

*H A S S E L B L A D*

**SUPER WIDE**

**C**

**INSTRUCTION BOOK**

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## Instructions for Use

May we first congratulate you on your choice of camera. Your new Hasselblad Super Wide C is an aristocrat among cameras and will produce well defined wide-angle pictures with extreme depth-of-field.

Please read these instructions carefully. They will tell you how the camera works and about its possibilities. The instructions include operation of the shutter mechanism and the exposure values, the automatic depth-of-field indicators and the exposure arrangements with and without flash synchronization. Details also are given of the design and method of loading of the interchangeable film magazines, the carrying and vertical control devices.

Before making a detailed study of your camera we suggest that you turn the page and read the brief instructions regarding the exposure of your first few pictures.

The Hasselblad Super Wide C is a precision instrument and, as such it must be properly looked after. Take good care of it and it will serve you well.

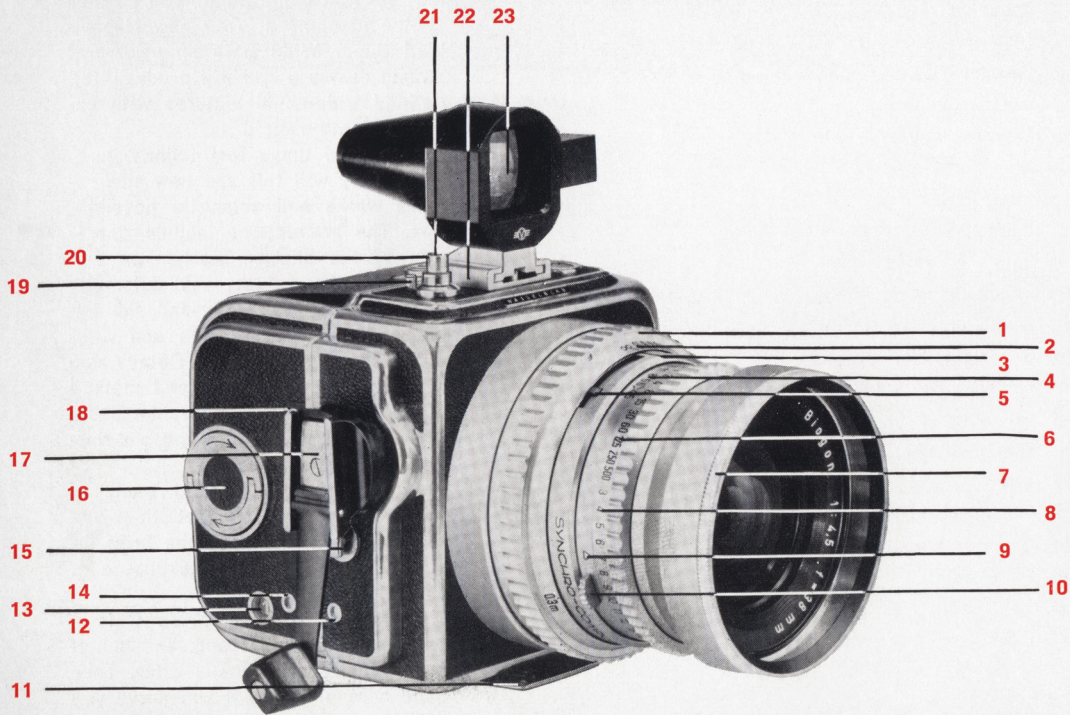
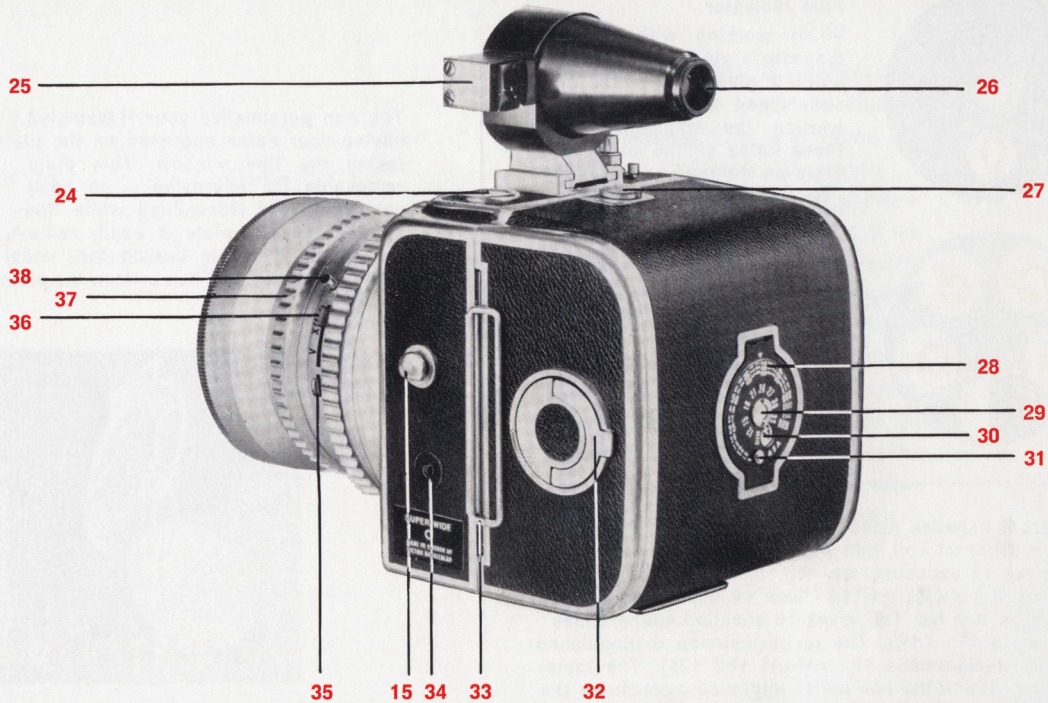


