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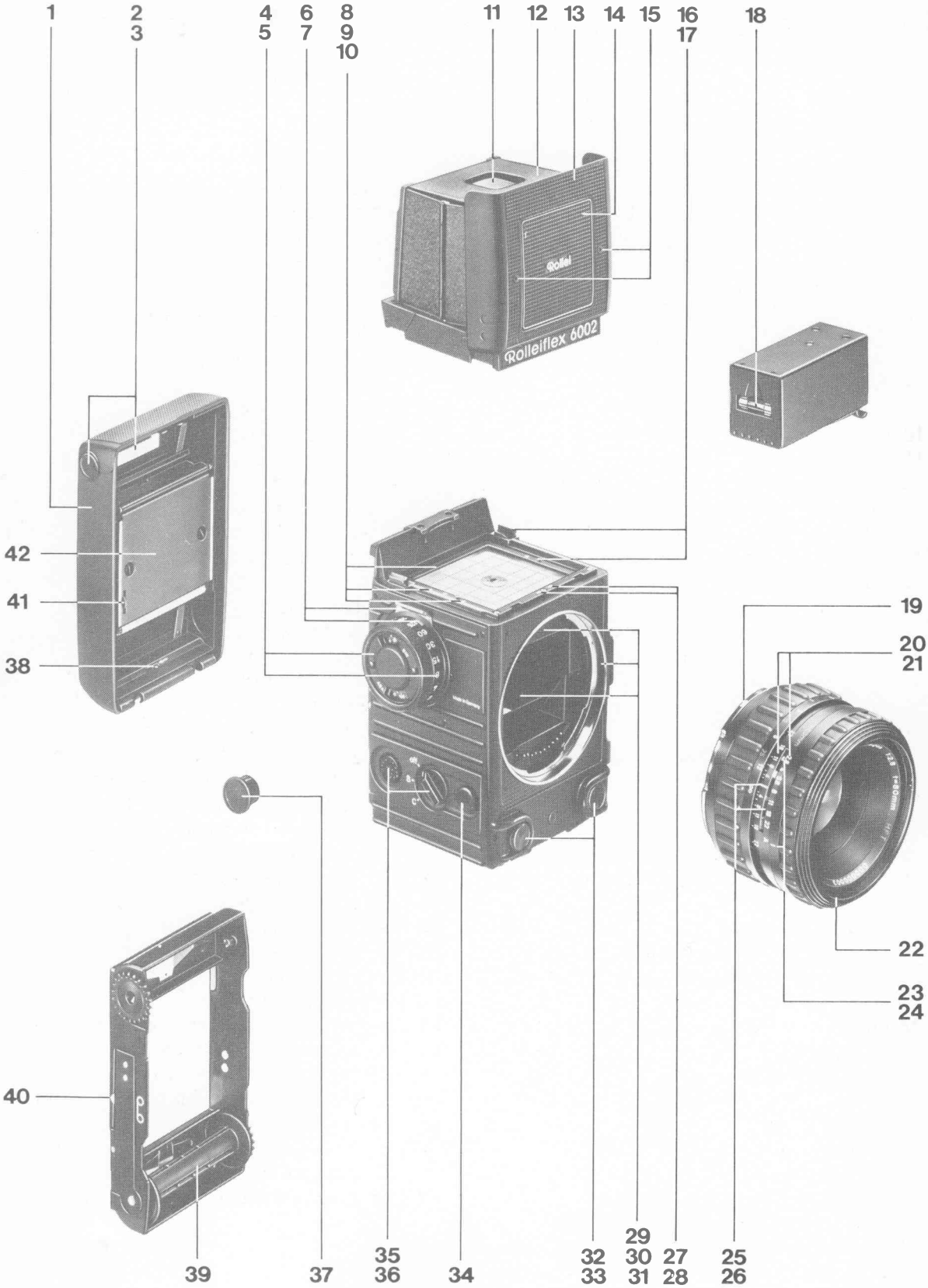
Rollei
fototechnic

Rolleiflex 6002

User's manual

Contents


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
Rolleiflex 6002

Components and functions

1 Camera back
2 Unlocking knob for camera back (r. h.)
3 Window for film type indicator
4 Film speed setting dial
5 Rotary knob for shutter speed
6 Holder for carrying strap (r. h.)
7 Shutter speed indicator, with red mark to show limit values
8 Hinged frame for focusing screen
9 Red LED indicator for under-exposure
10 Red LED indicator for over-exposure
11 Interchangeable viewing magnifier
12 Cover of viewfinder hood with mounting for viewing magnifier
13 Folding cover of viewfinder hood
14 Flap of framefinder, f = 80 mm
15 Mounting for additional framefinders, f = 150, 250 and 350 mm
16 Unlocking buttons for folding viewfinder hood, magnifying head or prism head
17 Unlocking knob for hinged frame of focusing screen
18 Fuse
19 Red mark on lens bayonet
20 Depth of field scale with distance indicator
21 Aperture scale
22 Lens screw thread for filters and lens hood
23 Automatic aperture indicator
24 Pointer for automatic or manual aperture selection
25 Distance indicator
26 Indicator region for automatic aperture control, showing red when on manual aperture setting
27 Green LED as »flash ready« indicator and monitor signal showing when dedicated flash unit is connected
28 Red LED for checking battery voltage
29 Red dot on camera bayonet
30 Camera bayonet
31 Swinging mirror
32 Release button (l. h.)
33 Release button (r. h.)
34 Combination test button for aperture indication, measured value memory function, depth of field monitoring and battery check
35 Universal connection socket for external control and accessory equipment
36 Central switch for: continuous operation (C), single exposures (S) and off
37 Protective cap for universal connection socket
38 Unlocking knob for back hinge
39 Empty spool
40 Pointer for arrow mark on the film leader
41 Film gauge
42 Film pressure plate
43 Battery pack, externally rechargeable
44 Clip for battery pack
45 Spare fuse
46 Slide for spare fuse
47 Interchangeable focusing screen
48 Protective cap for synchronization lead socket
49 Detachable folding viewfinder hood
50 Holder for carrying strap (l. h.)
51 X-synchronization contact for standard plugs
52 Back sight for use with framefinder
53 Back hinge
54 Unlocking knob for camera back (l. h.)
55 Frame counter window
56 Holder for tear-off tab from film box
57 Spring clip for film spool spindle
58 Symbol for film direction
59 Film cartridge
60 Film transport sprocket
61 Quick tripod coupling
62 3/8" tripod bush
63 1/4" tripod bush
64 Battery pack compartment
65 Lens unlocking button
66 Lens bayonet for connection to camera
67 Focusing ring with distance in m and ft
68 Locking button for aperture control ring
69 Control ring for automatic aperture or manual aperture selection
70 Centre X-synchronization contact and contacts for dedicated flash unit
71 Hot shoe for flash unit or accessories

Introduction

To make full use of the technology offered by the camera and to avoid possible faults during its operation, the user is strongly recommended to read this manual carefully prior to using the Rolleiflex 6002 for the first time. These instructions are set out as follows:

A comprehensive list of the components and functions is followed by a short introduction for readers in a hurry to get on with their photography.

Next, all the important information about the camera is given and illustrated in detail. All the operations needed to use the camera correctly are described in order, from the assembly of the basic components to the removal of the exposed film.

There follows a number of practical tips, with additional information for a better understanding of the camera, supplemented by notes on special photographic situations.

The tables contain the most important data on the range of interchangeable lenses and a summary of the entire camera system.

In case of problems in operating the camera – which even the experienced photographer may have when taking pictures in a hurry or after a long period of not using the camera – a trouble-shooting guide will help to quickly locate the possible cause and its solution.

Individual component numbers mentioned in the text and illustrations always refer to the same components and are first given in the two picture gatefolds, which are best left unfolded when reading the instructions.

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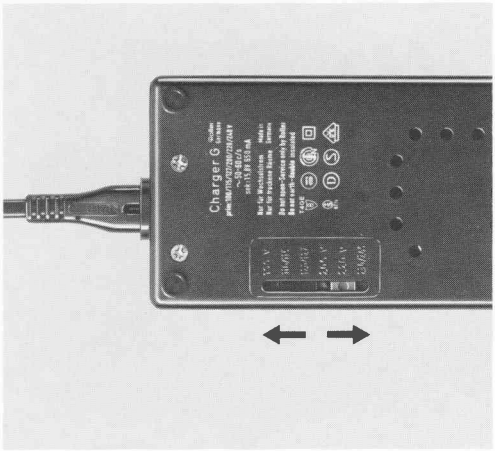
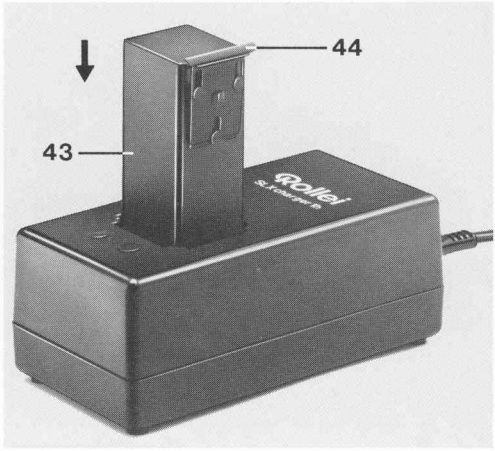
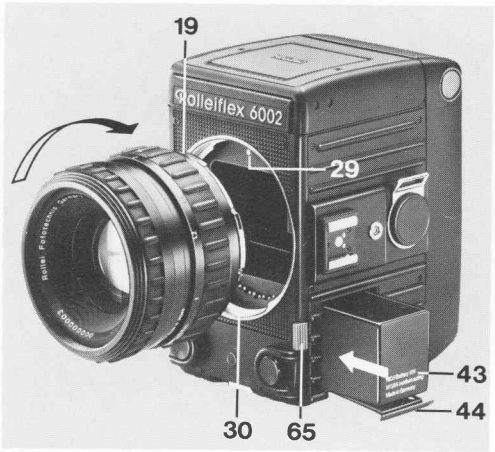


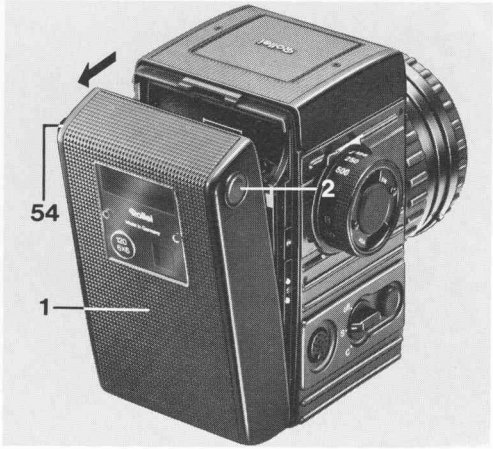


Essential information in brief

Rapid information in telegraphic style for readers in a hurry to get on with their photography: the most important controls and operations for familiarizing oneself with the camera and its functions. Anyone who wishes to have a more *detailed* knowledge of the camera right from the start should carry on reading on page 10.

Charging the battery pack
Set the charger to the correct mains voltage and connect to the mains. Push up clip 44, remove battery pack 43 and insert it in the charger in the position shown. The green light shows that charging is in process.



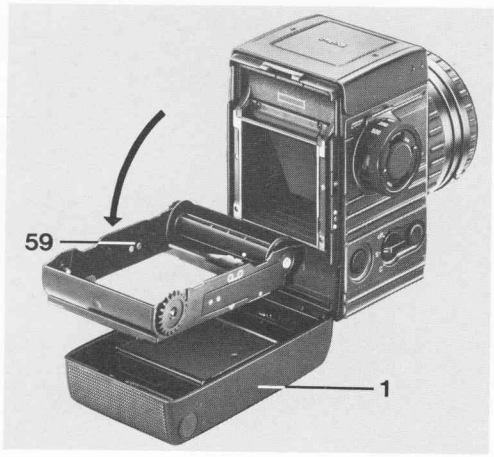


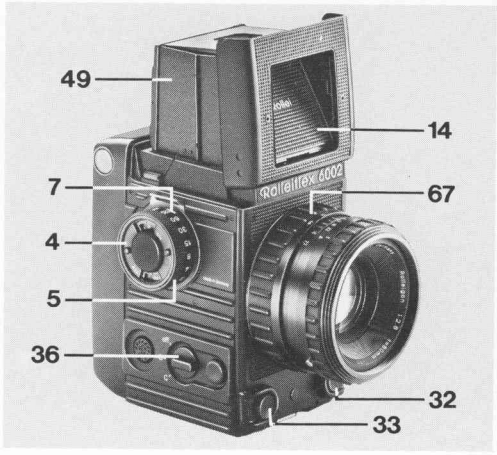
Inserting the lens
Press in red button 65, disengage the dustcap by turning anticlockwise. Insert lens with red mark 19 on red dot 29 on the camera bayonet 30, push it home and lock it by turning clockwise.

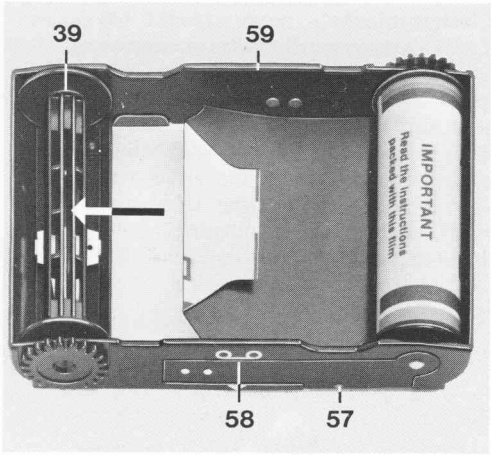
Inserting the battery pack
Insert the charged battery pack 43 in the camera with the clip 44 downwards and snap the clip into position.

