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BRONICA

— INSTRUCTIONS

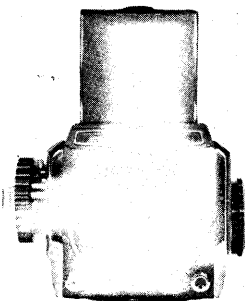
*lenza*  
**BRONICA-S**

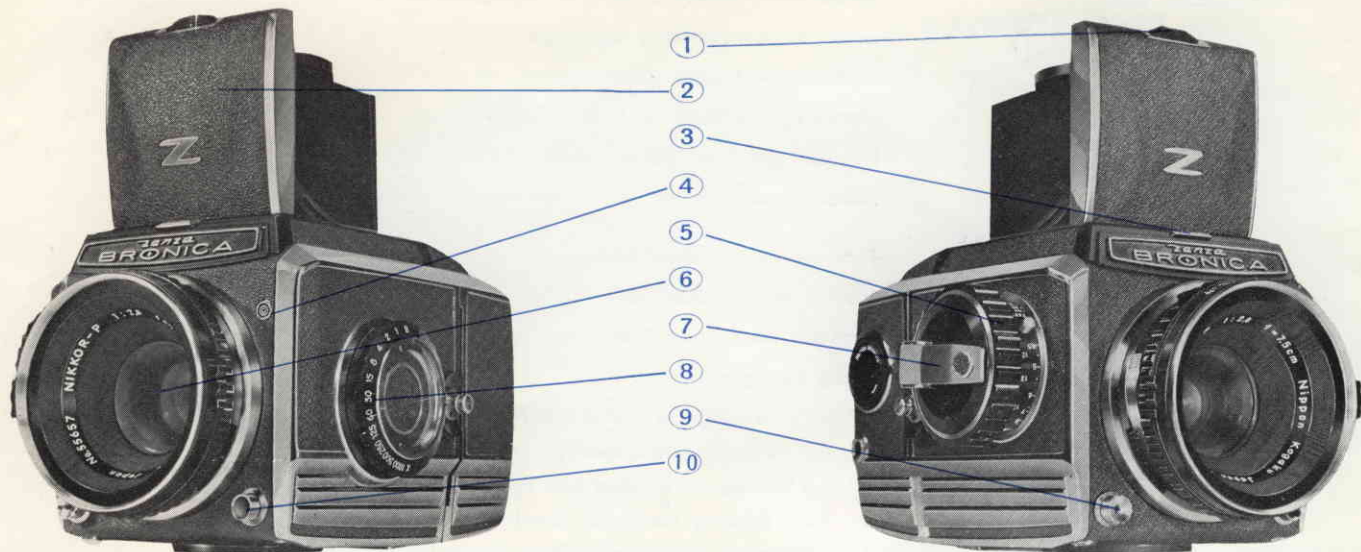
BRONICA  
BRONICA

## FEATURES ON ZENZA BRONICA-S

## HOW TO USE YOUR ZENZA BRONICA-S

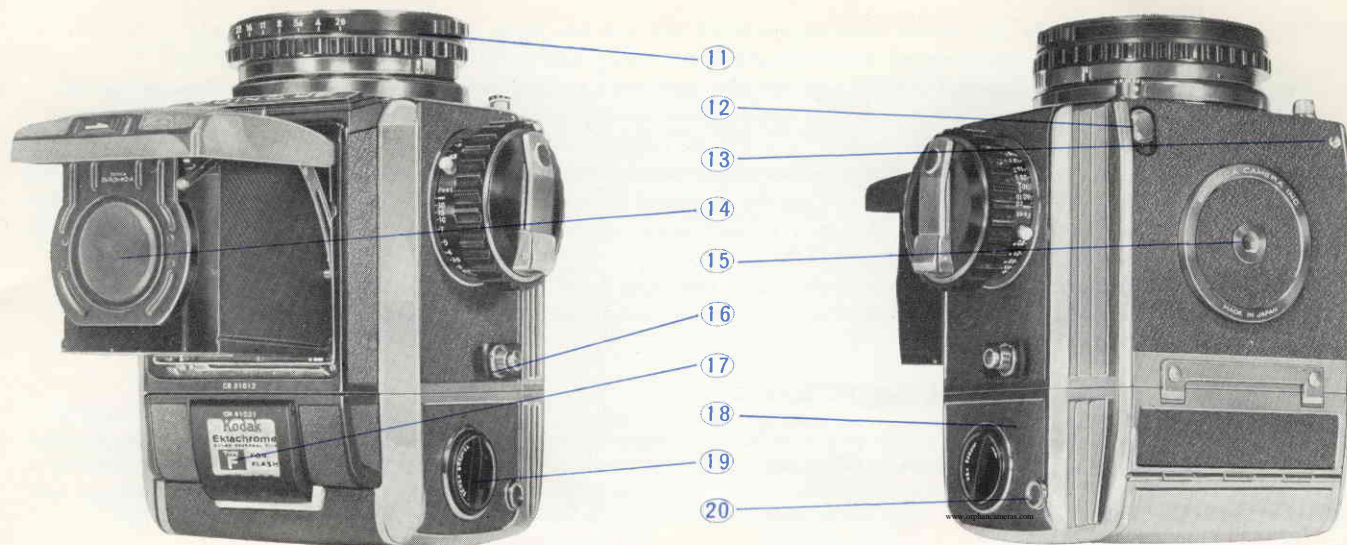
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- ① Focusing Hood Lock
- ② Removable Focusing Hood
- ③ Focusing Hood Retaining Lock
- ④ Flash Terminal
- ⑤ Focusing Knob

- ⑥ Normal 75mm Nikkor Lens F: 2.8
- ⑦ Winding Crank
- ⑧ Shutter Speed Dial
- ⑨ Body Release
- ⑩ Depth-of-field Preview Button



⑪ Diaphragm Preselector Ring

⑫ Mirror Lock-Down Button

⑬ Cable Release Socket

⑭ Magnifier

⑮ Tripod Socket

⑯ Strap Stud

⑰ Film Type Indicator Window

⑱ Filminder Back

⑲ Manual Film Winder

⑳ Exposure Counter Window

## FEATURES ON ZENZA BRONICA-S

It is best that you become intimately acquainted with your new Zenza Bronica S at the very outset. For soon you will both become close and inseparable companions sharing many delights and adventures in photography.