Fig. 1

- 1 Focusing ring
- 2 Distance scale
- 3 Central index
- 4 Diaphragm scale
- 5 Movable depth-of-field indicators
- 6 Speed scale
- 7 Filter ring
- 8 Exposure value scale
- 9 Exposure value index
- 10 Exposure value catch
- 11 Quick-socket for tripod
- 12 Shutter release signal
- 13 Exposure counter
- 14 Film signal
- 15 Carrying strap button
- 16 Loading key
- 17 Winding crank for film transport and shutter setting
- 18 Size marking
- 19 Time catch
- 20 Top release button
- 21 Cable release socket
- 22 Slide for view-finder
- 23 View-finder



- 24** Spirit level
- 25** Prism for level control
- 26** View-finder
- 27** Magazine catch
- 28** Film speed scale
- 29** Catch for film type setting
- 30** Film type symbols
- 31** Catch for film speed
- 32** Spool holder catch
- 33** Magazine slide
- 34** Cable bearer
- 35** Catch for M X V
- 36** Bar for synchronization and self release
- 37** Speed setting ring for time setting,  
diaphragm and exposure value
- 38** Synchronizer contact for M and X

Top release button for smooth and easy exposure. Threaded for cable release.

View-finder with same angle-of-view as the Biogon lens.

Prism for checking spirit level.

Spirit level for checking vertical alignment. If the camera is not exactly vertical, distortion will result.

The "time" catch device facilitates long exposures on "B". It should be set to "T" in such cases. The normal position is at "O".

Turn the focusing ring to set the camera to the required range. Owing to the extreme depth-of-field the focusing scale should be used in conjunction with the movable depth-of-field indicators to decide the most suitable range at which the photographs are to be taken.

Contact for "M" and "X" synchronization

Changeover control for "M" and "X" and the self-timer "V".

Button for carrying strap.

No exposure can be made until the magazine slide has been withdrawn.

Secure the flash cable with the hook provided for that purpose. This is particularly important when working with indirect flash illumination.

Fold out the rapid winding crank. Advance one revolution for each new exposure. The film wind contains a double-exposure check.

Quick socket for the Hasselblad tripod attachment. If the tripod cannot be used, the shoe can serve as a firm base when resting the camera on a level surface.

**A quick "recap" before proceeding further**

Fig. 2



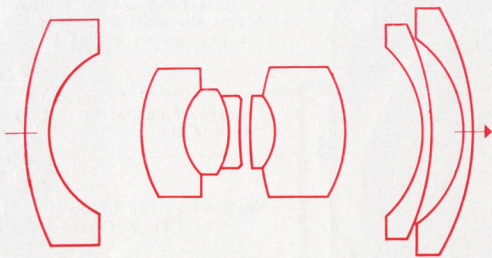


Fig. 3

### Zeiss Biogon 4.5/38 mm

Your Hasselblad Super Wide C is equipped with a Zeiss Biogon lens. This first-class example of optical ingenuity ensures perfect vertical and horizontal lines completely free from distortion from edge to edge, no vignetting even when used at the maximum aperture of 4.5. The 38-mm focal length results in the greatest depth-of-field ever achieved with a  $2\frac{1}{4} \times 2\frac{1}{4}$  camera with a  $90^\circ$  angle-of-view. It represents a new advance in the realm of wide-angle photography. The Zeiss Biogon is an 8-element lens (see diagram, fig. 3).