Loading the film
Press unlocking knobs 2 and 54, open the camera back 1 and remove the film cartridge 59 → page 7 top left. Pull out red spring clip 57 and insert film spool in accordance with symbol 58. Keep paper leader lined up straight and thread into empty spool 39, winding on until the arrow mark is exactly on the white pointer 40 → page 7 middle and bottom. Insert the tear-off tab from the film box in holder 56 (on the film spool side). Fit the film cartridge into the back, with the film spool on ⊨ and empty spool on ⊢. Close the back and lock firmly.

Set the dial 4 to the DIN/ASA value being used and the central switch 36 to »S«. Press release button 32 or 33: the film now comes into position for taking a photograph and the counter indicates frame 1. If the »1« does not appear, press the release button once more.

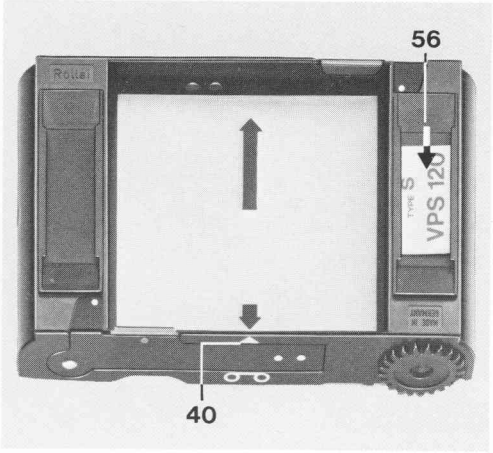


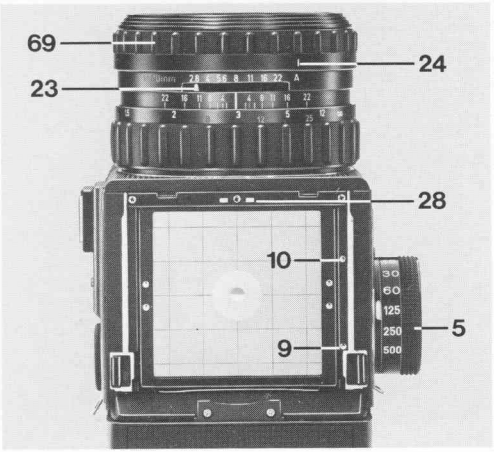


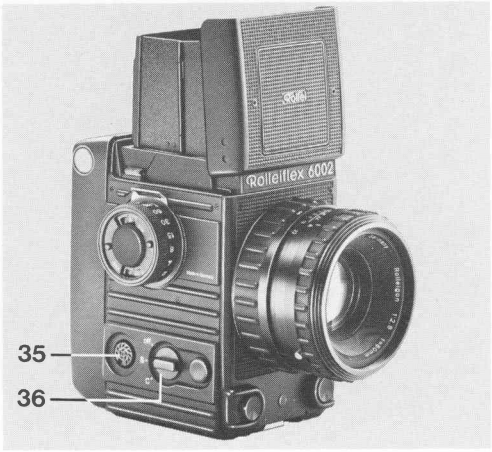


Focusing
Raise the viewfinder hood 49. Press flap 14 in slightly so that the magnifier swings upwards. Focus by turning the focusing ring 67.

Selecting the shutter speed
Use rotary knob 5 to set the shutter speed against marker 7. Intermediate values cannot be used. If this marker changes from white to red, the selected speed lies outside the automatic range – choose another speed for which the marker shows white.







Exposure metering

Press in locking button 68, set aperture control ring 69 with pointer 24 to »A« (automatic exposure). Press test button 34. Indicator 23 shows the automatically set aperture. Take note of any warning signals in the viewfinder: red signal 9 on lower right = danger of under-exposure; red signal 10 on upper right = danger of over-exposure; both red signals simultaneously = measuring range exceeded; the top centre red signal 28 = recharge battery pack *.

If necessary, adjust the exposure time with rotary knob 5 until both red signals 9 and 10 go out.

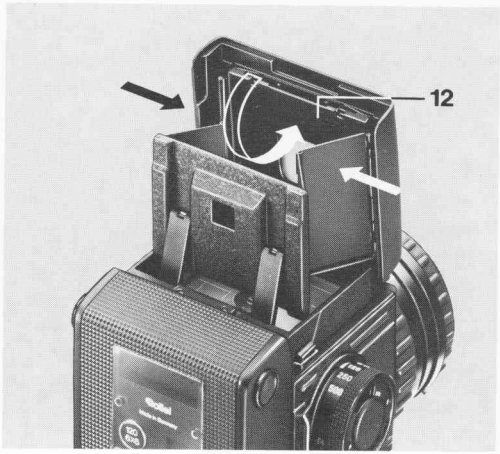
Shutter release

For single exposures *: with central switch 36 on »S«, briefly press the shutter release; for continuous operation *: with central switch 36 on »C«, keep the shutter release pressed for the required number of exposures. When the central switch is at »off«, the shutter release is locked. Release the shutter with the right-hand or left-hand release button, or by using the RC 120 cable release in connection socket 35.

* The battery voltage will at least be sufficient to allow the completion of the loaded film.

* S = single exposure
C = continuous operation

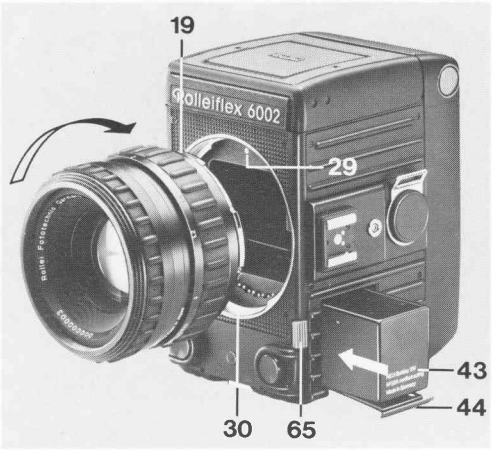
Reading the frame counter
Indication of photographs taken in counter window 55. Indication »S« = no film loaded or film not yet wound on; »white arrow« = film not advanced to frame 1; »red zone« = film end or film already wound up.

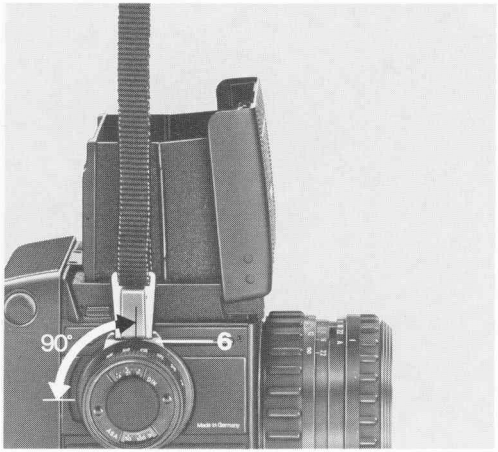


Closing the viewfinder hood
Fold hood cover 12 inwards. Press in both side sections and release again so that the hood shuts automatically.

Removing the film
After the last exposure the film is automatically wound up. Open the camera back and take out the film cartridge. Remove and seal the exposed film. Replace the film cartridge and close the camera back.

Note: a comprehensive description of the camera functions and operating techniques is given in the following pages. Practical tips are to be found on page 24. In the event of any operating problems, the table on pages 38–41 will be helpful.





Handling and use

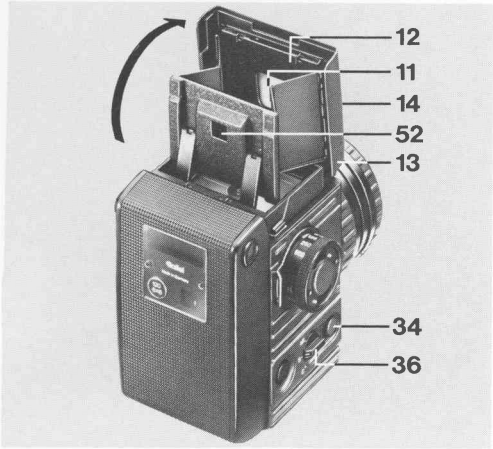
This section describes, by way of example, the process of making single automatic exposures with the basic equipment of the camera, from the assembly of the individual components [1]) to the removal of the exposed film. The description of the essential techniques is followed by an additional explanation and further hints for anyone who requires them.

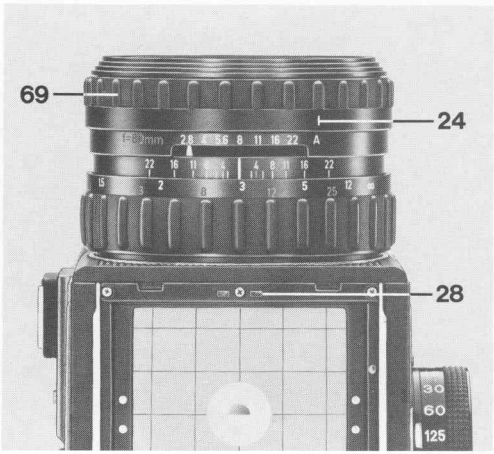
Preparing the camera for use
To insert the lens: turn the rear dust cap anticlockwise and remove. Remove the front dust cap by pressing in the snap mounts at the same time. Press in button 65 and release the dust cap from the camera body by turning anticlockwise. Insert the lens with red mark 19 on red dot 29 in camera bayonet 30, push home and turn clockwise to lock.

Inserting the battery pack
Push battery pack 43 with clip 44 facing downwards into the battery compartment and press the retaining clip tight.

Attaching the carrying strap
Clip the self-locking carrying hooks into the holders 6 and 50. To release the strap, press the locking buttons on the carrying hooks. The strap holders can turn through 90° and allow the camera to be carried in a variety of positions.

[1]) In its basic form, the camera is supplied in a special pack in which all the components are securely housed. We recommend that you keep this pack in case the camera has to be transported or dispatched. The serial numbers of the camera and the lenses should be noted as a precaution; this will help in replacement and as evidence of ownership in case of loss.





Opening the viewfinder hood
Hinge the top section upwards until vertical. Press the framefinder flap 14 slightly inwards until cover 12 with viewing magnifier 11 springs up.

Framefinder for eye-level viewing: press down flap 14 until it snaps into position. Viewing takes place through the back sight 52 (in this position, focusing cannot be monitored on the focusing screen).

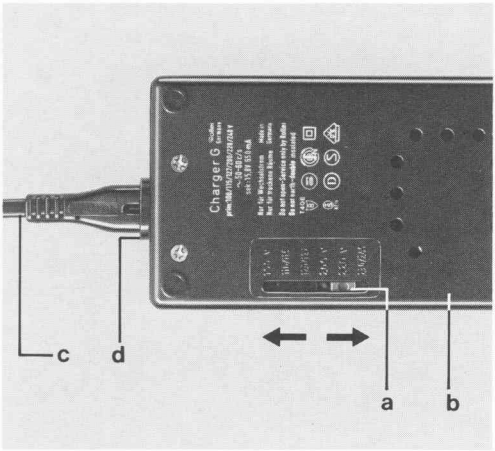
Checking the power supply
Switch on the automatic exposure control: press in the red locking button 68 underneath the lens and set the aperture control ring 69 with the white pointer 24 to »A«. Set the central switch 36 to »S« = single exposure or to »C« = continuous operation. Press test button 34 and look at the viewfinder image.

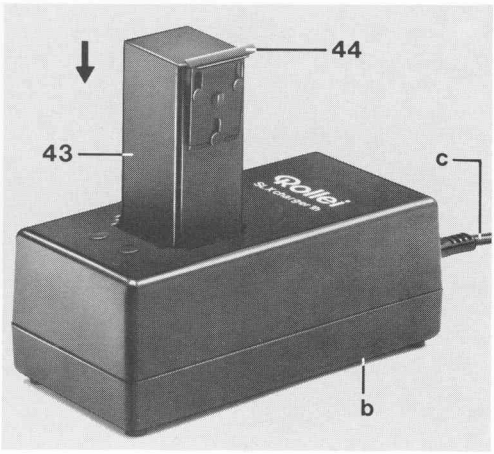
Red LED 28	Aperture indication	Power supply
Remains unlit	Yes	Fully charged
Lights up	Yes	Partially discharged, please recharge *
Lights up	No	Discharged, please recharge
Remains unlit	No	Totally discharged, recharge immediately

The power supply can only be effectively tested when a lens is fitted.

At each light measurement and exposure, the camera electronics carry out an automatic voltage check. Any critical or insufficient battery voltage is registered by means of corresponding signals in the viewfinder as described above and the camera is eventually switched off if the voltage is no longer sufficient for one exposure and film transport cycle.

* Power supply is still sufficient to shoot at the least the film actually loaded.





Charging the battery pack

Set the mains voltage selector a on the battery charger b to the appropriate voltage with a pointed object (e. g. a ballpoint pen). Fit the connection lead c into socket d and connect to the mains supply. Press up the retaining clip 44 and use it to pull the battery pack 43 from the battery compartment. Insert the battery pack in charger with the battery contact sockets lined up with the pins in the charger. The green light indicates that charging is in process.