Your Zenza Bronica S is a precision instrument upon which has been lavished the utmost of human ingenuity and skill.

It is unique in its field possessing conveniences and automatic features to be found in no other instruments of its type.

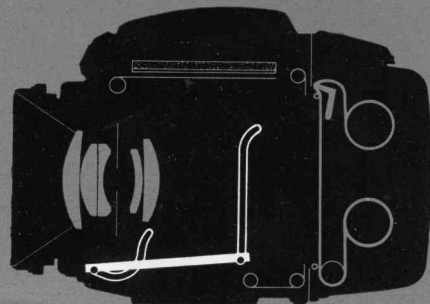
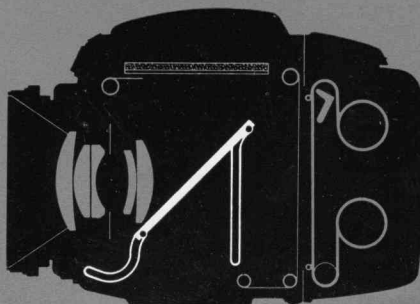
The Zenza Bronica S was designed to extend the scope of photographic expression beyond the limitations imposed by conventional equipment. It was designed to serve you — help you create the fine picture results you have often conceived yet found to be beyond the ken of present camera equipment. The Zenza Bronica S is an integrated tool in which automatic operation and quality of performance combine to equip and assist you in achieving notably better pictures.

Devote the extra minutes it will take you to know your Zenza Bronica S intimately. Read the instructions carefully.

Your efforts will be rewarded by a fruitful companionship which will last for many, many years.

### INSTANT RETURN AUTOMATIC MIRROR

The reflex mirror of the Bronica S is an exclusive original. It will not flip up for the exposure as in other single lens reflex cameras. It moves forward and down with greater clearance provided for deeply seated lenses, permitting shorter focal length to be used without mirror interference. Thus, the Bronica S can be equipped with a normal 75mm lens, or with a 50mm wide angle. After the exposure, the Bronica mirror instantly-automatically returns to viewing position.

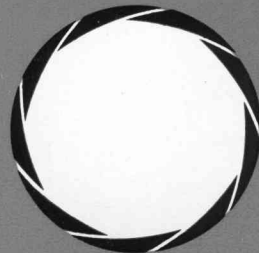
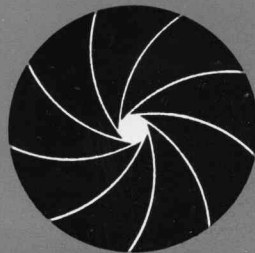


## INSTANT REOPEN AUTOMATIC DIAPHRAGM

Lenses for the Bronica S have fully automatic diaphragms. Simply focus and view with the lenses wide open. When exposure is made, the diaphragm automatically closes down to the preselected aperture for correct exposure. Immediately after the exposure, the diaphragm automatically reopens to full aperture, to provide a bright clear image on the focusing screen — ready for the next picture without readjustment.

## DEPTH-OF-FIELD PREVIEW BUTTON

The lens on the Bronica S is always wide open for focusing and viewing. This provides maximum image-screen brightness for greater ease and accuracy. However, it is often desirable to see the depth-of-field at 'taking' aperture. This is done by pressing the Depth-of-field Preview Button. The diaphragm automatically stops down. Release the button, and the diaphragm instantly returns to full aperture.





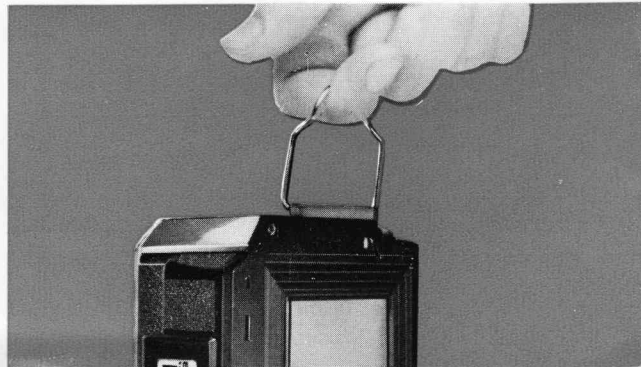
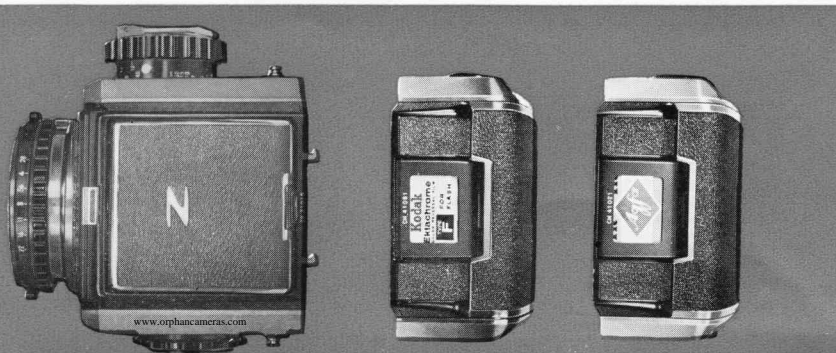
## INTERCHANGEABLE 'FILMINDER' BACK

This convenient feature offers many advantages. It makes possible to change film in the middle of a roll (black-and-white to color, color to black-and-white, indoor to daylight, etc.) without a loss of a single exposure. It also permits you to preload several backs, it is possible to shoot continuously without stopping for reloads.

The filminder back is fully automatic and foolproof. It is equipped with a metal dark slide to prevent film from being exposed while the back is off the camera. The back cannot be removed until the dark slide is inserted, and while the back is off the camera, the dark slide can not be withdrawn.

When a filminder back is attached to the camera, no attention need be paid as to whether the film or the shutter has been previously wound.

The film advance crank which normally winds shutter and film simultaneously, automatically performs only the required function. For example, if the shutter is wound, and if the film in position has been exposed, rotating the crank will only advance the film to a fresh, unexposed section. Also, when the back is on the camera, the dark slide must be completely withdrawn before exposure can be made.