The lens, and its remarkable performance, must be protected by ensuring that the delicate lens surface is not damaged in any way. Use a lens brush to remove dust etc., from the surface. Dust on the lens may also cause small "blobs" of light on the negative. Use the lens cap whenever the camera is not in actual use.

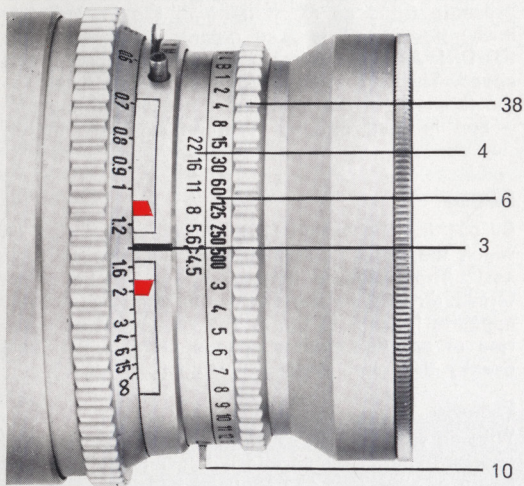


Fig. 4

### Speeds

The shutter speeds are shown on the speed scale (6) and comprise a linearly arranged series from 1–1/500 sec. and B. The shutter speeds are B, 1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 and 1/500. For exact exposure on B when using the EVS setting the series is continued in green (see fig. 4). This indicates speeds in whole seconds: 2, 4, 15, 30 and 60. The speed-setting ring (38) is used to set the shutter for these speeds and the pointer is set to the required figures on the black central index scale (3).

### The diaphragm

The aperture scale of the lens is f/4.5, f/5.6, f/8, f/11, f/16 and f/22. The diaphragm is released from the EVS setting by moving the catch (10) towards the camera body. It is set by turning towards the black central index (3).

The shutter speeds and the diaphragm aperture are in direct relation to each other in that the scales coincide. Both values are read from the same index.

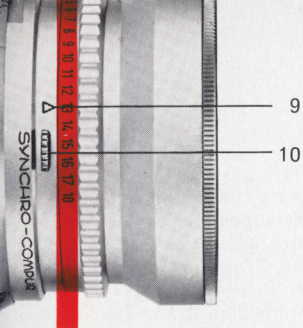


Fig. 5

### Exposure value system

You will have noticed that both the shutter speeds and the aperture settings follow a linear series. This means that the two traditional factors – aperture and time – have been reduced to one common factor. See also page 11.

The object of this innovation is to arrive at the exact shutter speed for all aperture settings under the same condi-

tions. The exposure function is designated in exposure values of 3–18 and these figures are engraved in red. The figures are called the EVS ratings and indicate in increasing value the greater intensity of reflected light falling on the film (see figure 6). Every higher EVS number represents twice as much light as the immediately lower figure and is thus clearly associated with the DIN, ASA and other systems of assessing film speed. The EVS rating depends on two factors – the intensity of the light and the speed of the film – and is read directly from an exposure meter.



Fig. 6

**3**

Dark subjects give low exposure factors



**18**

Light subjects give high exposure factors

### Setting

By pushing the button (10) backwards the ring on which the red EVS numbers are engraved is released. The exposure meter reading can be transferred directly to the corresponding EVS number opposite index 9 in fig. 5. The result will be a series of aperture-shutter speeds all of which give exactly the same exposure value (see fig. 7).

### Example

With an exposure value of 13 there are 6 different aperture-shutter speed alternatives. Thus the whole range of apertures can be used and the times will vary between 1/500–1/15 sec. (see fig. 7). Scales 4 and 6 thus give the same combinations as the red marking on the table.

EVS		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
APERTURE	4,5 *																
	5,6	4	2	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500				
	8	8	4	2	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500			
	11	15	8	4	2	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500		
	16	30	15	8	4	2	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500	
	22	60	30	15	8	4	2	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500

\* Owing to the linear construction of the scales, setting for whole exposure values will result in a deviation at shutter opening 4.5 which will fall between two time settings. In this case set the aperture for the most suitable time for the conditions.

Fig. 7

To the left of the diagonal red line (see table) will be found the full second speeds. Thus the exposure values can be used exactly even up to 60 sec. at f/22. The shutter speeds are shown in green figures. (See also fig. 8).

### Variations

The exposure indicated by the exposure meter is that recommended for normal exposures. However, certain variations may arise:

1. In certain cases over- or under-exposure may be desirable. If so, there are four different ways in which the exposure can be checked.