The battery pack is fully charged after a period of approximately 12 hours. A shorter charging time is also possible (occasionally) but no definite information can then be given on the charge capacity. Exceeding the charging time by a few hours will not damage the battery pack – excessive or frequent over-charging however will have a negative effect on the battery pack's service life.

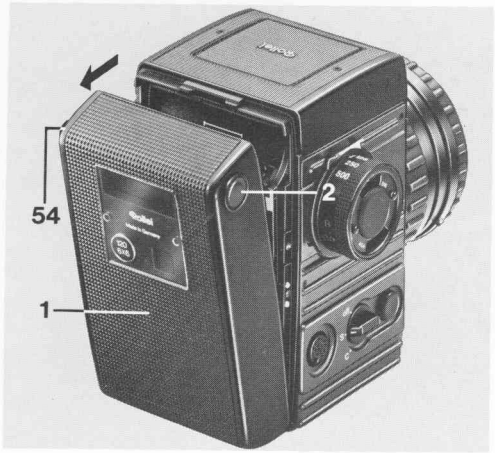
Once charging has been completed, disconnect the charger from the mains and remove the battery pack from its charging compartment. If the pack has been fully charged, its capacity will be enough for up to 600 exposures at a temperature of 20° C – 25° C.

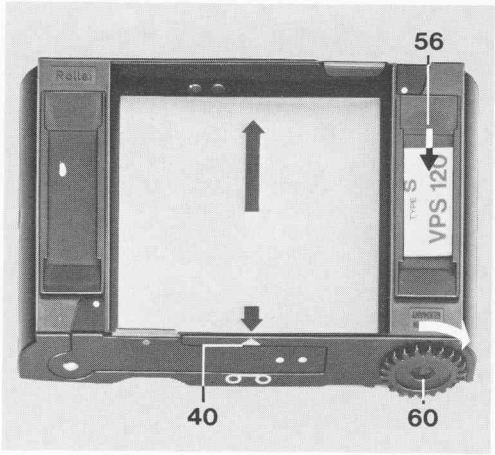
It is particularly important with this fully electronic camera always to have a power reserve in the form of a charged battery pack since light measurement, exposure and film transport cannot be operated manually.

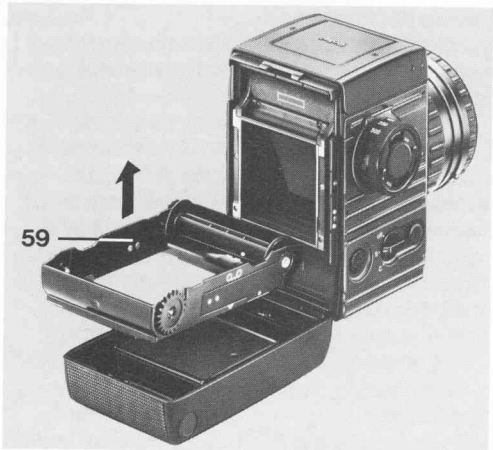
It is therefore recommended to have a second battery pack handy as a replacement.

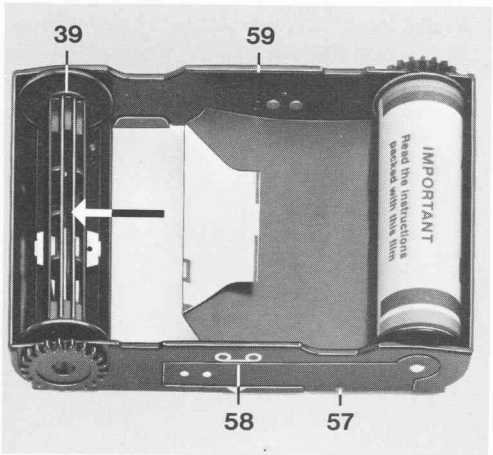
Note: since all rechargeable batteries slowly self-discharge when not in use, the battery pack should be recharged about every three months.

Tip 1 on page 24 also gives details on the battery capacity at low temperatures.









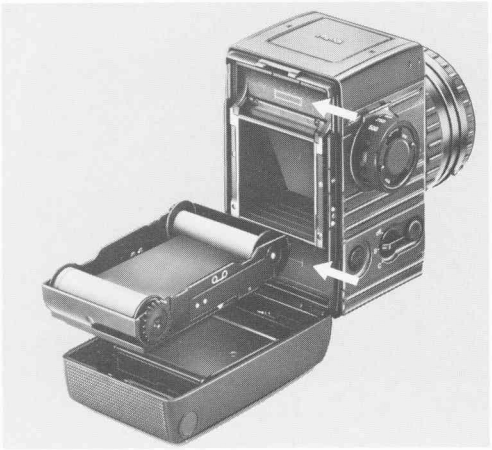
Loading the film cartridge

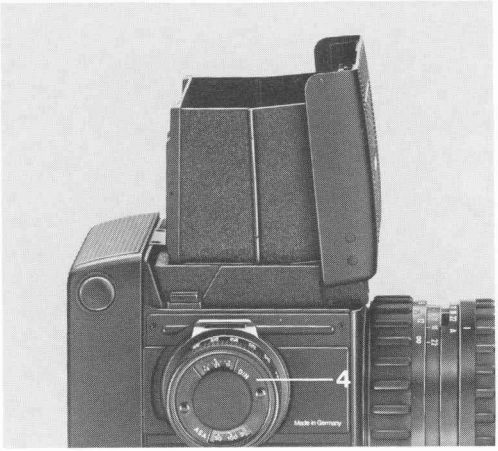
Press in unlocking buttons 2 and 54, open the camera back 1 and take out the film cartridge 59.

Pull red clip 57 outwards, insert film spool as shown by symbol 58 (black side of the paper inwards) and allow the clip to re-engage. Keep the film leader lined up *straight* and thread into empty spool, winding on tightly with the transport sprocket 60 until the arrow on the backing paper meets the pointer 40. Insert the tear-off tab of the film box in the holder 56 (on the film spool side) to show the film type loaded.

One film cartridge is supplied with the camera. For efficient shooting during a photographic session, it is advisable to use several cartridges. Pre-loaded cartridges can be conveniently carried around. The same cartridge (but *not* the same camera back!) can be used for 120 or 220 film.

With ambient temperatures below 0° C it is unadvisable to pre-load the film cartridges, but instead to load the film into the camera directly from its packed state. This is because the point where the film is joined to the leader becomes brittle under the effects of cold, which in turn may lead to problems occurring with the film advance.



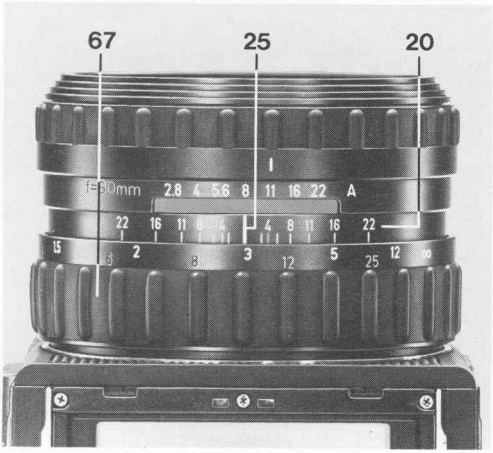


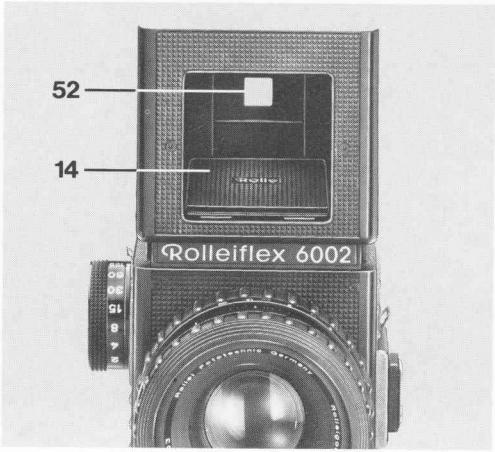
Inserting the film cartridge
Open the camera back as described and insert the loaded cartridge with the full film spool at symbol ⊨ and the empty spool at symbol ⊢.

Close the back firmly to lock and set the central switch to »S«. Briefly press shutter release 32 or 33: the film advances automatically to the shooting position and »1« appears in the counter window 55. If the »1« does not appear (which can happen with some makes of film) press the release button again.

Setting the film speed
Set the dial 4 to the DIN/ASA value of the film being used. Intermediate positions are not admissible.

The range of film speed settings is from 15 DIN/25 ASA to 39 DIN/6400 ASA, which covers practically all film emulsions available on the worldwide market. The clicks at each step on dial 4 can be felt distinctly and thus enable the value initially selected to be altered easily if a particular picture has to be slightly more strongly or faintly exposed.





Focusing

Open the viewfinder hood and fold out the viewing magnifier if required. Adjust the sharpness of the image by turning focusing ring 67. The distance measured can be read in m (or ft) against indicator 25. Determine the depth of field on the double scale 20 on either side of the distance indicator 25. For photography with infrared film, read off the focusing distance and set this on the red mark on the depth of field scale. All Rolleiflex 6002 lenses are always focused at full aperture.

The standard focusing screen offers three different focusing aids: the central split-image rangefinder, the microprism ring and the microprism structure of the ground-glass screen itself. This standard focusing screen is the optimum focusing screen for many applications – for special types of photography, there are five other interchangeable focusing screens in the accessories range.

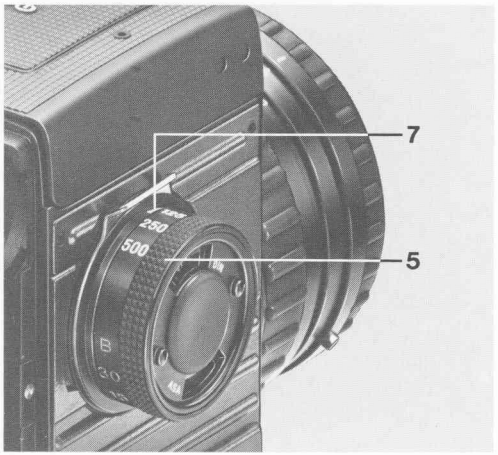
Framing

The grid on the standard focusing screen facilitates the vertical or horizontal alignment of the camera. The lines are 10 mm apart. Within the 4.5 x 6 cm vertical or horizontal format or the 4 x 4 cm format, smaller images can be framed using the intersections of the grid lines.

Interchangeable lenses widen or narrow down the image frame (from the same camera position); they are available in focal lengths from 40 mm to 500 mm.

For eye-level viewing, press the front flap 14 of the viewfinder hood completely in so that it clicks into place, then view through the back sight 52.

As alternatives to the standard folding viewfinder, a rigid magnifying viewfinder and two rotatable prism heads, each of which engages at 90° position, with a 45° or 90° eyepiece are available as accessories.



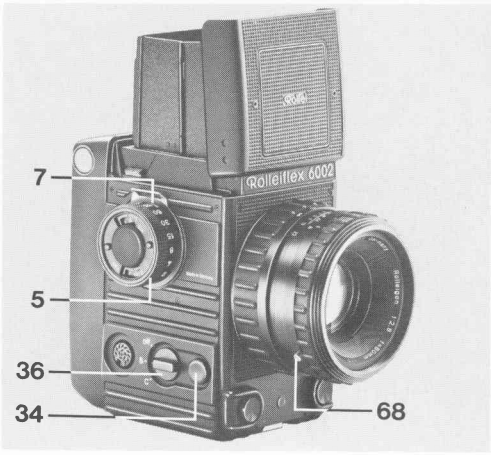
Selecting the shutter speed
The fast speeds from 1/2 to 1/500 sec are marked in white on the rotary knob 5; the slow speeds from 1 to 30 sec and B are marked in green. Intermediate values cannot be used; the »B« setting can only be used effectively with the manual aperture setting.

With automatic aperture, the camera registers the limits of the measuring range and the automatic operating range by means of warning indicators. A satisfactory result can be achieved most quickly if the preselected shutter speed lies approximately in the centre of these ranges so that correcting to a faster or slower speed is possible → »Setting limits« page 35.

Example: when using ASA 400 film out of doors in relatively bright light, one should preselect 1/125 or 1/250 sec rather than 1/30 or 1/15 sec. On the other hand, working indoors with available light on ASA 50 film, one should preselect 1/8 or 1/15 sec, not 1/60 or 1/125 sec.

Selecting the shutter speed with automatic aperture
Set the selected speed with rotary knob 5 against indicator 7. If the red area shows in the indicator, the selected speed is outside the range of the automatic aperture control. Adjust the shutter speed so that the red area disappears again. The final shutter speed is obtained from the light measurement.

Selecting the shutter speed with the manual aperture setting
Here the shutter speed corresponding to the preselected aperture is determined either with a hand-held exposure meter or by means of the built-in system (with the automatic aperture control briefly switched on for this purpose) as described under »Exposure metering«.



Exposure metering

Press red locking button 68 on the lens and set pointer 24 on the aperture control ring to »A« (automatic exposure). Light metering is possible *only* on this setting!