## NEW EXCLUSIVE FILM TENSION SYSTEM

The Bronica film tension system makes the film surface perfectly flat at the focal plane. All tension on the film is removed during the winding process. The instant the film is in place, tension is automatically applied.

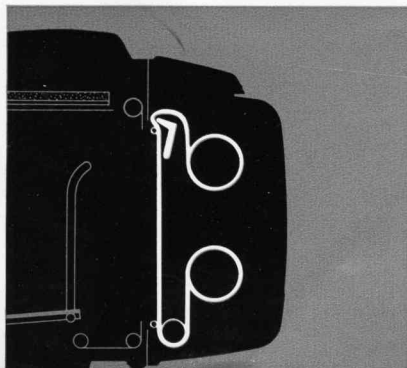
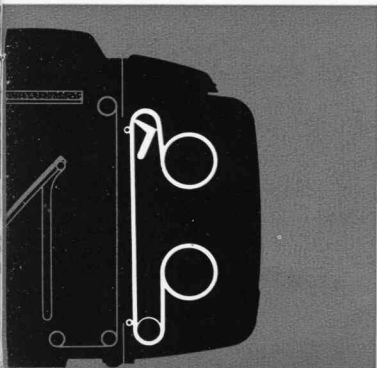
The system not only allows the use of much greater tension to assure perfect flatness at the focal plane but also eliminates dangerous film scratches which can occur if the film is advanced while under tension.

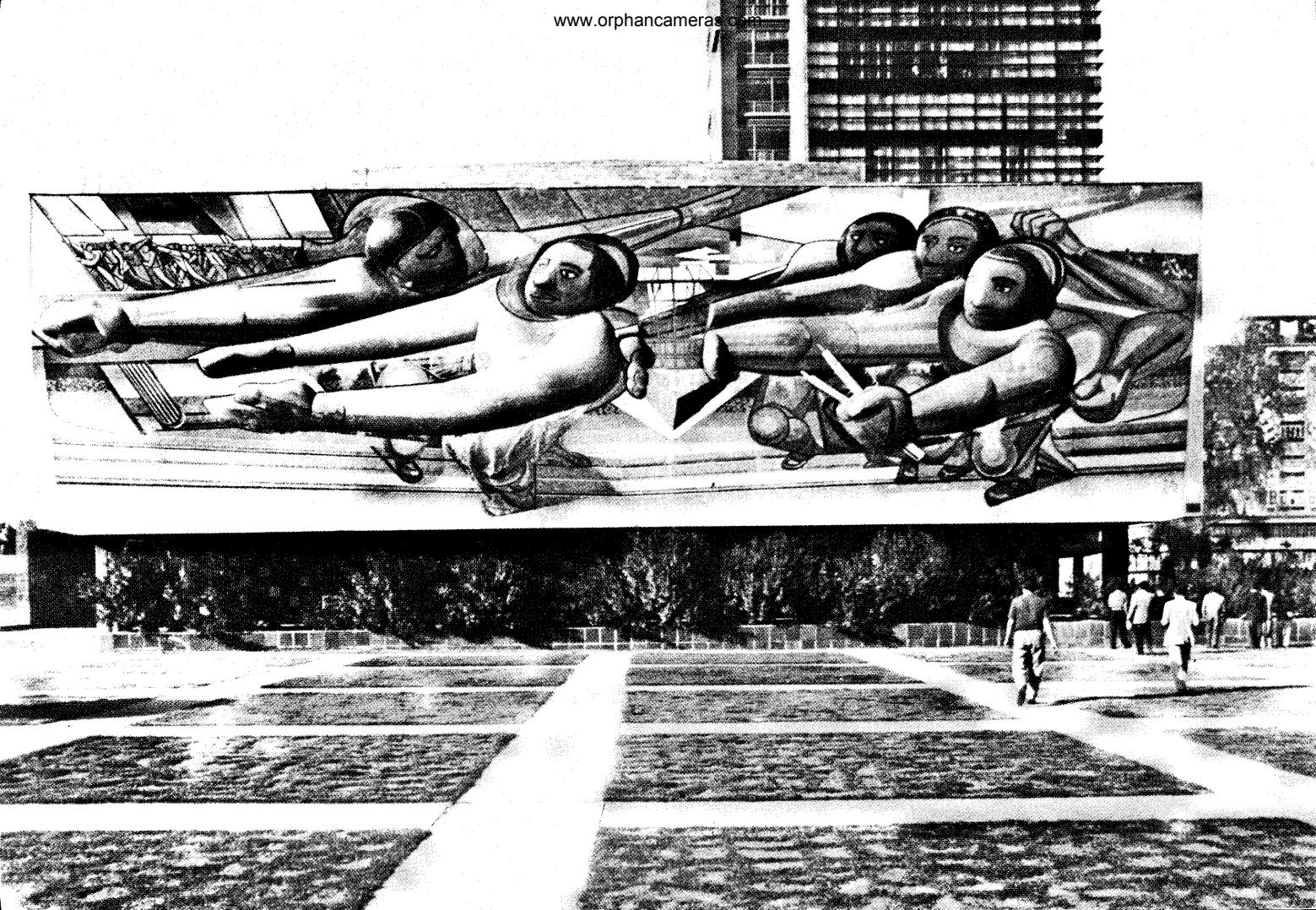
\*Patent applied

## NIKKOR LENSES

Nikkor lenses are standard for the Bronica S. Today, no finer optics are available. And Nikkor lenses are the most compatible lenses for the superb performance of the Bronica S. Nikkor lenses have proved to be the finest in 35mm photography field in which optical quality means almost everything.

Available focal length range from 50mm wide angle to 1000mm super telephoto. The 50, 75 and 135mm lenses are equipped with instant return automatic diaphragms and are designated as Auto-Nikkors.