Reduce (over-expose) or increase (under-expose)

#### A. At the source

1. the sensitivity value on the exposure meter.
2. or the EVS rating (page 8).

#### B. In the exposure combination

3. or the aperture (page 7).
  4. or the shutter speed (page 7).
2. When using filters the exposure has to be increased to allow for the light absorbed by the filter (see page 26).

### Setting of half units

The aperture scale is graduated in half-stops and therefore the exposure values can be set with great accuracy. This is of particular importance to allow for the increase in exposure time when using color filters or when taking color photographs in general. The narrow exposure latitude of color film requires very accurate exposures and if the wrong EVS number is chosen both the exposure and the color balance may be seriously affected.

Note that there is no intermediate position between 4.5 and 5.6, since these aperture values represent half-stops.

### Long exposure times

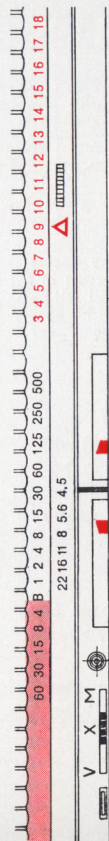
With EVS values of 8 and below the chances of using instantaneous shutter speeds are limited. Table 9 shows the aperture-shutter speed combinations for exposures of longer than 1 second at EVS 3.5–8. The green figures give the correct speeds for the relevant apertures when the shutter is set to B.

### Example

Set the EVS scale to 5. For the sake of depth of field you wish to use f/11. According to the table (fig. 9) the exposure time is 4 seconds. The scales 4 and 6 on your camera show the same value as the table. All you have to do now is open the aperture to B with the cable release and then hold it open for 4 seconds (see page 16).

When making long exposures on color film, however, allowance must be made for the color balance correction factor.

Fig. 8



These corrections are given in the table below:

exp. time as per exposure meter	correction factor
1–3 secs.	1.0
3–6 secs.	1.3
6–10 secs.	1.6
10–18 secs.	2.0
18–31 secs.	2.5
31–60 secs.	3.0
60–130 secs.	4.0

One EVS number = factor 2.0. The figures are those for Eastman Kodak Ektachrome film.

EVS	4	5	6	7	8
f 22	30	15	8	4	2
16	15	8	4	2	
11	8	4	2		
8	4	2			
5.6	2				

*Instantaneous speeds*

Fig. 9

## Linear structure

A characteristic of lenses with exposure values is, as previously explained, that all the scales are linear. Since these now have exactly the same intervals as regards both position and function they are interchangeable.

The advantage of this when making separate settings on the scales is greater speed and reliability – speed in that the photographer quickly learns how to change the setting without needing to concentrate unduly, and reliability in that the scales give more accurate results than was the case previously. But, most important by learning to apply the exposure values you develop an entirely new photographic technique.

## New ideas spell progress

It is possible that experienced photographers will find the idea of exposure factors something new. They may think of it as automation, and more than the methods they have grown used to. The exposure factors have been developed with a view to making routine quicker and more certain. The scales on the camera are so placed that the time and aperture settings can be made either individually or automatically. Devote a few minutes to learning the secret of the exposure factors and you will find that they are a great help.

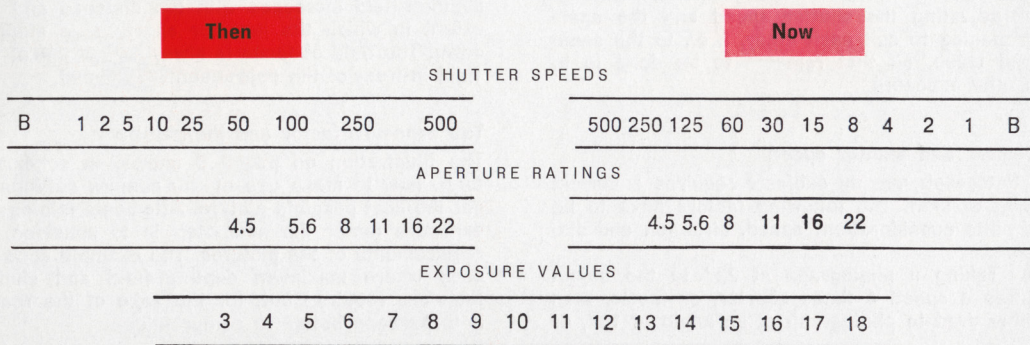


Fig. 10

## **Brief description of the shutter**

The basic principles of the shutter operation are: the EVS number is obtained from the exposure meter, which measures the intensity of the light prevailing at the time of taking the photograph and relates this to the speed of the film in the camera. When using a filter it is necessary to correct the exposure meter reading by the filter factor. When the EVS rating has been worked out and set on the camera the exposure time and the aperture have been set in a given relation to each other. The shutter speed can then be altered to suit the motion of the object or, if a certain depth-of-field is called for, the aperture opening can be reduced, or "stopped down", by the required amount. The automatic depth-of-field indicators show the extent of the field of focus for every shutter opening. After adjusting the shutter speed and the aperture opening to suit each other, i. e., to the same overall value, all that remains to be done is to make the exposure.

