	_____
ELMARIT-R 90mm f2.8	11 806	_____
Alternatively with higher speed		
SUMMICRON-R 35mm f2	11 115	_____
SUMMICRON-R 90mm f2	14 219	_____
Alternatively with ultra high speed		
SUMMILUX-R 35mm f1.4	11 143	_____
SUMMILUX-R 90mm f1.4	11 880	_____
Combi case	14 805	_____

3. Further expansion

Starting with a 50mm standard lens, the logical expansion is a 24mm wide-angle and a 135mm telephoto. From the 60mm Macro standard lens, a 28mm wide-angle and a 180mm telephoto would be preferable.

The next expansion step from 28/60/180 could be the 2x Extender, which would provide an outfit with 28, 60, 120, 180 and 360mm focal lengths, versatile enough for the highest demands.

4. What else is there?

Of course, one could slowly collect all the lenses and accessories that make up the LEICA R4 system. We'll limit ourselves to the following tips:

- The two zoom lenses are ideal for travel photography.
- Landscape and nature photographers should carry an extreme wide-angle such as 21mm, 19mm or even 15mm, as well as a medium telephoto.
- Sports and wildlife shots sometimes have to be taken at long distances. Long telephotos from 250mm are essential.
- A motor winder or drive plus high-speed lenses are recommended for reportage and quick snapshots.
- Experienced photographers use the small tripod and ball head wherever possible.

5. A final note

If you are interested in entering the LEICA R4 system or want to expand your equipment, the LEITZ Information Service would be pleased to advise you. Address and telephone number can be found overleaf.

Lens	maximum aperture Focal length in mm	Angle of view	Number of elements / components	Smallest aperture	Focusing range in m	Smallest object area in mm	Filter size series	Length in mm	Diameter in mm	Weight in g	Code No.
SUPER-ELMAR-R	f/3.5/15	110°	13 / 12	22	∞-0.16	70 x 106	Built-in	92.5	83.5	815	11 213
Fisheye-ELMARIT-R	f/2.8/16	180°	11 / 8	16	∞-0.30	401 x 601	Built-in	60	71	470	11 222
ELMARIT-R	f/2.8/19	95.7°	9 / 7	16	∞-0.30	261 x 392	-	60	88	500	11 225
SUPER-ANGULON-R	f/4/21	92°	10 / 8	22	∞-0.20	148 x 221	8.5/E 72	43.5	78	410	11 813
ELMARIT-R	f/2.8/24	84°	9 / 7	22	∞-0.30	250 x 374	8/E 60	48.5	67	420	11 221
ELMARIT-R	f/2.8/28	76°	8 / 8	22	∞-0.30	188 x 282	7/E 48	40	63	275	11 204
SUMMILUX-R	f/1.4/35	64°	10 / 9	16	∞-0.70	266 x 399	E 67	76	75	660	11 143
SUMMICRON-R	f/2/35	64°	6 / 6	16	∞-0.30	140 x 210	E 55	54	66	422	11 115
ELMARIT-R	f/2.8/35	64°	7 / 6	22	∞-0.30	140 x 210	E 55	41.5	66	305	11 231
PA-CURTAGON-R	f/4/35	64/78°	7 / 6	22	∞-0.30	140 x 210	8/E 60	51	70	290	11 202
SUMMILUX-R	f/1.4/50	45°	7 / 6	16	∞-0.50	180 x 270	E 55	50.6	66.5	395	11 776
SUMMICRON-R	f/2/50	45°	6 / 4	16	∞-0.50	180 x 270	E 55	41	66	250	11 216*
MACRO-ELMARIT-R	f/2.8/60	39°	6 / 5	22	∞-0.27 (with adapter to 1:1)	48 x 72 (24 x 36)	E 55	62.3 (92.3)	67.5	390 (520)	11 212
SUMMILUX-R	f/1.4/80	30°	7 / 5	16	∞-0.80	192 x 288	E 67	69	75	625	11 880
SUMMICRON-R	f/2/90	27°	5 / 4	16	∞-0.70	140 x 210	E 55	62.5	70	560	11 219
ELMARIT-R	f/2.8/90	27°	4 / 4	22	∞-0.70	140 x 210	E 55	57	63	475	11 806
MACRO-ELMAR-R	f/4/100	25°	4 / 3	22	∞-0.60 (with adapter to 1:1.6)	72 x 108 (38 x 57)	E 55	90 (120)	67.5	540 (670)	11 232
MACRO-ELMAR	f/4/100	25°	4 / 3	22	in the focusing bellows-R only ∞-1:1	24 x 36	E 55	62.5	68	365	11 230
ELMARIT-R	f/2.8/135	18°	5 / 4	22	∞-1.50	220 x 330	E 55	93	67	730	11 211
ELMARIT-R	f/2.8/180	14°	5 / 4	22	∞-1.80	193 x 290	E 67	121	75	825	11 923
APO-TELYT-R	f/3.4/180	14°	7 / 4	22	∞-2.50	276 x 414	E 60	135	68	750	11 242
ELMAR-R	f/4/180	14°	5 / 4	22	∞-1.80	175 x 262	E 55	100	65.5	540	11 922
TELYT-R	f/4/250	10°	7 / 6	22	∞-1.70	124 x 186	E 67	195	75	1230	11 925
APO-TELYT-R	f/2.8/280	8.5°	8 / 7	22	∞-2.50	195 x 293	E 112	261	125	2750	11 245
TELYT-R	f/4.8/350	7°	7 / 5	22	∞-3.00	171 x 257	E 77	286	83.5	1820	11 915
TELYT-R	f/6.8/400	6°	2 / 1	32	∞-3.60	158 x 236	7	384	78	1830	11 960
MR-TELYT-R	f/8/500	5°	5 / 5	8	∞-4.00	180 x 270	(E 77) 5 filters available	121	87	750	11 243
TELYT-R	f/6.8/560	4.3°	2 / 1	32	∞-6.40	224 x 336	7	530	98	2330	11 865
TELYT-S	f/6.3/800	3°	3 / 1	32	∞-12.50	320 x 480	7	790	152	6860	11 921
VARIO-ELMAR-R	f/3.5/35-70	64-35°	8 / 7	22	∞-1.00	632 x 947 338 x 507	7.5/E 60	64.5	72	420	11 244
VARIO-ELMAR-R	f/4/70-210	35-12°	12 / 9	22	∞-1.10	264 x 396 96 x 144	E 60	157	73.5	720	11 246