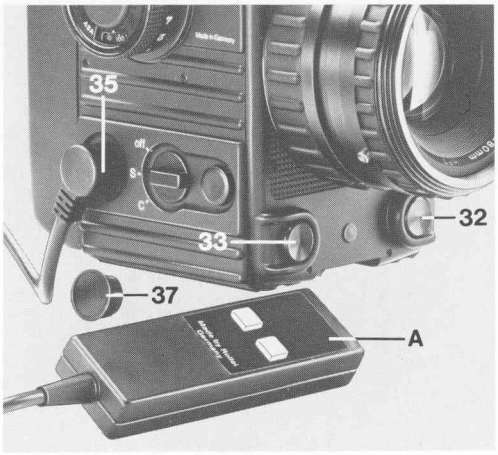
Set central switch 36 to »S« (or, for continuous operation, to »C«). Press test button 34 and observe indicator 23, which shows the measured and set exposure value.

Look for any warning signals in the viewfinder: lower LED 9 = f-number cannot be increased any further (risk of underexposure); upper LED 10 = lens cannot be stopped down any further (risk of overexposure); both diodes simultaneously = limits of measuring range are exceeded.

If the upper or lower LED lights up, the selected shutter speed can be adjusted by turning knob 5 in the direction of the glowing diode until it goes out. If both diodes are alight simultaneously, the shutter speed should similarly be adjusted until they go out (and the red area 7 in rotary knob 5 disappears again).

After this adjustment, the selected shutter speed and the corresponding aperture lie within the automatic control range and hence in the measuring range of the camera; with this speed and aperture, the resulting photograph will be correctly exposed.

Very weak or extremely bright light with an unsuitable type of film can result in the shutter speed adjustment being insufficient to cancel the exposure warning indicators. The tables on page 35 »Setting limits« give suitable suggestions for these extreme cases.



The memory function
In difficult lighting conditions, such as with backlight or high contrast, the metered exposure can be corrected (see also practical tip 11).

To do this, a reading should be taken of the light reflected from the highlight area of the subject and the combination test button 34 should be pressed until shutter release.

Stray light compensation
Stray light entering through the open viewfinder is allowed for by the metering system and compensated for up to an intensity ratio of stray light: measured light = approx. 20 : 1. The compensation feature is always in operation, i. e. whether viewing the image through the prism head, the rigid magnifying head or the folding viewfinder hood with the magnifier raised.

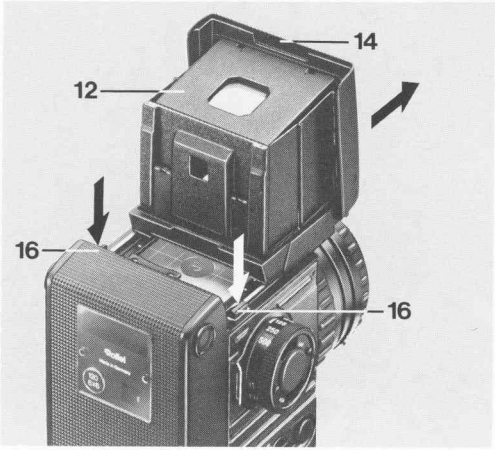
If the finder image is viewed through the folding hood without the viewing magnifier, direct incidence of light (e. g. sunlight and artificial light sources, particularly fluorescent lamps) must be avoided.

For time exposures, the folding viewfinder head should always be closed.

Release and exposure
Using the camera release: press release button 32 or 33 as desired.

Using the remote release RC 120 (A): take off protective cap 37, connect the release lead into socket 35. Briefly press the »start« button.

When the release is actuated, the exposure takes place at the pre-selected shutter speed with the aperture as measured and adjusted at the moment of release. After the subsequent automatic film advance, the camera is immediately ready to take another photograph.



Reading the frame counter
The number of frames exposed is shown in the counter window 55. When the camera back is opened, the counter springs back to the start position and indicates »S«.

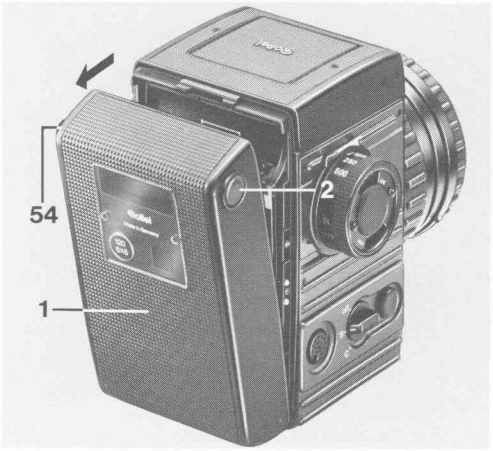
Other indications in the counter window: when »S« shows, there is no film loaded or the film is not yet wound on; if a white arrow appears, the film has not been wound on to the position for exposure number 1. A red zone indicates the film trailer or that the film is completely wound up.

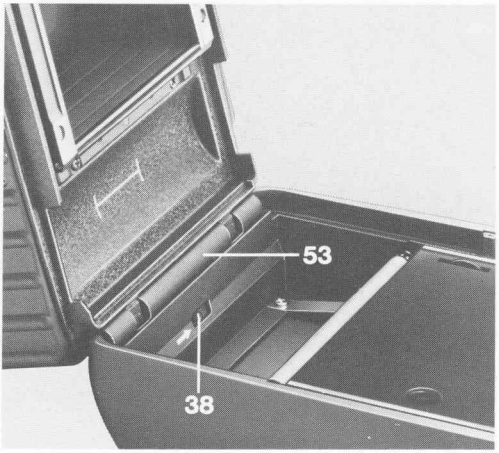
Removing the film
After the last exposure wait until film transport is complete and the film is wound up. Then open the camera back and remove the film from the cartridge. Replace the film cartridge – with a new film in if required; close the back so that it clicks into place.

Closing the viewfinder hood
Fold the hood cover 12 with the magnifier inwards. Press both side-pieces inwards and then release them again so that the hood closes automatically.

If the framefinder has been in use: press in the sprung side-pieces and release, then allow flap 14 to spring up. The hood can now be closed fully as described above.

Removing the viewfinder hood
The standard viewfinder hood is easily removed for cleaning the camera or changing the viewfinder system. Open the hood and press both buttons 16 down. The viewfinder is then unlocked and can be removed by sliding it towards the lens.





The interchangeable components

Lens, viewfinder, battery, magazine and film cartridge can all easily be detached from the camera body. While the battery and film cartridge are only changed for reloading, a choice can be made from a variety of interchangeable components for creating, monitoring and recording the picture.

Changing the film cartridge
Open the back of the camera, remove the cartridge with the exposed film, take out the film spool and handle it in the usual way. Insert the loaded film cartridge and close the back of the camera. Release the shutter so as to wind on the new film.

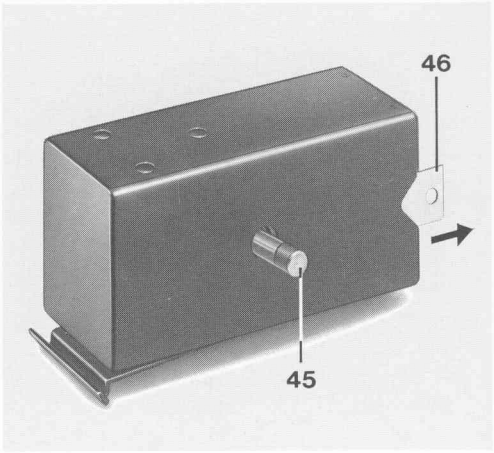
If only one cartridge is available, the empty spool remaining from the film taken out can take up the leader of the new film, without being transferred. This practical advantage arises from the symmetry of the cartridge, which also fits the transport system when turned through 180°.

If the new film has a different speed or is of a different kind, the film-box tab in the cartridge should be changed and setting dial 4 reset accordingly.

Changing the camera back
Press in both unlocking knobs 2 and 54, open camera back and remove the film cartridge. Push unlocking knob 38 in the direction of the arrow, swing the back downwards and release it from the back hinge 53. The interchangeable back is then fitted into the hinge and knob 38 is pushed again in the direction of the arrow.

Please note! Beside the camera back 120/6x6 (for 12 exposures 6x6 cm) supplied with the Rolleiflex 6002 as standard, there are four other interchangeable backs which must be used as follows:
220/6x6 back for 220 film = 24 exposures 6x6 cm
120/4.5x6 back for 120 film = 16 exposures 4.5x6 cm
220/4.5x6 back for 220 film = 32 exposures 4.5x6 cm
Polaroid magazine for 8 Polaroid exposures 8.3x10.8 cm (3 1/4x4 1/4") for exposure format 6x6 cm.

The interchangeable magazines of the Rolleiflex 6006 may on no account be used on the Rolleiflex 6002 because the Rolleiflex 6002 drive/motor unit is not designed to operate interchangeable magazines. Moreover, the nature of the film track does not allow the film to lie perfectly flat.



Changing the battery pack

Press up the retaining clip 44 and pull out the spent battery pack 43. Insert the charged battery pack with the clip pointing towards the camera base and press in the clip to lock.

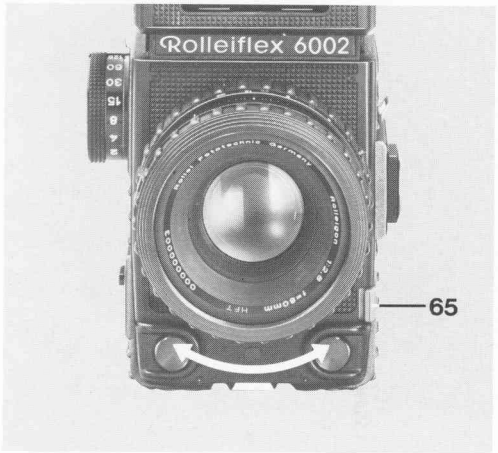
The battery capacity is more than adequate for around 600 exposures at a normal temperature of 20° C i. e. for around 50 rolls of 120 film or 25 rolls of 220 film in the 6x6 format. If, however, the shooting programme does not allow time for recharging or if photographs must be taken in extreme cold, a long period of operation can be ensured by using two interchangeable battery packs: one powers the camera while the other is a standby pack for use when the first is discharged.

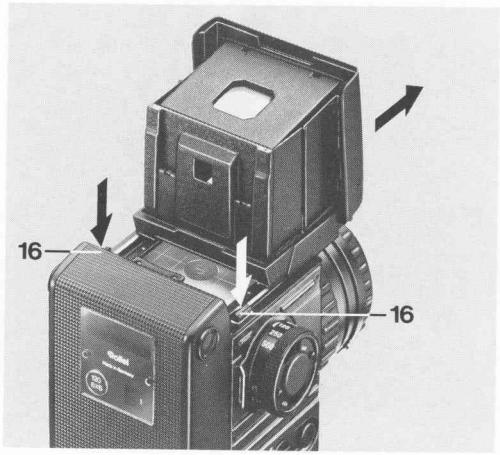
Replacing the fuse

Take the battery pack out and remove the fuse 18 from its holder. Opening the slide 46 releases the spare fuse 45. Press this home into the holder. Close slide 46 again and insert the battery pack into the battery compartment. Provide a new spare fuse as soon as possible: M 0.8 A/ 250 V available from photographic or radio dealers.

To avoid damaging the camera, on no account should any other type of fuse be fitted!

If the replacement fuse also blows, the cause should be traced first, e. g. incorrect film insertion, particularly faulty winding; torn film due to extreme cold, or poor attachment of the paper leader to the film. If the cause cannot be found, further help can be obtained from the Rollei customer service department.





Changing the lens

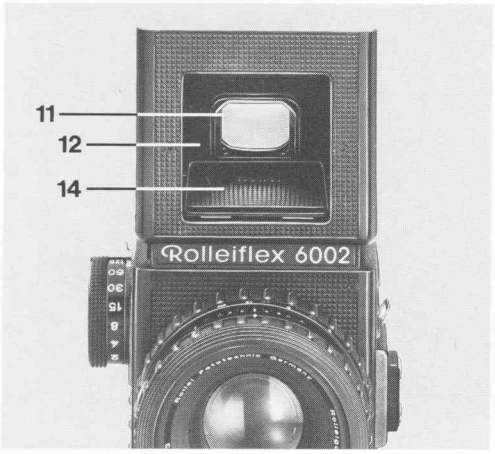
Press button 65, undo the lens by turning anti-clockwise and remove from the camera bayonet. Insert the replacement lens with the red mark against the red dot and engage by turning clockwise.

Please note: when changing to a different focal length before taking a photograph, it is advisable to take a new light reading, since the new image frame will usually have a different brightness distribution and/or there will be a different aperture range.

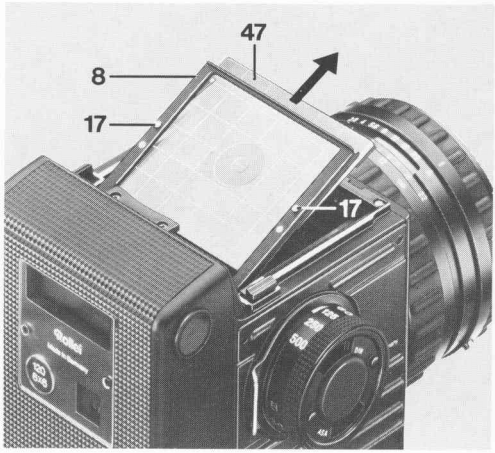
Interchangeable lenses are currently available with focal lengths of 40, 50, 55, 60, 80, 120, 150, 75–150, 140–280, 250, 350 and 500 mm. The lens cards supplied with the interchangeable lenses contain all the necessary information on depth of field, technical data and use with extension tubes and bellows for close-up photography.