## HOW TO USE YOUR ZENZA BRONICA-S

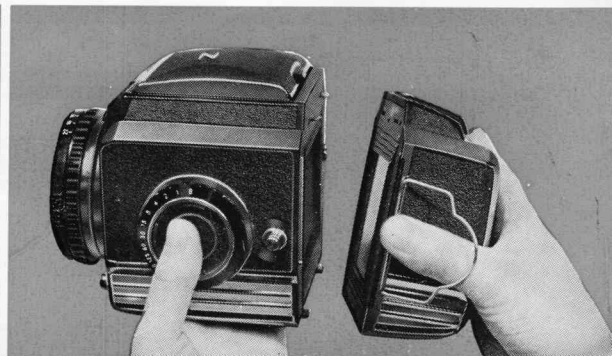
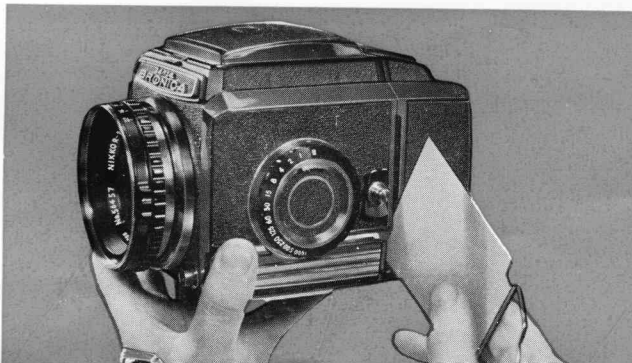
### REMOVING THE 'FILMINDER' BACK

Hold the camera body in the left hand, with filminder back in right, so that the thumb rests on protruding edge of dark slide.

Note: The Film Back cannot be removed from the Bronica unless the metal slide is inserted.

Press dark slide inward with thumb. This releases the filminder back from the camera. Remove by tilting the filminder back as illustrated and lift from open hinge at bottom.

Note: The dark slide is only necessary for removing the film back from the camera. The dark slide should be removed when the back is attached to the camera.



## LOADING THE 'FILMINDER' BACK

The BRONICA S uses 120 roll film and may be loaded either with the filminder back on or off the camera. If you prefer to load with the back attached, follow these instructions.

- a. Open the frame-shaped mask of the film type indicator and slide the lock in the direction of the '0'; the back cover will then pop open.
- b. Remove the film holder from the filminder back.
- c. The film holder consists of two spindle assemblies:

The lower spindle assembly which is marked with a red arrow, holds the roll of unexposed film and other holds the take-up spool.

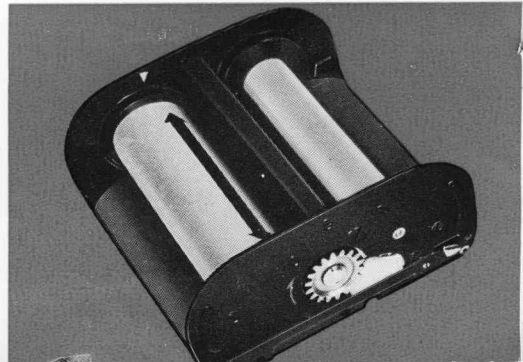
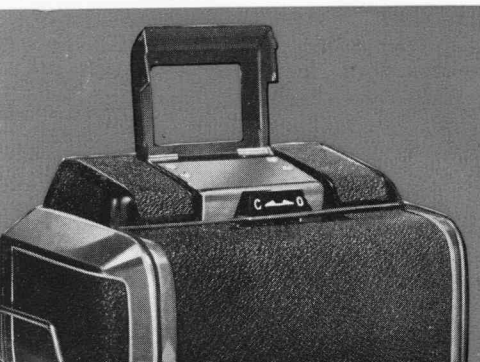
Note that one end of the spindle in the back is spring-loaded and can be moved out of position.

- d. The unexposed roll of film must be loaded into the spindle which is marked with the red arrow. Push one end of the film roll into the spring-loaded side of the spindle.

The film roll then slips into place. Make sure that the inside of the leader paper faces outwards.

- e. Draw the leader paper across the film pressure plate over the roller. Insert the end of the leader paper into the wide slot of the take-up spool and secure it by manually rotating the take-up spool until the film start mark.
- f. Place the film holder into the open film back, so that the gear wheels on the holder and in the back fit together.
- g. To have the two gears fit correctly, it may be necessary to rotate the manual film winder; then push down the film holder, wind the leader paper until the red arrow mark on the film matches the start mark.

Then, lock the back cover.



- h. Push the lock to the "C" mark. If the back cover does not lock fully, check and make certain the film holder is properly set in the film back.
- i. Place an end of the film carton box in the film type indicator mask; push down and lock the frame mask. This exclusive film type indicator mask is designed so that you can see the name of film, as well as the type and the speed.
- j. The exposure counter window shows the film exposure number.
- k. To combine the loaded filminder back with the camera body, pull out the film winding crank attached with the focusing knob and wind the crank until it is checked, then (1) will appear in the exposure counter window.
- l. Even if filminder back is not combined with the camera body, film can be wound by rotating the film winding dial on the back.

Caution: Handle "Filminder Back" carefully. Don't press down, and avoid any shock, to prevent the light leak prevention curtain from being stuck. Also the flat surface of film may not be maintained.

## REMOVING THE EXPOSED FILM

After the 12 exposures are made, the film advance crank will wind only the film. Wind until there is no resistance. Then, open the back cover and remove the exposed film from the film holder.



(1) WINDING THE SHUTTER AND ADVANCING THE FILM

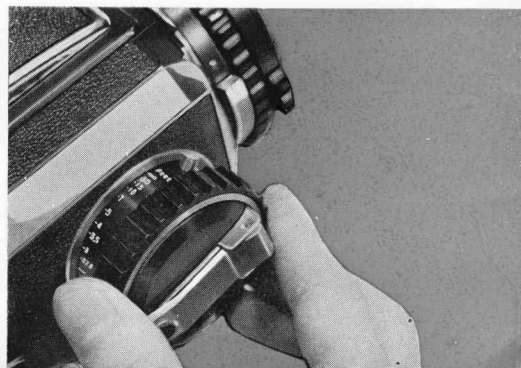
After the shutter and film have been fully wound, the crank may be folded back into the focusing knob.

Note: Be sure to keep turning the crank until the shutter and film are fully wound.