## **Movement and shutter speed**

To photograph moving subjects requires a certain amount of skill. The following factors have to be taken into consideration: speed, direction and distance.

Rule: Taking a photograph at  $90^\circ$  to the object requires a speed 4 times shorter, or faster, than that required to photograph at an angle of  $10^\circ$ , or

double that required to photograph at an angle of  $45^\circ$ . The distance between the camera and the subject also influences the shutter speed. An object within 5 yards of the camera generally requires a speed 4 times faster than that required for an object at 15 yards, regardless of the angle of approach. As regards shutter speed it is generally considered that  $1/60$  sec. is the slowest speed that can be used with the camera in the hand. For speeds of  $1/30$  and lower a tripod should be used.

## **Depth-of-field and aperture**

It will be seen from a study of the movement of the depth-of-field indicators (5), page 14, that the extent of the field depends on two factors: distance from camera to subject and aperture. Rule: The depth-of-field increases with the distance and the extent to which the lens, or aperture, is stopped down. The field of focus is always about  $2/5$  of the field in front of the object and  $3/5$  beyond.

## **The exposure factor and the picture**

The illustration on page 13 shows, in schematic form, how to make use of the camera settings to get the best possible picture. After determining the exposure factor the next step is to consider the requirements of the pictures. The example shows a case where maximum depth-of-field and shutter time are required but, for the sake of the result, it is perhaps better to compromise.