* not for LEICAFLEX and LEICAFLEX SL

Photo Information

LEITZ Information Service

All questions connected with photography, projection, enlarging and binoculars can be answered with pleasure by the Leitz Information Service, Mondays to Fridays from 8.00-12.00 and 13.00-16.00 on (064 41) 29 24 36. Or write: ERNST LEITZ WETZLAR GMBH Information Service Postfach 2020 D-6330 Wetzlar West Germany

LEICA School

The LEICA School is part of Leitz service. It was founded in order to meet the wishes of many keen photographers for thorough training in photography, projection and enlarging. The course offer a practical photo-technical program, with stimulation, information and tips. Further details and registration forms are available from:

ERNST LEITZ WETZLAR GMBH
LEICA School
Postfach 2020
D-6330 Wetzlar
West Germany

Photographic Books

The books in the "Farbfotographie für Jedermann" (Color Photography for Everyone) series are aimed at both beginners and the more advanced. All photographic and reproduction problems and questions on composition using shape and color are dealt with. To date, five volumes have been published (in German): "Die Landschaft" (The Landscape), "Das Porträt" (The Portrait), "Das Tier" (Animals), "Der Schnappschuß" (The Snapshot) and "Bei jedem Licht" (In Any Light).

Publishers: Umschau-Verlag, Stuttgarter Straße 18-24, D-6000 Frankfurt/Main, West Germany. The same publishers produced the book "Applied Leica Technique", which describes the technique of photography with the LEICA R system in great detail.

The LEICA system handbook can be obtained from Leitz dealers or from the Leitz Information Service against a cover charge.

Leitz Warranty

LEICA cameras and lenses are manufactured according to strict quality standards and are tested at every stage or production. For this reason, Leitz is able to offer an extended warranty of two years on every LEICA camera and lens.

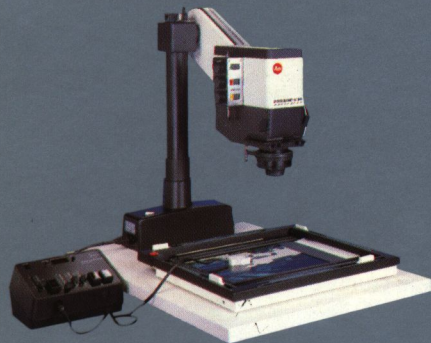
This is confirmed by the original warranty card which is filled out and presented by authorized LEICA dealers on the day of purchase.



LEICA FOTOGRAFIE

This magazine is absolutely essential for those who wish to learn more about 35mm photography and who are looking for recommendations on how to expand their photographic equipment. It is published in English, French and German, with 8 issues per year.

Publishers: Umschau-Verlag, Stuttgarter Straße 18-24, D-6000 Frankfurt/Main, West Germany.



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