## (2) PRESETTING THE DIAPHRAGM AND FOCUSING THE LENS

- Set diaphragm for preselected exposure or 'taking' aperture by rotating diaphragm preselector ring on lens until desired aperture indicator matches the white dot. Preselector ring may also be set for intermediate apertures (between markings).
- Slide hood lock in direction of arrow and raise finger. Hood will unfold and open.
- Look at the image on the focusing screen. Note how uniformly bright it is from corner to corner, and as you rotate the focusing knob, how readily you can see the image in 'infocus' or 'out-of-focus'.

The focusing scale is calibrated on the focusing knob. If the 75mm lens is used, read the green calibration: the red is for 50mm lens and the white scale is for 135mm lens. To set the scale for the lens you are using, rack the focusing tube back to infinity; now, use the raised pin set in the focusing scale collar, and set the correct color scale in position. Note that the 'Infinity' setting on the scale you are using must line up with the infinity indicator mark on the side of the camera body.

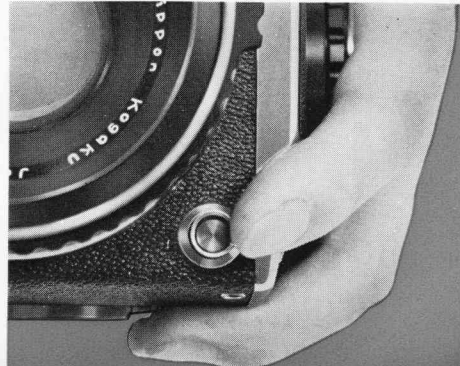


- d. If a magnified image is desired, push back on hood cover. This will release the magnifier into position. Keep the eye close to the magnifier for a clear vision of the entire field of the focusing screen.
- e. To replace magnifier, press down on metal magnifier frame until it locks against the under-side of the hood cover.
- f. To close the hood, first hold in the sides, then the back, and finally, bring the front cover down until 'clicks' shut.
- g. To remove the focusing hood - either for cleaning the screen or interchanging with sports or other finders - lift the hood retaining lock above camera name plate. Hood will spring free.
- h. To replace hood, slide it on, so that the two metal tabs on the camera fit into the slots on the rear of the hood frame. Snap hood closed.

### (3) USING THE DEPTH-OF-FIELD PREVIEW BUTTON

In the Bronica S, the lens is always wide open for viewing and focusing, regardless of the aperture you have selected for the exposure. However, after having focused you may want to see the depth-of-field at 'taking' aperture. While looking at the focusing screen (with or without magnifier) press the red button with the forefinger of your left hand. This will instantly close the diaphragm down to your preselected 'taking' aperture and the image in the screen will show the exact depth-of-field at that aperture.

Release the red button and the diaphragm will instantly spring back to full aperture.

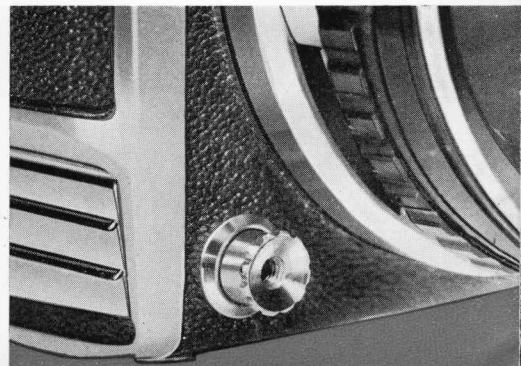
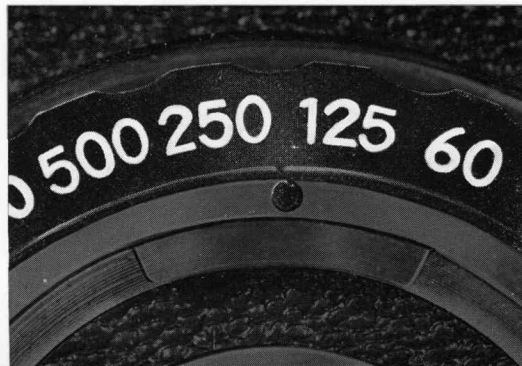
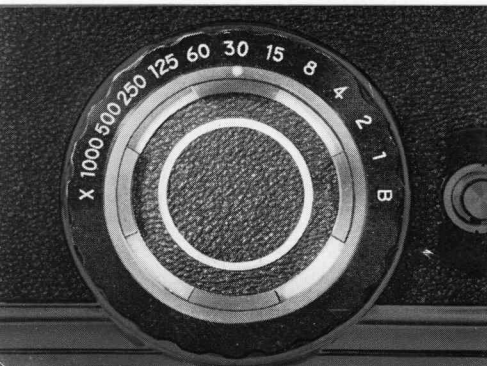




#### (4) SELECTING THE SHUTTER SPEED

- a. A shutter speed may be selected either before or after the shutter is wound.
- b. Rotate the speed selector dial until the desired shutter speed 'clicks' into position under red arrow head indicator.  
The selector may also be set for intermediate shutter speeds (between marking).
- c. The numerals represent shutter speeds of 1 second, 1/2, 1/4, 1/8, 1/15, 1/30, X, 1/60, 1/125, 1/250, 1/500, and 1/1000th, "X" represents 1/50th second, and is the fastest shutter speed with which X-type (electronic) flash units may be used (see Using Flash). "B" is for Bulb.
- d. When "Time" exposure is desired, it can be arranged by setting at "B".
- e. The body release button is equipped with a safety lock. Rotate the tip of the release button clockwise. When the red dot is in side position, shutter is locked.

When "T" (Time) exposure is desired, set the shutter speed dial at "B", depress the body release button and turn the tip of the button counter-clockwise. This will lock the shutter open. To close the shutter, turn the tip of the button clockwise.



## (5) MIRROR LOCK-DOWN BUTTON

A mirror lock-down button is located below the shutter release button, on the bottom of the camera body.

After winding the shutter, the mirror can be locked down by pushing the mirror lock-down button, then depress the shutter button separately, so that the real quiet exposure can be made.