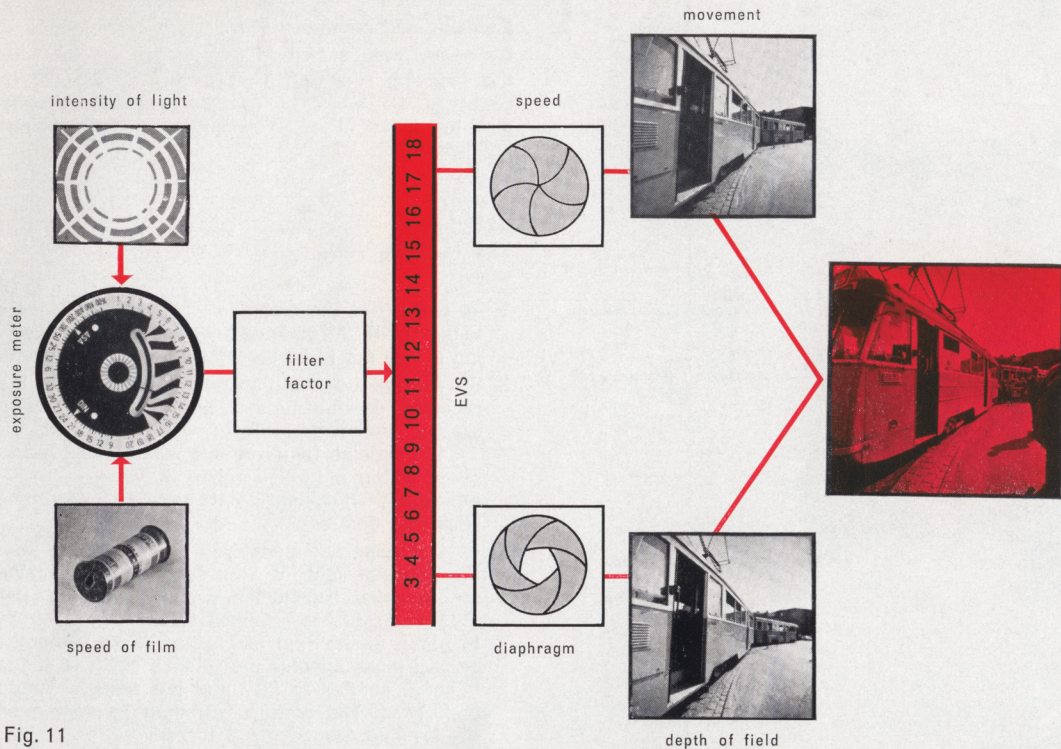


Fig. 11



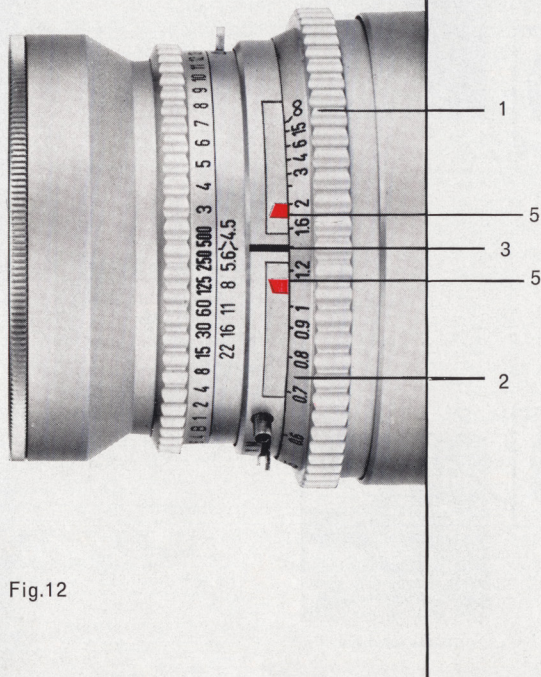


Fig.12

### Focusing and depth-of-field

Distances from 1 foot to infinity can be set with the focusing ring (1). The distance scale (2) is engraved on the ring and corresponds directly with the index (3) and the rotatable depth-of-field indicators (5).

### Useful tips

The focusing range can be determined in three ways.

1. By measuring the distance and setting the scale to this figure. All close-ups require careful measuring if they are to be reproduced at a given scale.
2. By setting the depth-of-field indicators for the required depth-of-field. Used in photographing groups and fixed objects when the depth-of-field is critical. Of advantage when taking sports shots within a limited range of focus. Examples: Hurdling, start-and-finish pictures wrestling and boxing.
3. It is of importance that you can determine both the depth-of-field and the framing by checking the focusing trough the ground glass adapter. This accessory is attached to the camera body in place of the film magazine. When using the ground glass adapter the release catch is set to "T" the shutter to "B" and the release button depressed. The picture will then be visible on the brilliant ground glass screen.

### Automatic depth-of-field indicators

Thanks to the movable depth-of-field indicators it is appreciably easier to focus the camera. Moreover, since it is possible to read off the depth-of-field corresponding to the exposure combination right on the distance scale, the roundabout method of focusing on the distance scale is eliminated. The movable depth-of-field indicators show the exact field of focus and, at the same time, the distance of camera to subject can be read on the index (3). The depth-of-field indicators consist of two parallel movable pointers. The position of these pointers in relation to the distance scale is adjusted as soon as the aperture setting is changed, and, of course, every change of shutter speed results in a corresponding change in aperture setting, since these two functions are automatically connected. Changes in the EVS setting due to changed lighting conditions also affect the aperture. Finally, the iris diaphragm can be disconnected from the exposure value setting. In this case the value is shown by the depth-of-field indicators. However, when the distance setting is changed, the pointers remain in the same position. Fig. 13 shows how the largest aperture opening ( $f/4.5$ ) results in the smallest depth-of-field. This is equal to the distance shown between the two pointers. The smallest aperture ( $f/22$ ) gives the maximum depth-of-field. A practical method of localizing a predetermined depth-of-field is to focus first on the nearest part

of the object and read off the corresponding value on the distance scale. The same procedure is then applied to the part of the object farthest away. By setting the depth-of-field indicators to these two points you will have immediately made a setting that previously seemed extremely complicated.

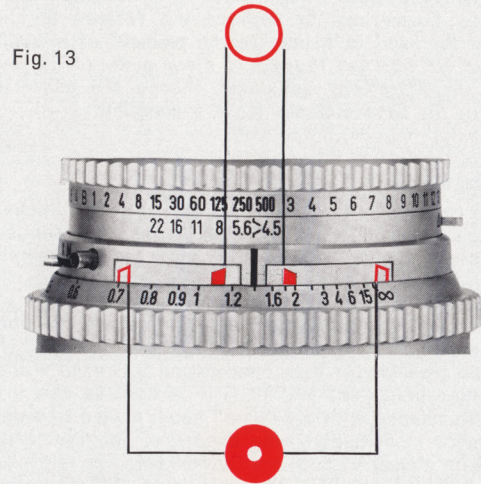


Fig. 13

### Vibration-free exposures

After making all the necessary settings the exposure is made by pressing the top release button (20). A standard cable release can be threaded into the top release button. Before an exposure can be made the shutter must be cocked by turning the transport crank (17) and the magazine slide removed (see page 21).