Changing the viewfinder system

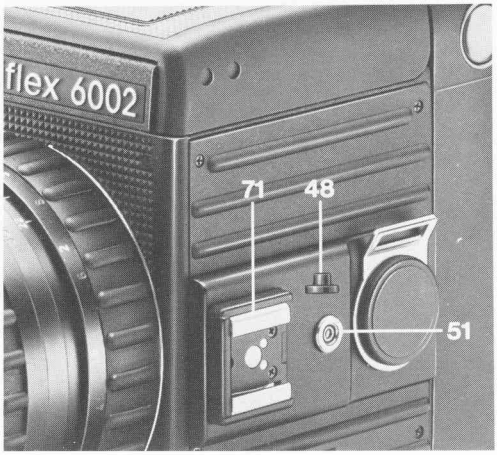
Open the standard viewfinder hood, press in both unlocking buttons 16 and remove the hood by sliding horizontally forwards. Slide the replacement viewfinder on in the same way, pushing it horizontally towards the camera back (but without pressing the unlocking buttons). The viewfinder locks in place automatically.



Changing the viewing magnifier
Remove the viewfinder hood, push in and engage flap 14. Press the magnifier 11 inwards at the front edge and withdraw it from its mounting 12. Insert the new magnifier from inside under the mounting. Interchangeable magnifiers with eyesight correction from +2.5 to −2.5 dioptres are available as spare parts.



Changing the focusing screen
After removing the viewfinder hood (or the finder being used at the time), push back both unlocking knobs 17 and carefully lift up the hinged frame 8. Take out the focusing screen 47 and store it in dust-free conditions; do not touch the upper or the underside – handle by the edges. Insert the replacement screen (with the matt side towards the mirror!) between the retaining clips and the retaining springs. Close frame 8, pull gently backwards and allow to lock on both sides.



Practical tips

1 Battery capacity

The battery pack contains special Nickel/Cadmium batteries with sintered electrodes, which are characterized by their high reliability and ability to be rapidly recharged. As with all batteries, the useful capacity reduces as the temperature falls. After charging, possible capacities are as follows:

at battery temperature	per range
+20° C (+68° F)	up to 600 exposures.
−10° C (+14° F)	up to 50 exposures.

Using up the full capacity at low temperatures will require a prior rapid-charging period followed by normal charging for about three hours in order to recharge the battery fully.

In extreme cold (temperatures below −10° C) it is best to carry the battery pack separately from the camera and close to the body to keep it warm and then insert it shortly before use. In this situation, use of the external battery connection is recommended (available as an accessory). In extreme cases (photography in polar regions, refrigerated premises, low-temperature laboratories) the camera must also be kept warm or insulated.

2 Shutter release

The shutter release can be actuated by means of the left- or right-hand release button or the cable remote release, the IR remote release or multiple-exposure control unit ME 1, the multiple-exposure handpiece MRC 120 or the timer. All these methods can be used at any time, as alternatives or in combination. Unintentional shutter release can be prevented by switching off the release circuit (with the central switch at »off«).

3 Automatic exposure control

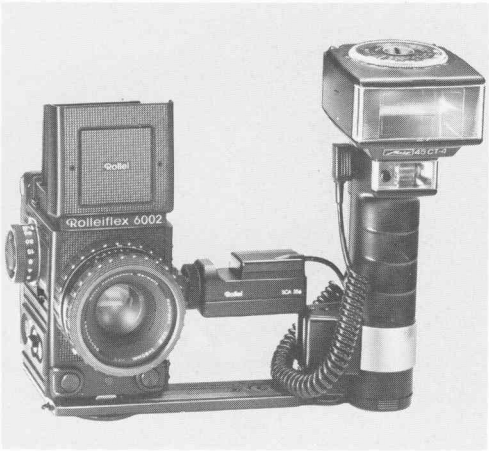
During the shutter release, the metering system determines the aperture required for the pre-set shutter speed and adjusts it almost simultaneously by means of the microprocessor-controlled linear motor in the lens.

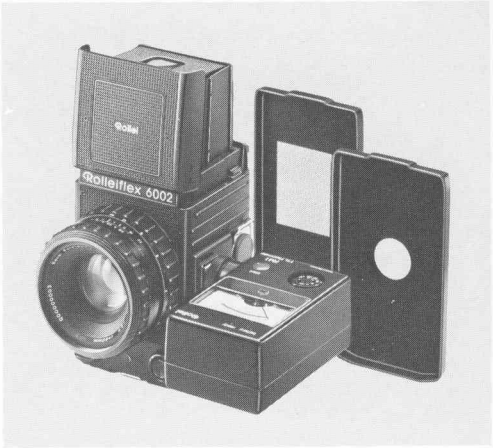
A prior measurement using the test button is particularly recommended in difficult lighting conditions in order to check the automatic aperture (e. g. for the available depth of field).

4 Flash synchronization

The Rolleiflex 6002 is X-synchronized for all shutter speeds up to 1/500 sec. The aperture is set *manually* according to the guide number and the distance. However, the automatic aperture control can also be used when employing flash for fill-in lighting in bright daylight or artificial light.

Flash units with a centre contact can be fitted and brought into contact with hot shoe 71. The electrical contact 51 has a 3 mm standard socket. The cap 48 is inserted to protect the socket from dust when not in use. The two contacts are connected in parallel.





In order to be able to use the TTL flash metering system, with all its technical advantages, it is recommended to use flash systems that are compatible with the Rolleiflex 6002. With the Metz C 70 system adapter, the Metz 45 CT 5 and 60 CT 2 flash units can be used. The SCA 356 automatic flash offered by Rollei makes it possible for the system to use all the automatic flash units of well-known manufacturers who supply the SCA 300 system.

When automatic flash units are used the flash output is automatically controlled. Through a built-in sensor, the light reflected from the film surface at the moment of exposure is measured and the duration of the flash is regulated according to the film speed. The precise exposure obtained in this way guarantees the best possible flash pictures.

For the correct flash exposure, the appropriate DIN/ASA setting on the system adapter should be observed.

The green LED in the viewfinder indicates the sufficient exposure of the film and when the flash is ready.

If the green LED glows steadily again after an exposure, this means that the film was sufficiently exposed and that the flash is available again for immediate use.

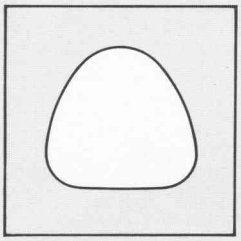
If the green LED flashes on and off after an exposure, this means that the film was sufficiently exposed. When the flashing changes to a continuous light, the flash is ready again.

If a great deal of energy was required for the flash photograph, a dark interval may occur between the flashing and the steady glow of the LED. If the energy available from the flash unit is not enough for sufficient exposure of the film with the set aperture, the »flash-ready« indicator in the viewfinder will not flash. The exposure should then be repeated with a greater aperture.

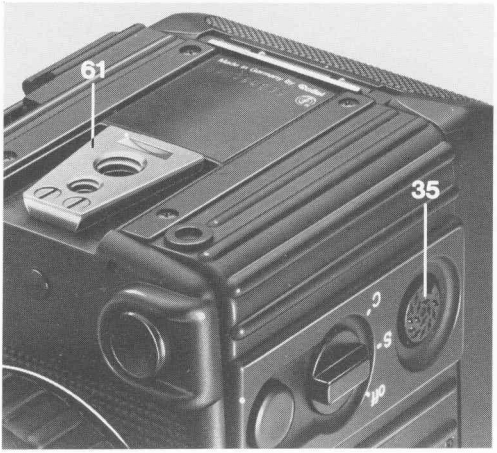
The Rollei TTL flashmeter FM 1 provides the photographer with a new type of precision instrument enabling exact flash exposure metering of the camera using professional studio flash equipment or standard flash units. Connection to the camera is done via the hot shoe. A sensor built into the camera body measures the light reflected from the film plane and relays these readings to the measuring electronics of the flashmeter. A highly sensitive display instrument then informs the user in EV values whether the exposure was correct. In the event of an incorrect flash exposure, the light value can be adjusted accordingly via the aperture or the flash power.

The measuring field for centre-weighted exposure metering

Focusing screen



Field measured in exposure metering



5 Remote release

Electrical remote release units are available as accessories, with leads 0.4 m, 5 m or 10 m long. These units are connected via socket 35. The remote release facility also enables the mirror pre-release to be operated remotely → practical tip 16.

The infrared remote release set allows individual and sequential exposures to be made without lead from a distance of up to 60 m. In addition, a special connection in the infrared transmitter enables a second Rolleiflex to be triggered at the same time as manual shutter release on the first camera.

The ME 1 multiple-exposure control unit can also be used as a remote release. The multiple exposure handpiece MRC 120 (with 0.4 m lead) can similarly be used for this purpose.

The timer gives intervals between exposures over an unusually large range, from 1 sec up to 59 hr. 59 min. It can trigger between 1 and 999 exposures.

6 Time exposures

The cable release socket is made usable by unscrewing a cap. The camera has a 1/4'' and a 3/8'' bush for a tripod attachment. The quick tripod coupling 61 fits the Rollei quick-release tripod clamp and allows rapid alternation between hand-held and tripod photography. For time exposures (> 30 sec), the shutter is set to »B« and operated as follows: press the release button and, keeping it in, set the central switch to »off«, then let the button out. To complete the exposure, set the central switch to »S« and press the release button again to close the shutter.

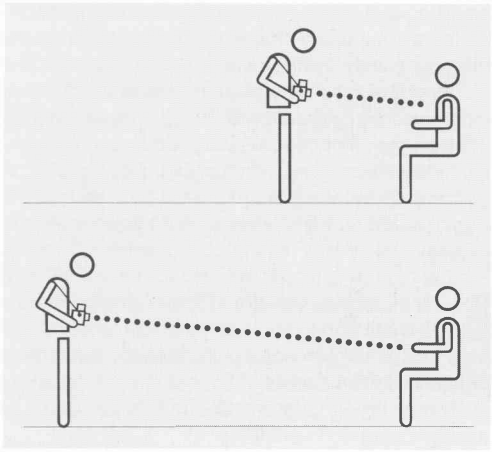
7 Light contrast

It is well known that determining the correct exposure becomes more difficult as the film gradation gets steeper and as the light contrast in the selected image increases. Excessive contrast can often be avoided by fill-in flash, masking the highlights, softer lighting, altering the direction of view or the camera position, changing the type of film, compensating in development etc. If the light contrast is still too high for the film, it must be decided whether light areas, shadows or middle tones are more important for the purpose of the photograph.

The exposure is measured by means of the three large Silicon cells as shown in the top left illustration.

Simulated reading

e.g. with the Kodak grey card (used according to their instructions) is strongly recommended in these circumstances and provides an average value for the best compromise, with optimum reproduction of the middle tones in the image.



Close-up reading
Close-up reading is also used in difficult lighting conditions. The subject is metered by the camera from a close-up position and the indicated aperture is read off. The photograph is then taken from the intended position, with this aperture value being set manually → illustration above. Alternatively, the memory function can be used as described on page 18 or in practical tip 11.

8 Macrophotography
Extension tubes, retroadapter and bellows extend the optical possibilities into the macro range. In this connection, combinations of extension tubes can be used as desired; extension tubes can also be combined with the bellows unit. In all these cases the electronically controlled automatic aperture facility is retained.

The extension tubes are available in lengths of 9, 17, 34 and 68 mm – all with the double Rollei bayonet, enabling them to be combined as desired. With all four tubes fitted, a maximum extension of 128 mm is available. The bellows offers an infinitely variable extension between 67 and 204 mm. Using the retroadapter, the retrofocus position is also possible with the corresponding lenses. The compendium is a valuable supplementary unit for these photographs, which usually involve difficult lighting techniques.

The automatic flash units already mentioned are clearly ideal for macrophotography on account of the precise built-in flash metering, even at the shortest camera-to-subject distances.

9 Manual aperture selection
This is used when the desired depth of field requires a particular aperture, and also with flash photography, when over- or under-exposure is required, when working with a pre-released mirror and always when working outside the range of the automatic aperture control → illustration above.

10 Multiple exposures
Multiple exposures are easily carried out via the MRC 120 multiple exposure handpiece. The MRC 120 is also suitable for single exposures and operating the mirror pre-release facility.

With the ME 1 multiple-exposure control unit, the interval between exposures can be preset between 0.1 and 1.5 sec or to any required time. Between 1 and 10 individual images can be selected in a multiple-exposure sequence.

11 Memory function

A substitute subject – e. g. the grey card or the most important part of the actual subject viewed close up – is metered with the test button pressed. The photograph is taken from the original position with this »memory value« for the aperture. The memory function can also be used in close-up metering as in tip 7.

12 Checking the depth of field

If a given depth of field is required for a particular photograph, the aperture automatically set is determined by pressing the test button; the shutter speed knob is then adjusted until the required aperture is indicated on the lens. The depth of field can then be best judged on the focusing screen using the viewing magnifier.

13 Rapid charging

For rapid charging of the NiCd battery pack a quick-action charger is available as an accessory to ensure an easy and reliable power supply for the camera. The following points should be observed during rapid charging:

As with the standard charger, first set the mains voltage selector to the appropriate voltage, then fit the connection lead into the socket and connect to the mains supply.