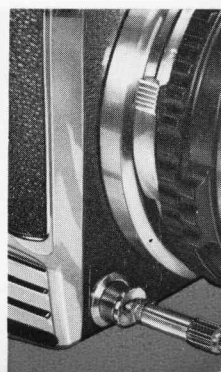
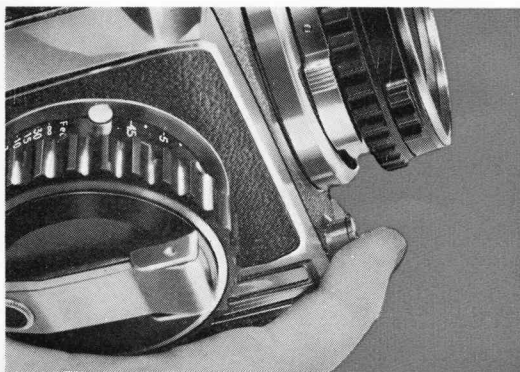
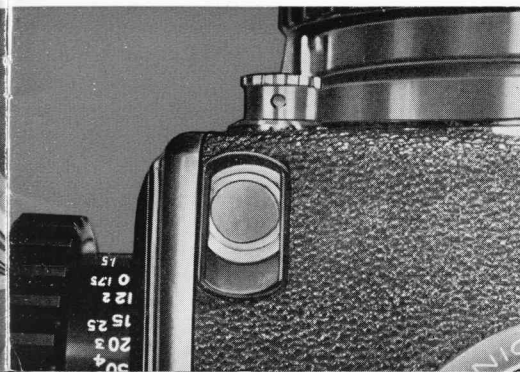
## (6) MAKING THE EXPOSURE

Having advanced film, wound the shutter, selected the 'taking' aperture and shutter speed, and having focused the lens, you are now ready to make the exposure.

- a. If the metal dark slide has not been previously withdrawn, do so at this time. The Bronica cannot be 'fired' with the dark slide in position. It must be completely removed. Simply pull the wire handle until the slide is withdrawn.

Note: The dark slide need not be reinserted after the exposure unless you intend to remove the filminder back.

- b. To make the exposure, squeeze the body release with the right or left forefinger, as preferred. You will notice that the image returns to the viewing screen immediately after the exposure — bright and clear as before. This is the result of two automatic Bronica features; the instant return automatic mirror and the instant reopen automatic diaphragm.
- It is desirable to use a cable release when slow shutter speed is used. Cable release socket is placed both on the body release button and below the depth-of-field preview button.
- c. When shooting at speeds slower than 1/30th second, it is recommended that the Bronica be mounted on a stable tripod or rested on a firm support.



## (7) MAKING DOUBLE OR MULTIPLE EXPOSURE

As explained earlier, your Bronica has built-in protection against inadvertent double exposure. However, there are times when deliberate double exposure may be desired.

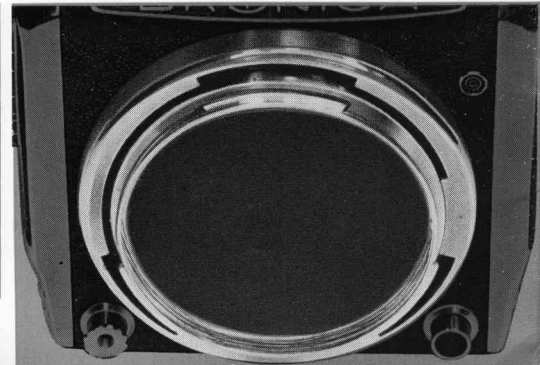
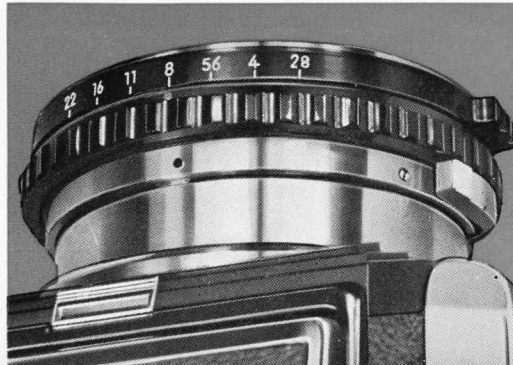
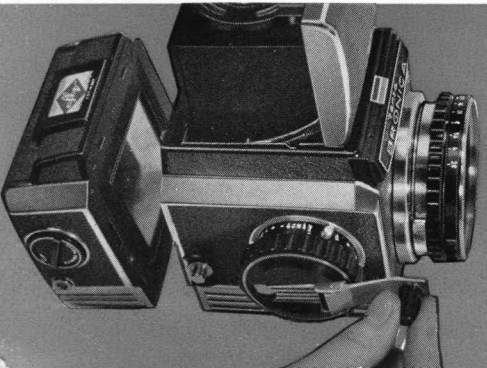
- a. After making one exposure, and wishing to make another on the same (exposed) film frame, remove the magazine back.
- b. Rotate the film advance crank until the shutter is wound. Place the magazine back on the camera. You may now make the double exposure.

## (8) INTERCHANGING LENSES

Lenses are quickly and easily interchangeable on the Bronica S. The normal 75mm lens, the 50mm wide angle and 135mm telephoto are equipped with quick-change, 1/6 turn bayonet mounts.

- a. To remove bayonet-mounted lens, hold lens front in the right hand with thumb on milled ridges of Lens Bayonet Lock.
- b. Press bayonet lock with thumb, and simultaneously twist lens to the left (counter-clockwise) 1/6 turn. Remove lens.
- c. To mount lens, insert lens into focusing tube, lining up the red dots on lens ring and focusing tube. Twist the lens-mount to right (clockwise) until bayonet lock snaps closed.
- d. To mount Nikkor telephoto lenses longer than 180mm, first rack the focusing tube back to infinity. Mount the long telephoto lens in the outside bayonet. Focus with the focusing ring on the lens.

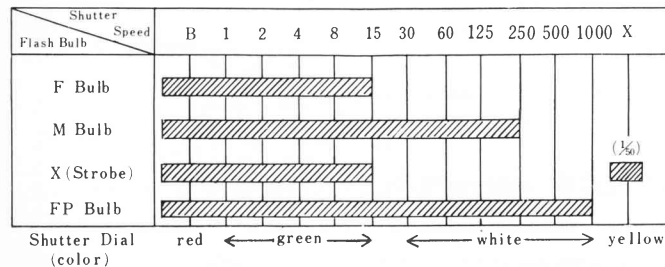
Note: The inside of the Bronica focusing tube is threaded (diameter 57mm, pitch-1mm) in order to accept any lenses you now have. The distance from the foremost front edge of focusing tube to the film emulsion is 102.0mm.