A common cause of bad pictures is camera movement. Learn how to depress the release button smoothly and to anticipate the moment of release and you will get sharp and clear pictures. If you expect "surprise" situations choose the shortest exposure time suitable for the conditions.

### Time Exposure

The release button can be combined with a "time" catch device (19). When this is used the shutter must be set to "B" and the catch set to position "T". When the release button is pressed the catch holds the shutter open. When the catch is returned to the "O" position the shutter is closed and the release button returns to its original position. When exposures longer than one second are used – the shutter being set to "B" – it is best to use the cable release with the "time" catch device to avoid camera movement during exposure. The film cannot be advanced until the "time" catch is returned to the "O" position. The self-timer "V" can also be used to avoid movement. See above for setting.

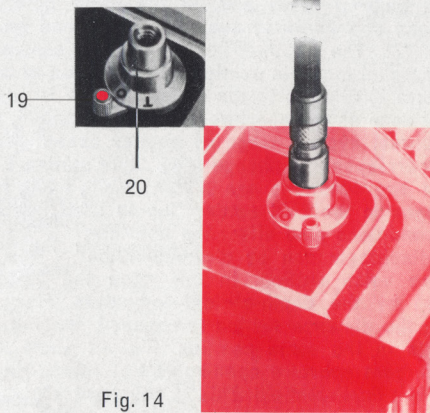


Fig. 14

**Until the catch is returned to the "O" position the film cannot be transported.**



Fig. 15

### Top release

To enable pictures to be taken from the hand position the camera is provided with a top release. If you hold the camera as shown in the illustration you can keep your eye on the vertical level indicator. At most shutter openings the depth-of-field is so great that you can "guess" focus. The most essential feature of photographing from the hand position is that the camera is vertical and we sug-

gest therefore that immediately before taking the picture – and after the subject has been clearly placed in the frame – you concentrate on the spirit level alone. A circle has been placed on the front finder lens, which helps the eye to find the horizontal line automatically.

When extreme accuracy in alignment is necessary, you will probably prefer to mount the camera on a tripod. Carefully calculate all the picture effects and don't forget the possibility of using the ground glass adapter. If, in addition, you have a focusing hood among your accessories, you can combine

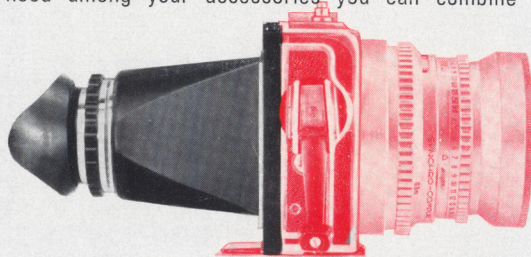


Fig. 16

this with the ground glass adapter thereby converting your Super Wide C from a hand camera to an ideal field camera for architectural studies. When checking the picture on the ground glass screen the shutter must be set at "B", the aperture to the largest opening and the "time" catch device to position "T".

Don't forget to return the catch to the "O" position before you make the exposure.

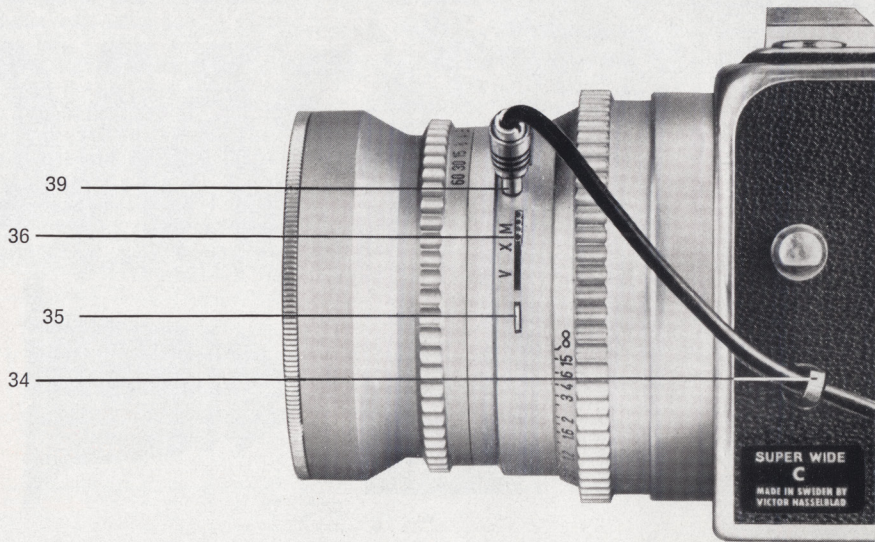


Fig. 17

### Self-Timer Device

The green lever (36) engages the self-release which, when in position "V", operates at all exposure times and "B". However, before the lever can be moved to "V" the catch (35) must be pressed down.