Insert the battery pack in charger with the battery contact sockets lined up with the pins in the charger. The quick-action charger automatically controls the whole charging process, which consists of a continuous normal charge *and an* additional rapid charge that depends on the state of charge and temperature of the battery. Two indicator lamps on the charger show the type of charge: green = normal charge and red = rapid charge. The total charging time depends on the condition of the battery (the number of exposures made, self-discharge) and amounts to about one hour after normal discharge. After 10 to 15 minutes enough power is available for about 100 exposures. When the red light on the charger goes out, the rapid charge is completed and sufficient charge capacity has been reached for up to 600 exposures at temperatures of around 20° C.

After rapid charging stops, normal charging continues and the battery is fully charged after a total charging time of approximately 3 hours. Exceeding this charging time occasionally will not damage the battery, but frequent overcharging should be avoided. It is recommended to use a timeswitch between the mains cable and the mains when recharging.

The ambient temperature during rapid charging should be between +5° C and around +35° C. If the battery has become very hot due to external circumstances, rapid charging is delayed by the built-in temperature cut-off and will only begin when the battery has cooled down sufficiently.

Note: the quick-action charger can also be used with 12 V car batteries: Insert the connection lead (accessory) into the charger socket and the cigarette lighter socket of the car.

The charging time is about 14 hours; only normal charging is possible.

14 Rapid release

For sports scenes, animal photography and action shots, it is especially important to have the fastest possible shutter release so as to catch the subject at the crucial moment. Thus, since the time between release and mirror movement must be made as short as possible, the light metering and mirror movement are carried out beforehand.

Rapid release with the memory function

Switch on the automatic aperture control, press the test button and hold it in. Press the release button just short of the release point and press fully in at the instant the exposure is required.

Rapid release with mirror pre-release

Carry out light measurement as usual, read off the corresponding aperture and set this value manually (after switching off the automatic aperture control). Pre-release the mirror. Press the release button fully as soon as the desired view of the subject is obtained. The sports viewfinder is used here to monitor the subject, since the mirror is hinged up.

15 Continuous operation

Set the central switch to »C«. Press the shutter release – after the appropriate metering – and hold in. The camera re-measures, exposes the film and winds it on repeatedly, until the release button is let out again. The sequence of pictures is taken at approx. 1.5 exposures per second (with a correspondingly short exposure time). If the button is held in for the entire film length, the film will automatically be wound up after the last exposure. For this, it is best to use newly loaded type 120 or, best of all, 220 film. The memory function can also be used with continuous exposures, i. e. all the photographs are exposed with the aperture value that is stored by pressing the test button.

16 Mirror pre-release

For vibration-free exposures, particularly when using long focal lengths or in close-up photography, the mirror pre-release facility is only possible using the RC 120 remote release lead (art. No. 208 985) available as an accessory. Connect the release lead to socket 35 (the spot above the connection socket marks the correct inserting position of the plug), measure the exposure, read off the aperture, then switch off the automatic aperture control and set the measured aperture *manually*. Briefly press button »mirror«, and the mirror will swing up. Now take the picture.

Please note: with the mirror pre-released, the light meter will not give a usable aperture indication, since the measuring cells are fitted behind the swinging mirror and in this raised position only measure the light coming in through the viewfinder. It is also important to remember that the mirror pre-release cannot be reset and that a photograph must subsequently be taken with the mirror raised.

17 Interchangeable lenses

The Rolleiflex 6002 professional camera system is rounded off perfectly by a selection of top-performance interchangeable lenses, optimally suited to the needs of today's demanding photographer. Two ranges are available:

First of all there the three Rolleigon lenses. Rollei works in close cooperation with other established partners of proven capability who have acquired comprehensive know-how in the design of exceptional quality lenses. These lenses are therefore known for their good ratio of price to performance, plus a high standard of quality throughout all stages of manufacture. The Rolleigon lens range encompasses focal lengths f 4/50 mm, f 2.8/80 mm and f 4/150 mm. The f 2.8/80 mm and f 4/150 mm lenses are provided with an E 67 filter thread mount. The Rolleigon f 4/50 mm has an E 77 thread mount. With the adapter ring available from Rollei's accessory programme, Rollei filters and lens hoods with bayonet size VI can also be used (only in combination with the Rolleigon f 2.8/80 mm and Rolleigon f 4/150 mm). Apart from these inexpensive Rolleigon lenses, there is also a complete range of Carl Zeiss and Schneider Kreuznach lenses. The Carl Zeiss lens range encompasses focal lengths from 40 to 500 mm which can be extended to 1000 mm by means of the teleconverter. For the standard focal length, the Planar f 2.8/80 mm is used. The Distagon f 4/50 mm and f 3.5/60, as well as the Sonnar f 4/150 mm and f 5.6/250 mm may be used as standard interchangeable lenses. All these lenses have the same outer bayonet size VI for filters and lens hoods.

Interchangeable lenses for special areas of photography are: the Distagon f 4/40 mm as a wide-angle lens with an angle of view of approx. 90°, the S-Planar f 5.6/120 mm with special correction for close-up work, the Tele-Tessar f 5.6/350 mm and f 8/500 mm as high-performance telephoto lenses for sports, aerial and long-range photography, the Variogon 75–150 mm and 140 – 280 mm from Schneider Kreuznach as high-performance zoom lenses and the Schneider PCS Super-Angulon f 4.5/55 mm as a special shift lens with perspective correction for architectural photography and for extended depth of field in accordance with the Scheimpflug principle.

The most important accessories

A highly versatile accessory programme is available, expressly designed to widen the range of applications open to the user of a Rolleiflex 6002. This programme not only serves to optimize handling of the camera, it even makes it possible for certain special photographic results to be achieved at all. The entire accessory range of the Rolleiflex 6006 can of course also be used on the Rolleiflex 6002, with the exception of the interchangeable magazines.

A full summary of the camera system, including all accessory components, is given on pages 36-37.

Interchangeable backs
The interchangeable backs allow the use of 120 and 220 roll film in the 6x6 cm or 4.5x6 cm format. The Polaroid magazine with drawslide can be interchanged with the standard camera back and takes Polaroid film in the 8.3x10.8 cm (3 1/4x4 1/4") format. Effects of different settings and lighting on the instant-picture results of Polaroid films can be checked prior to taking the actual photograph.

Interchangeable finders
Four interchangeable finders, as well as six different bright focusing screens, ensure the ideal subject image is obtained in any photographic situation.

The *standard folding viewfinder hood* for waist-level viewing is fitted with an interchangeable viewing magnifier (+3 to −3 dioptres, visual magnification is 3.3 x). A sports framefinder is integrated and can accommodate an additional attachable framefinder for other focal lengths.

Two rotatable 45° and 90° *prism heads* give an upright, right-reading viewfinder image. They click into four positions, each turned through an angle of 90° and therefore offer comfortable viewing even if the photographer is situated unfavourably to the subject.

Designed for waist-level subject viewing, the rigid *magnifying head* is equipped with a focusing eyepiece offering a magnification of 2.5 x and dioptre adjustment from +0.6 to −2.1 dioptre values.

The eyecup may be removed as desired. This finder is specially suitable for close-up and macrophotography.

Bright matt screen with central wedge and microprism ring
Universal matt focusing screen with split-image wedge and microprism ring. The wedge provides most exact focusing on vertical lines, the microprism by the disappearance of shimmering image detail. The microstructured matt screen permits sharp focusing over the whole image area.

Fine ground glass screen
Fine matt ground glass screen for most exact focusing, especially in macrophotography, at all apertures and with more powerful focusing magnifiers. Particularly suited to creative photography where focusing aids can be obstructive to the photographer.

Bright matt screen
Screen with fine microstructure for full-area

focusing and unobstructed composition, also suitable for small-aperture lenses and for depth-of-field monitoring.

Bright matt screen with split-image wedge
Universal screen for best sharpness assessment with split-image wedge and matt screen. The wedge permits most exact focusing on vertical lines, for instance in architectural shots.

Bright matt screen with microprism spot
Universal screen for rapid shooting with microprism and matt area to permit exact focusing even in poor light. Sharpest focus marked by shimmer-free image.

Bright matt screen with clear spot
Special matt focusing screen for macrophotography and photo-micrography, with clear spot and graticule. Clear spot permits parallax-free aerial image focusing at very small apertures, for instance through a microscope. Graticule facilitates checking of the reproduction scale.

Extension bellows unit
The extension bellows unit is equipped with rack-and-pinion drive and focusing rack. Locking screws hold the bellows unit at the set extension required, which can also be read off a separate scale. Mounting to a tripod is done via a 1/4" or 3/8" tripod bushing. All automatic functions of the camera are maintained and transmitted when using the bellows unit.

Extension tubes
Extension tubes are available in lengths of 9, 17, 34 and 68 mm and may be used singly or in combination, or with the bellows unit and the retroadapter. All automatic functions of the camera are maintained.

Retroadapter
With the retroadapter, the range of applications in close-up photography open to the user of the Rolleiflex 6002 is widened considerably. This adapter allows lenses with focal lengths between 50 and 120 mm to be effectively used in reverse position, whilst maintaining and fully transmitting all automatic functions. One example of the advantages of the retroadapter: used in combination with the bellows unit and the reversed Planar f 2.8/80 mm lens, the photographer is given a reproduction scale from 1.8:1 to 3.5:1.

ME 1 multiple-exposure control unit
This electronic control unit enables multiple exposures to be taken (without moving the mirror or advancing the film), e. g. for timed shots of technical processes, movement sequences in sports photography, etc.

The ME 1 unit is linked to the camera via connection socket; it takes one to ten automatic multiple exposures in one sequence and the intervals between exposures can be adjusted from 0.1 to 1.5 sec or preset to any required time.

Timer
The timer is a multi-purpose timeswitch unit that can be used to make any desired number of exposures at preselected intervals. The timer makes exposures at intervals in an exceptionally large range (from 1 second to 59 hours, 59 minutes). It can trigger between 1 and 999 exposures.

The selected programme of exposures and time interval is permanently displayed. The number of exposures still to be made or the time used up in the interval can be read from an illuminated display. A programme already running can be cut short, and additional exposures can be made within the interval time.

The quartz-controlled time intervals are maintained with extreme accuracy and, with maximum deviations of 1/20,000 sec, they meet the highest scientific requirements.

Infrared remote control set
The infrared remote control set enables shutter release without lead for single shots or time exposures up to a clear distance of 60 m.
A special circuit within the transmitter even allows a second Rolleiflex to be triggered at the same time the shutter of the first camera is released manually. Both the transmitter and receiver are lightweight, compact units and easy to operate. Power supply for the receiver is conveniently provided by the camera's battery pack.

Visual monitoring signals inform the user about the mode of transmitting and receiving, as well as about the opened shutter during time exposures. A whole new range of interesting and hardly imaginable possibilities is now open to the photographic enthusiast – from the candid snapshot through a hidden camera to a documentary of camera-shy wildlife from a safe distance.

Rollei SCA 356 dedicated flash interface module
The Rollei SCA 356 flash module is the interface to all dedicated flash units of leading makes using the SCA 300 system. The dedicated functions are connected by simply mounting the flash unit with the SCA adapter in the camera's hot shoe. This ensures correct dedicated inputs for perfect flash exposures.

Rollei FM 1 flashmeter
This high precision photometer enables accurate internal flash metering with studio flash equipment or normal flash units on the camera. The FM 1 flashmeter ist connected to the camera via the hot shoe. During the exposure, a sensor built into the camera body measures the light reflected from the film plane or the metering backplate and relays this information to the metering electronics of the flashmeter. A highly sensitive display instrument will then tell the user in EV factors whether the flash power was correct to achieve a perfect exposure. If the flash output was incorrect, corresponding adjustment to the EV value can be made by altering the aperture or flash power. Metering backplates available as accessories for spot or integral measurement can be used instead of the camera back.

Adapter ring E 67/bayonet size VI
Rolleigon f 2.8/80 mm and f 4/150 mm lenses for the Rolleiflex 6002 are provided with the standard E 67 screw thread for filter attachment and allow the use of all conventional filters and lens hoods. If however original Rollei filters and lens hoods with bayonet size VI are to be used on Rolleigon lenses, this is made possible with the aid of the adapter ring. The ring is also needed if the Rolleigon f 2.8/80 mm lens is used with the retroadapter.

Pistol grip
The pistol grip is provided with electronic release and is mounted to the camera via a quickscrew fitting. The wrist strap may be fitted either on the left-hand or right-hand side of the grip as required. With the aid of the extension side mounting kit, the pistol grip can be attached to the left or to the right of the camera. The pistol takes further grip accessories in combination with the side mounting kit and can be extended into a universal flash unit attachment system.

Quick tripod coupling
This coupling is for rapid mounting of the camera on a tripod. The quick coupling can remain on the tripod.

Summaries and tables

Setting limits

The step diagrams illustrated on page 35 show the working ranges of the interchangeable lenses in terms of the available apertures and shutter speeds. They present the important factors graphically and at the same time show the limits of the setting ranges.

The examples of reading off the shutter speed and aperture are given as step diagrams.