## (9) USING FLASH

Your Bronica S is in automatic switching over synchronization which is coupled with shutter speed.

The Bronica flash terminal accepts standard connecting cord (German Type).



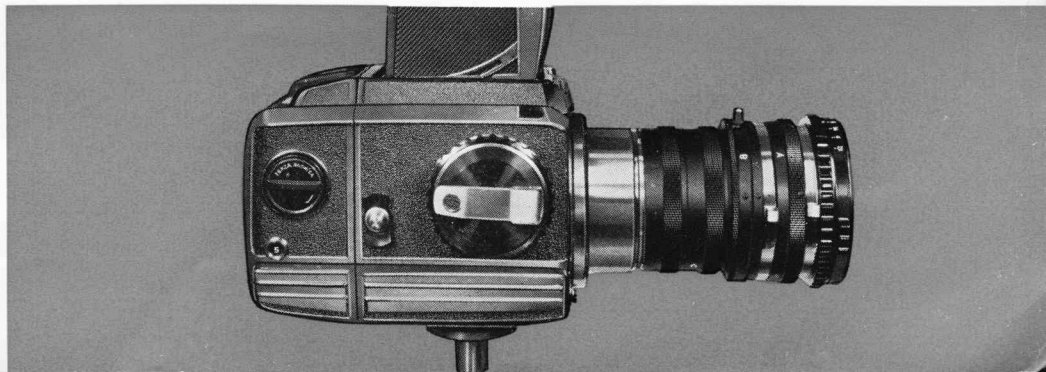
## (10) CLOSE-UP PHOTOGRAPH

With the 75mm standard lens, you can approach up to the 50cm to the subject without using any attachment.

If you want to photograph the subject in closer than 50cm, use a special Bronica extension tube set.

One set consist of "A" ring, "B" ring, and 2 pieces of "C" ring.

No. of Tube	Magnification Rate			Exposure Magnification Ratio		
	75mm F 2.8	50mm F 3.5	135mm F 3.5	75mm F 2.8	50mm F 3.5	135mm F 3.5
"A"	0.22—0.45	0.35—0.69	0.15—0.26	1.4 —2.0	1.82—2.85	1.32—1.56
"A" + "B"	0.45—0.67	0.69—1.03	0.26—0.38	2.0 —2.77	2.85—4.12	1.56—1.90
"A" + "B" + "C"	0.67—0.88	1.03—1.47	0.38—0.57	2.77—3.53	4.12—6.10	1.90—2.46
"A" + "B" + "C" + "C"	0.88—1.10	1.47—1.70	0.57—0.63	3.53—4.41	6.10—7.29	2.46—2.65



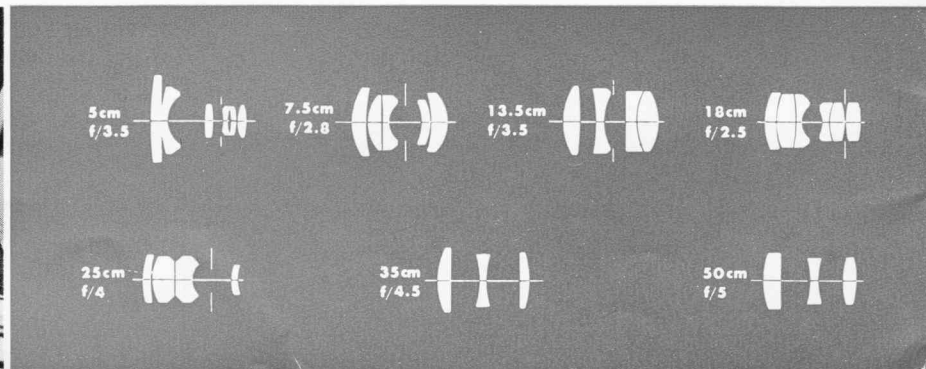
## USING THE BRONICA NECK STRAP

The shoulder strap supplied with your Bronica serves two purposes. One, it provides a safe and convenient means for carrying the camera, and two, it helps steady the camera during the exposure, especially with long focus lenses.

- The shoulder strap is equipped with a coupling connector at each end. Place these coupling connectors over the camera strap stud on each side of the camera and press.
- To remove the strap, lift or raise the metal wings on each camera strap stud, and simultaneously lift off the coupling connectors.
- As an aid to steadying the camera during exposure, first adjust the length of the strap until the camera is at a comfortable distance for focusing and viewing. During the exposure, draw downward on the camera so that the strap is strained and taut. This will greatly minimize the effect of hand vibration.

## LENS SPECIFICATION

Type	Distance Focus	Aperture Ratio	Angle of View	Magnification	Closest Distance	Aperture Dia- phragm	Filter Size	Focusing
Wide Angle	5 <sup>cm</sup>	3.5	77°	0.67×	<sup>cm</sup> 29 <sup>in</sup> 12	Auto	82mm dia	Lens Cylinder Back-Forth
Standard Focus	7.5	2.8	55°	1 ×	50 20	"	VIII	"
Long Focus	8.5	1.8	50°	1.13×	<sup>feet</sup> 60 <sup>2</sup>	"	VIII	"
Telephoto	13.5	3.5	33°	1.8 ×	<sup>m</sup> 1.3 4	Preset	VIII	"
"	18	2.5	25°	2.4 ×	1.5 5	"	IX	Hericoid
"	25	4.0	18°	3.33×	2.3 8	"	IX	"
"	35	4.5	13°	4.67×	4 13	"	IX	"
"	50	5.0	9°	6.67×	8 20	"	110mm dia	"
"	100	6.3	4.5°	13.3 ×		"		"



## FILTERS

BRONICA filters for 50mm lens is in screw-in type, all the other BRONICA filters are attached on the lens by using BRONICA filter retaining ring. The filter retaining ring to be able to accept BRONICA filter on both 75mm and 135mm lenses, will be supplied as an accessory. To fit BRONICA filters on 180mm-500mm lenses, it can be made by using lens hood which is supplied with these lenses.