Interchangeable lenses	Full aperture	Focal length mm	Aperture range	Angle of view	Range setting from	Elements/ components	Length	Weight
Rolleigon HFT	f/4	50	4–32	75° / 57°	0.5 m (20 in)	8/8	86 mm (3.39 in)	715 g (25.2 oz)
Rolleigon HFT	f/2.8	80	2.8–22	52° / 38°	0.9 m (3 ft)	6/5	63 mm (2.48 in)	570 g (20.11 oz)
Rolleigon HFT	f/4	150	4–32	29° / 21°	1.4 m (4.6 ft)	5/4	99 mm (3.9 in)	760 g (26.8 oz)
Distagon HFT	f/4	40	4–32	88° / 69°	0.5 m (20 in)	10/9	126 mm (5 in)	1475 g (52.03 oz)
Distagon HFT	f/4	50	4–32	75° / 57°	0.5 m (20 in)	7/7	96 mm (3.78 in)	840 g (29.63 oz)
PCS-Super Angulon[1])	f/4.5	55	4.5–32	70° / 85°	0.5 m (20 in)	10/8	155 mm (6.1 in)	1650 g (58.20 oz)
Distagon HFT	f/3.5	60	3.5–22	67° / 49°	0.6 m (1.97 ft)	7/7	83 mm (3.27 in)	770 g (27.16 oz)
Planar HFT	f/2.8	80	2.8–22	52° / 38°	0.9 m (3 ft)	7/5	63 mm (2.48 in)	590 g (20.81 oz)
S-Planar HFT	f/5.6	120	5.6–45	36° / 26°	0.95 m (3.1 ft)	6/4	100 mm (3.94 in)	810 g (25.57 oz)
Variogon[1])	f/4.5	75–150	4.5–32	55° / 29°	1.8 m (5.9 ft)	15/13	180 mm (7.09 in)	1800 g (63.49 oz)
Variogon[1])	f/5.6	140–280	5.6–45	32° / 16°	2.5 m (8.2 ft)	17/14	238 mm (9.37 in)	1750 g (61.7 oz)
Sonnar HFT	f/4	150	4–32	29° / 21°	1.4 m (4.6 ft)	5/3	102 mm (4.02 in)	890 g (31.39 oz)
Sonnar HFT	f/5.6	250	5.6–45	18° / 13°	2.5 m (8.2 ft)	4/3	170 mm (6.7 in)	1150 g (40.57 oz)
Tele-Tessar HFT	f/5.6	350	5.6–45	13° / 9°	5 m (16.4 ft)	4/4	227 mm (8.94 in)	1650 g (58.2 oz)
Tele-Tessar HFT	f/8	500	8–64	9° / 6°	8.5 m (27.89 ft)	5/3	316 mm (12.44 in)	1995 g (70.37 oz)

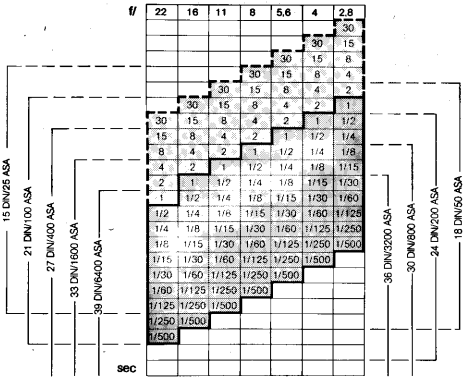
[1]) Lenses from Schneider Kreuznach.

Lenses with the inscription »made by Rollei« are made by Rollei Fototechnic GmbH under licence from Carl Zeiss, Oberkochen, W. Germany.
(Rollei-HFT® = is a registered trade mark)

The Rolleiflex 6002 System

760 020	Rolleiflex 6002 with standard Rolleigon f 2.8/80 mm HFT lens
979 370	Distagon f 4/40 mm HFT
979 280	Distagon f 4/50 mm HFT
979 285	Distagon f 3.5/60 mm HFT
979 050	Rolleigon f 4/50 mm HFT
979 080	Rolleigon f 2.8/80 mm HFT
979 150	Rolleigon f 4/150 mm HFT
979 290	Planar f 2.8/80 mm HFT
979 310	S-Planar f 5.6/120 mm HFT
979 320	Sonnar f 4/150 mm HFT
979 330	Sonnar f 5.6/250 mm HFT
979 340	Tele-Tessar f 5.6/350 mm HFT
979 345	Tele-Tessar f 8/500 mm HFT
979 350	Variogon f 5.6/140–280 mm HFT
979 355	Variogon f 4.5/75–150 mm HFT
979 270	PCS Super-Angulon f 4.5/55 mm
979 225	2x Teleconverter
206 030	Filter, medium yellow (–1.5 EV)
206 060	Filter, light red (–2 to –3.5 EV)
206 110	Zeiss Softar I soft-focus attachment
206 160	Filter, circularly polarizing (–1.5 EV)
977 050	24x36 mm Slide copying stage
977 040	6x6 cm Slide copying stage
740 020	Adapter ring E 67 / bayonet size VI
209 410	Lens coupling ring
975 000	Filter, medium yellow (–1.5 EV) for Distagon f 4/40 mm lens
206 120	Zeiss Softar II soft-focus attachment
206 070	Filter, infrared
206 040	Filter, green (–1.5 EV)
206 050	Filter, orange (–1.5 to –3 EV)
206 080	Filter, R 1.5 colour compensating
206 150	Filter, UV
208 950	Quick focusing lever
206 105	Gelatine filter holder for Distagon f 4/40 mm
977 020	Micrometer focusing drive
977 290	Extension bellows unit
740 021	9 mm Extension tube
740 022	17 mm Extension tube
740 023	34 mm Extension tube
740 024	68 mm Extension tube
974 550	Bellows lens hood
206 010	Lens hood, size VI, for Distagon f 4/50 and f 3.5/60 mm lenses
206 020	Lens hood, size VI, for Planar and Sonnar 80–250 mm lenses
740 028	Retroadapter
206 100	Gelatine filter holder, size VI
977 000	SL 66 extension bellows unit
208 975	Front lens cap, size VI
207 066	FM 1 TTL flashmeter
207 075	Backplate for spot metering
207 074	Backplate for integral metering
[1])	Metz C70 dedicated flash interface module
[2])	Dedicated Metz 45 CT 5 or 60 CT 2 flash unit
[3])	Compact or handle type flash units (SCA 300 system) by Agfa, Braun, Cullmann, Metz, Osram and Regula
207 065	Rollei SCA 356 dedicated flash interface module
971 010	Carrying strap
760 097	Magnifying head
760 096	Prism head, 90° eyepiece
760 095	Prism head, 45° eyepiece
[4])	Underwater housing (available from Ocean-Optics 6100 Darmstadt, West Germany)
208 992	FRC 1 foot-operated remote control
207 045	Infrared remote control set
207 041	Timer
208 988	ME 1 multi-exposure control unit
208 942	MRC 120 remote release
208 985	RC 120 remote release
560 180	Bright matt screen with central split-image wedge and microprism ring
560 100	Bright matt screen with clear spot
560 050	Bright matt screen with split-image wedge
560 060	Bright matt screen with microprism spot
560 040	Bright matt screen
560 030	Fine ground glass screen
760 030	6x6 cm / 120 film back
760 031	6x6 cm / 220 film back
760 032	4.5x6 cm / 120 film back
760 033	4.5x6 cm / 220 film back
760 090	Polaroid magazine
972 050	Leather case for camera
208 700	Quick tripod coupling
270 031	Flash extension kit I
207 032	Flash extension kit II
760 075	Spare film insert
208 945	Pistol grip
208 946	Extension side mounting kit for pistol grip
208 947	Dedicated flash extension kit for Metz handle type flash units
207 033	Quick tripod coupling component
208 953	NiCd power pack (spare)
740 045	Standard charger
740 030	Quick-action charger
208 955	Car battery cable
208 956	External battery lead
970 965	Leather holdall case
972 482	Aluminium case

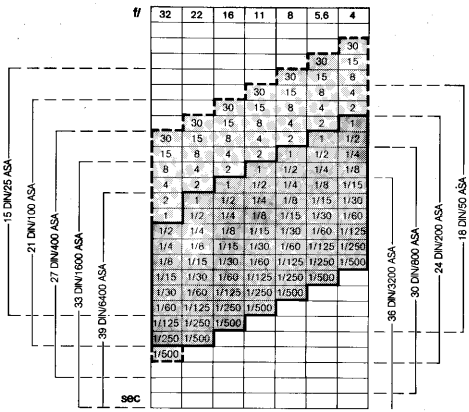
Rolleigon f 2.8/80
Planar f 2.8/80



Planar f 2.8/80 mm or Rolleigon f 2.8/80 mm, 24 DIN film and 1/60 sec. are selected; the aperture measured is f 8.

Find 1/60 sec. in the vertical f 8 column. On the same horizontal line, 1/8 to 1/500 sec. lie in the dark grey (automatic control) zone. Vertically above these speeds the corresponding apertures f 2.8 to f 22 can be read off.

Distagon f 4/40
Rolleigon f 4/50
Distagon f 4/50
PCS-Angulon f 4.5/55
Distagon f 3.5/60
Rolleigon f 4/150
Sonnar f 4/150
Variogon f 4.5/75–150

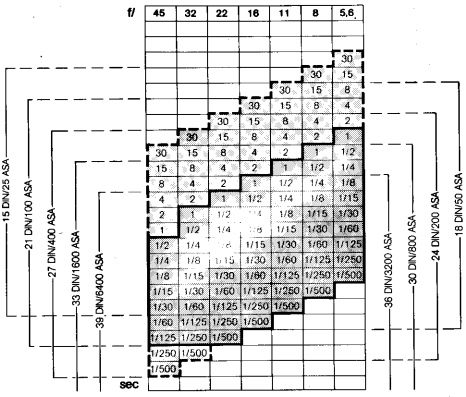


Sonnar 4/150 mm or Rolleigon 4/150 mm, 15 DIN film and 1 sec. are selected; aperture f 32 is neccessary for the depth of field required. The measured value indicated on the camera is f 4.

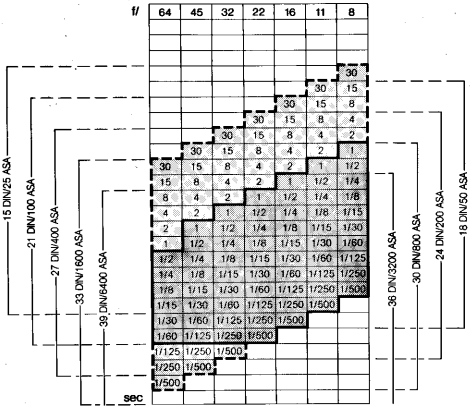
Find 1 sec. in the f 4 column: in this horizontal line, f 32 is in the white zone. The adjoining time of 30 sec. is doubled, and a 60 sec. exposure is used with the »B« * setting.

* Reciprocity failure at low light intensity requires a further increase in exposure according to the film type.

S-Planar f 5.6/120
Sonnar f 5.6/250
Variogon f 5.6/140–280
Tele-Tessar f 5.6/350



Tele-Tessar f 8/500



S-Planar f 5.6/120 mm, 18 DIN film and aperture f 45 are required for a close-up photograph. 1/8 sec. is selected, f 8 is measured. Horizontal extension from 1/8 sec. in the f 8 column produces a shutter speed of 4 sec. in the light grey (manual) zone under f 45.

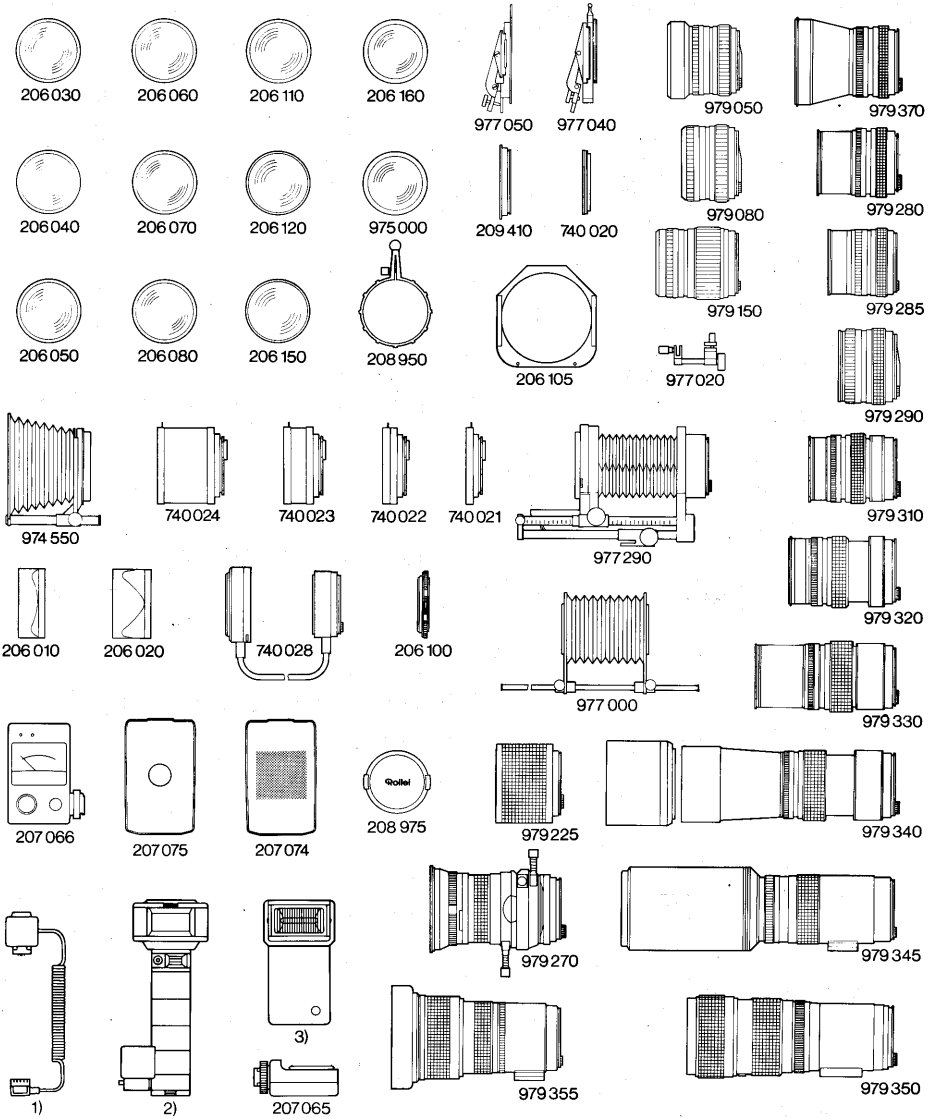
1/60 — With automatic exposure control, but range can also be used manually.

4 — Manual setting range without automatic aperture control.

»B« setting; measuring range is exceeded.

21 DIN — DIN/ASA sensitivity ranges: intermediate values should be rounded off towards a longer exposure time or wider aperture

The speed of 1 sec. is not included in the automatic range for technical reasons.


206 030
206 060
206 110
206 160
977 050
977 040
979 050
979 370
206 040
206 070
206 120
975 000
209 410
740 020
979 080
979 280
206 050
206 080
206 150
208 950
206 105
979 150
979 285
977 020
979 290
974 550
740 024
740 023
740 022
740 021
977 290
979 310
206 010
206 020
740 028
206 100
979 320
977 000
979 330
207 066
207 075
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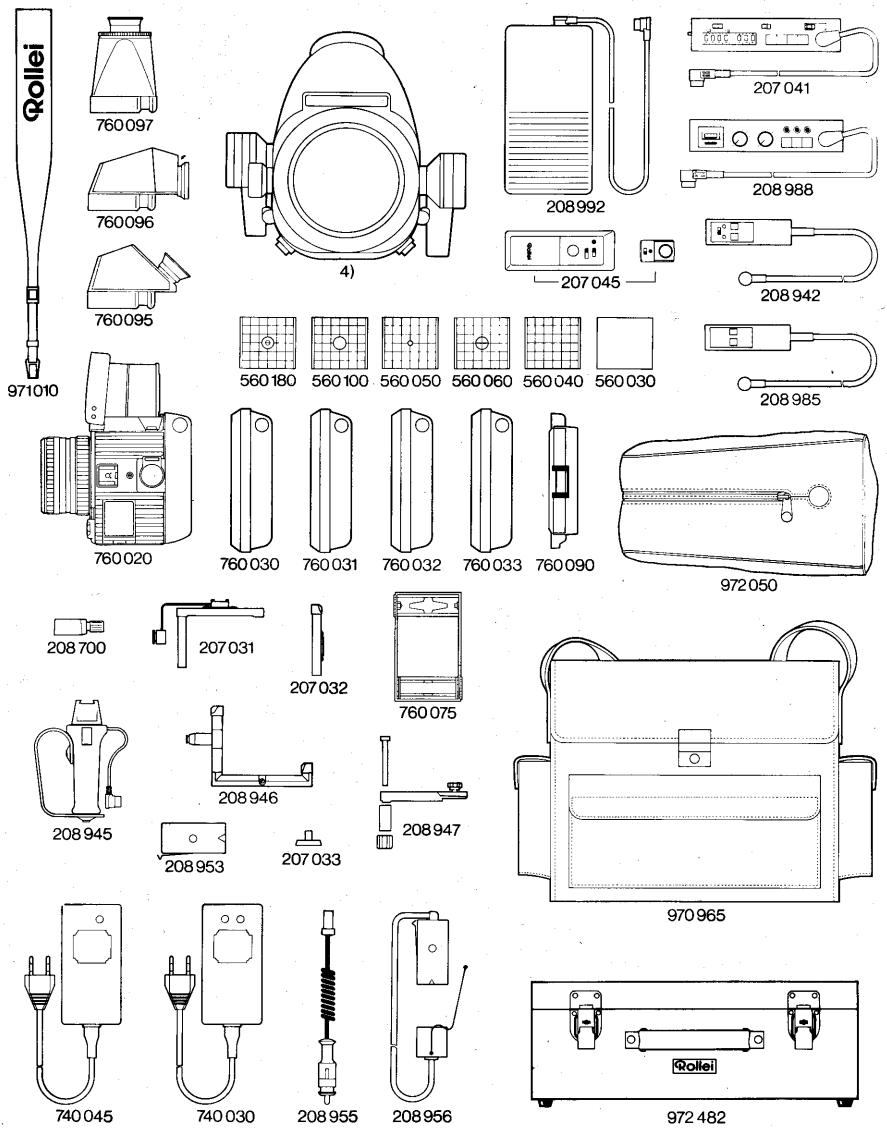
208 975
979 225
979 340
979 270
979 345
979 355
979 350
1)
2)
3)
207 065



Troubleshooting guide

Problem
Film does not advance to frame 1
No aperture indication on the lens
Battery discharges prematurely
Viewfinder hood will not close
No viewing image on the focusing screen
Viewfinder image blurred
No adjustment available from light meter
Light meter produces a different result with a different focal length

Cause	Remedy
Tight and loose coils in film leader	Release once more. If necessary, wind film tightly by hand when loading
Automatic aperture control switched off	Set aperture ring to »A«
Lens not engaged	See that lens is firmly engaged
Battery discharged, battery defective	Recharge or change battery
Fuse blown, operating switch on 0	Replace fuse, set operating switch to S or C
Working temperature too low, battery defective due to improper care	Warm or recharge battery: use interchangeable batteries and/or an external battery connection
Magnifier still raised	Fold magnifier down
Framefinder in operating position	Fold framefinder out
Mirror pre-released	Release the shutter and repeat light measurement if necessary
Rotary shutter speed knob not set	Engage shutter speed knob
Focusing screen in wrong position or not locked in place	Insert screen properly, (matt side downwards), press frame in firmly
Defective eyesight	Use correcting magnifier (+2.5 to −2.5 dioptres available)
Shutter speed set too fast or too slow	Choose another speed
Unsuitable film chosen and/or very unfavourable lighting conditions	Load with a different type of film; use a grey filter, artificial light or flash; if necessary fit a lens with a wider aperture range
New measurement allows for the change in brightness distribution in the image frame	No action necessary (changing the angle of view alters the image frame and produces a different brightness distribution)

Troubleshooting guide

Problem	Cause
Release not possible, but no error in prior light measurement	Battery warning indicator not observed, electronics switched off due to inadequate voltage
Camera switches off during continuous exposure	Battery voltage insufficient
Camera switches off during film winding-on or transport due to fuse blowing	Film base too brittle, e. g. after storage in refrigerator or in extreme cold
	Film wound on one-sided
	Film incorrectly loaded, film direction symbol not observed
Incorrectly exposed picture	Light changed after mirror pre-release
	High level of stray light entering through finder hood (especially with fluorescent lighting)
Picture underexposed	Taken using automatic exposure after mirror pre-release
Blurred picture	Film used with wrong back
Counter stops at 15 or 16	120 film used in 220 back
220 film will not wind up fully	220 film used in 120 back
1 or 2 frames not exposed at end of film	Film not wound on far enough when loaded

Remedy
Change or recharge battery
Use battery with maximum possible charge
Keep film (and camera) warm, replace fuse, carry charged batteries on your person
Replace fuse (use only type 0.8 A/250 V) Keep film even and parallel when loading, observe direction symbol in cartridge
In changing light do not use pre-release, then automatic aperture control operates right up to shutter release
Raise viewing magnifier, avoid direct light incidence; in difficult lighting conditions, close finder hood
Always set aperture manually after mirror pre-release
Only use camera with appropriate back
Release twice, to wind the film up fully. Blurring can be expected due to distortion of the flat film surface
Release about 20 times to transport film
Wind film on till arrow points to marker

Care of the camera

The Rolleiflex 6002 requires the same care as any valuable piece of equipment that is expected to be reliable over a long period. To clean, please use the following proven methods:

Remove dust with a soft camel-hair brush or air blower. If it is necessary to clean the outer surfaces of the lenses, breathe on them and then polish them with lens cleaning paper. For protection against static, breathe on them and allow the moisture to evaporate.

Take special care in cleaning the focusing screen: the rough lower surface should only be treated with a soft brush or air blower. Protect this side carefully from dirt and fingermarks.

Protect the camera from the long-term harmful effects of steam or damp.

The high humidity in tropical or subtropical areas can damage the metal parts by corrosion and the glass surfaces by fungal attack. Whenever possible, dry the camera frequently in the fresh air and sun. Keep the magazine and film guiding surfaces clean (particles of gelatine rubbed off the film are a breeding ground for fungus). When the camera is not used for long periods, store it in an airtight container with silica gel cartridges. Protect the camera particularly carefully from any kind of dirt.

Technical data

Camera type
Automatic motorized single-lens reflex camera with electronic control by integral microprocessor, TTL exposure metering (automatic aperture control), TTL automatic flash control and interchangeable backs.

Picture format
6x6 cm and 4.5x6 cm.

Film types
120 and 220 roll film for 12/24 pictures (6x6 cm) or 16/32 pictures (4.5x6 cm), Polaroid pack film for 8 pictures (6x6 cm).

Film speed
Adjustable on the camera: 15–39 DIN/ 25–6400 ASA.

Exposure metering
Centre-weighted integral metering system by means of 3 large-area silicon photocells behind the swinging mirror. Electronic stray light compensation during the shutter release process. Automatic, switchable to manual aperture selection with 1/3 stop intervals. Combination test button for storing measured values.

Measuring range
Light values 3–18/3.2–100,000 asb/1–33,000 cd/m^2 using 21 DIN/100 ASA film with f 2.8/80 mm lens.

Shutter
Electronically controlled leaf shutter, 1/500–30 sec and B, operating through two integral linear motors.

Interchangeable lenses
Rollei bayonet engaging with camera body and 10-pin contact strip for pulse transfer for aperture and shutter drive. Rolleigon f 4/50, f 2.8/80 and f 4/150 mm lenses. Zeiss lenses from 40 to 500 mm, extending to 1000 mm by use of double tele-converter. Special Shift/Scheimpflug f 4.5/55 and Vario 75–150/140–280 mm lenses from Schneider Kreuznach, with full automatic aperture control, including use with bellows, retroadapter and extension tubes.

Release
2 microswitches at the front of the camera. Remote release connection.

Film transport
Motorized for individual exposures or continuous operation. Exposure frequency to 1.5 frames /sec.

Multiple exposure
Using the multiple-exposure handpiece MRC 120 or the multiple-exposure control unit ME 1 (up to 10 exposures per second with ME 1).

Reflex mirror
Swinging mirror with partially transparent multi-layer coating and pneumatic damping; can be pre-released.

USA Patent No. 3.780.635	25. 12. 72
USA Patent No. 3.792.485	12. 02. 74
USA Patent No. 1.104.656	01. 08. 78
USA Patent No. 3.967.298	29. 06. 76
USA Patent No. 4.162.439	24. 06. 79
USA Patent No. 3.724.350	03. 04. 73
GB Patent No. 1.433.814	25. 08. 76
Canada Patented	20. 12. 77
GB Patent No. 1.432.111	11. 08. 74
USA Patent No. 3.883.886	13. 05. 75
USA Patent No. 3.911.459	07. 10. 75

Viewfinder system
Standard folding viewfinder hood. Interchangeable with 45° prism head, 90° prism head or rigid magnifying head. Six interchangeable focusing screens.

Flash synchronization
1/500–30 sec. Accessory shoe with centre synchronizing contact and contacts for TTL automatic flash control in combination with automatic flash units and special adapter Rollei SCA 356 or Metz C 70, as well as Rollei FM 1 flashmeter.

Automatic flash
TTL flash measurement at the film surface by additional silicon photocells with viewfinder information on flash readiness and light output.

Power supply
Rapidly rechargeable sintered NiCd batteries (charge time up to 1 hour with the quick-action charger) for approx. 600 exposures (in normal room temperature).

Interchangeable backs
For 6x6/120 film, 6x6/220 film, 4.5x6/120 film, 4.5x6/220 film. Rapid loading by means of pre-loadable film cartridges. Automatic film threading and wind-up when connected to camera. Self-resetting frame counter. Film type indicator.
Polaroid magazine for film pack (8 exposures 6x6 cm).

Connections
14-pin universal socket for special remote release cable or control and accessory equipment. Cable release connection. Quick tripod coupling. 1/4" and 3/8" tripod bushes.

Working temperature range
From −20°C to +60°C. Special-duty versions for temperature extremes can be manufactured by Rollei Fototechnic GmbH on request.

Dimensions
108x112x138 mm / 4.2x4.4x5.4 in without lens.
153.5x112x138 mm / 6x4.4x5.4 in with f 2.8/80 mm lens.

Weight
Approx. 1230 g / 430 oz without lens; approx. 1800 g / 630 oz with f 2.8/80 mm lens.