In addition, BRONICA filter for 50mm lens can be fitted on to 180mm-350mm lenses by using adaptor ring.

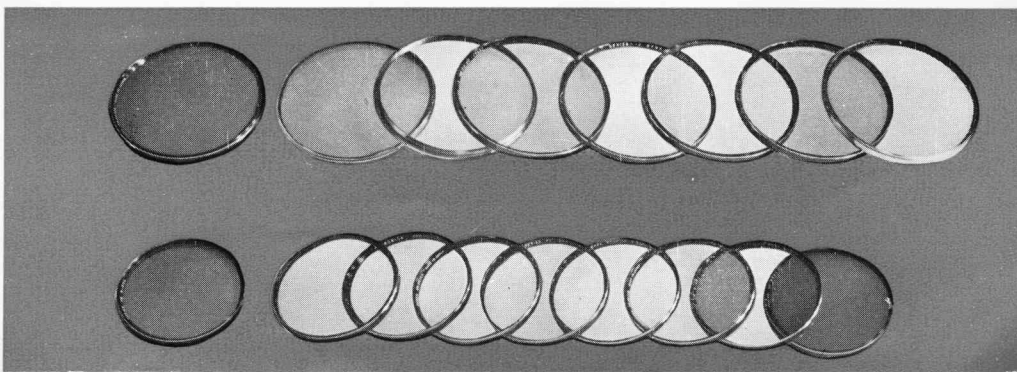
FOR MONOCHROME	Color Number	Color	Exposure Magnification				Effect of Filters
			*B type panchromatic film		*C type panchromatic film		
			Daylight	Art. Light	Daylight	Art. Light	
SL-39	UV	Transparent	1	1	1	1	To absorb ultra-violet radiation and results to effect clear image.
SY-44	Y1	Light Yellow	1.5	1.3	1.5	1.2	To stress sky and to effect clear image on back ground which is resulted to obtain natural contrast.
SY-48	Y2	Yellow	2.0	1.5	2.0	1.5	To effect to stress contrast, and red and yellow render them lighter. This is the common filter for general use.
SO-56	YA3	Amber	4.0	3.0	4.0	2.0	To dark sky and to express clear cloud. This filter is to effect to obtain strong contrast between dark and clear images.
SR-60	R1	Red	8.0	4.0	6.0	3.0	To effect to obtain stronger contrast than above. In case this filter is used in combine with infra-red film, it can obtain perfect infra-red photograph.
G-55	PO0	Yellowish Green	2.5	2.0	4.0	3.0	In case this filter is used in combine with panchromatic films, it can obtain natural contrast.

\*B type panchromatic films: Konipan S, SS, Neopan S, SS, Plus X, Double X and Veri-Chrome.

\*C type panchromatic films: SSS class films and Tri-X.

FOR COLOR	Color	Conversion ratio for color temperature *Dekamired value	Exposure Magnification	Classification of color film	Effect of Filters
L-1A	Light Violet	0	1	Daylight type or Tungsten type	To absorb ultra-violet rays in order to prevent from bluish appearance of back ground, and adjust natural color balance. In addition, used for protection of the lens.
O-85A	Orange	+12	2	Tungsten type	To be used for conversion of the color temperature which results to permit using tungsten type color film under daylight.
B-80A	Dark Blue	-12	2.5	Daylight type	To be used for conversion of the color temperature which results to permit using daylight type color film under artificial light.
B-82C	Blue	-4.0	1.5	Daylight type	To absorb reddish color when photograph is taken before 9 A.M. or after 3 P.M. in sunny place, and adjust the natural color balance.
O-81B	Amber	+4.0	1.5	Daylight type	When photograph is taken under cloudy or shadow, it is inclined to bluish color. This filter absorbs blue color and adjust the natural color balance.

\* (+) Reduction of color temperature. (-) Increase of color temperature.



**EFFICIENCY**

- Type** : Daylight loading, interchangeable film back,  $2\frac{3}{4}" \times 2\frac{3}{4}"$  (6cm  $\times$  6cm) single lens reflex camera.
- Film** : 120 roll film (Brownie film), 12 exposures.
- Standard Lens** : NIKKOR 75mm F:2.8 fully automatic preset diaphragm, 5 elements.
- Lens Mount** : Bayonet type (BRONICA mounting), also equipped with screw mounting (57mm dia. pitch=1mm), and large Bayonet mounting to accept long telephoto lenses.
- Finder** : Equipping with fresnel lens and large magnifier.
- Viewfinder Hood** : Interchangeable with pentaprism viewfinder, or sports finder.
- Focusing** : Side knob type focusing.
- Distance Scale** : Equipping with distance scale for 75mm, 50mm and 135mm lenses.
- Mirror** : Flipping down, instant return automatic mirror system.
- Mirror Release Button** : Mirror only can be released by pressing down Mirror Release Button.
- Diaphragm** : Fully automatic preset diaphragm — 75mm 50mm and 135mm lenses.  
Manual preset diaphragm — 180mm, 250mm, 350mm and 500mm lenses.
- Diaphragm Preview Button** : Depth-of-field can be checked by pressing down Diaphragm Preview Button.
- Shutter** : Vertically operating focal plane shutter, non-rotating single shutter dial, B. 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500, 1/1000 and "X" (1/50). "T" (Time) exposure can be obtained by utilizing shutter release lock device, intermediate shutter speed can be obtained.
- Synchro** : Automatic switching over synchronization system;  
FP class bulb : synchronized at all shutter speeds, except at "X".  
M class bulb : B. 1—1/250.  
F class bulb : B. 1—1/15.  
Electronic Flash : "X". 1—1/15.
- Interchanging Films** : Interchangeable film back which is fully coupled with camera body, dark slide with safety lock system, built-in light leak prevention curtain.
- Film Loading** : Automatic film winding system by matching with film start marking, hinged back cover, special film holder.
- Film Winding** : Self-cocking type by winding crank.
- Film Counter** : Automatically returning back to "O".
- Exterior Camera Body** : Made of 18-8 Stainless Steel, polished finish.
- Dimension** : 100mm  $\times$  100mm  $\times$  140mm



Soft Leather Case