The self-timer operates  $8\frac{1}{2}$  seconds after setting. The lever then returns to position X. The shutter is then X-synchronized and the camera can be used with strobe flash even with this kind of photography. (See page 19, Synchronization.)

## Synchronization

The camera is fully synchronized for both M and X settings. The synchronizer contact (38) is of the coaxial type. The cord from the flash holder to the synchronizer contact is secured to the cable fastening with a special cable bearer (34). Switching from X to M is done by means of the green lever (36). The catch (35) must first be pressed down. The significance of M and X synchronization is explained on figure 18.

**X synchronization.** This is used to fire the flash when the shutter is fully open. Used primarily for strobe flash at all exposure times.

**M synchronization.** This delays the exposure until the flash has reached its peak intensity. Used with class M and S flash bulbs at all shutter speeds. When using M synchronization the shutter speed is always shorter than the flash time of the bulb. This factor must be borne in mind when using fast shutter speeds.

Most strobes have a reflector with an angle-of-view extending to no more than  $70^\circ$ . This is insufficient for your Biogon lens and, when taking flash photographs, you must expect vignetting resulting from this small reflector angle. The easiest way to overcome this is to turn the reflector towards the ceiling and use bounce lighting. Remember to open the diaphragm by at least one stop to allow for the loss of light.

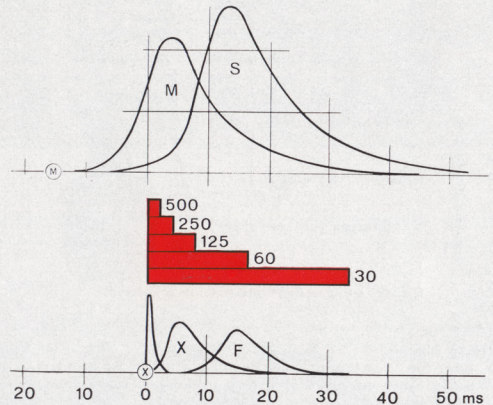


Fig. 18

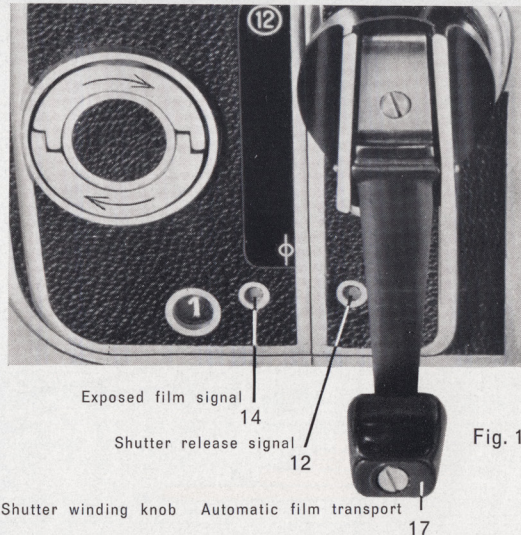


Fig. 19

### Film transport and shutter setting

The transport crank (17) has two functions; to cock the shutter and to advance the film to the next frame. This is done by turning the crank one revolution. While the shutter is being cocked the signals showing "shutter set" (12) and "film advanced" (14) are actuated. Fig. 20 shows the various combinations that may exist, for example, after changing a magazine. If, at any time, you are unable to turn the film transport knob it may be because:

1. The last film frame has been exposed, leaving no number visible in the film window (13).
2. The time catch is at "T" and the release button has not returned to the original position. See page 16, fig. 14.

Shutter winding knob    Automatic film transport

17

### Safety signals

1. Both the film transport (14) and the shutter setting (12) are white. This means that a new frame has been brought forward and the camera set for exposure.
2. Both the signals are red. The exposed frame has not been advanced and the shutter is not cocked. Advance the film.



Fig. 20

3. The film transport signal is red, the shutter setting white. The magazine has been attached to the camera with the last exposed frame not advanced. The shutter is cocked and, if the release button is pressed, there will be a double exposure. This may, of course, be taken advantage of intentionally.
4. Film transport white, shutter setting red. The magazine has been attached to the camera with a new frame in position but without cocking the shutter. To make an exposure it is necessary to re-cock the shutter. This will result in the loss of a frame.

**Rule:** When attaching a magazine to the camera ensure that the signals both show the same color, i. e., red or white.

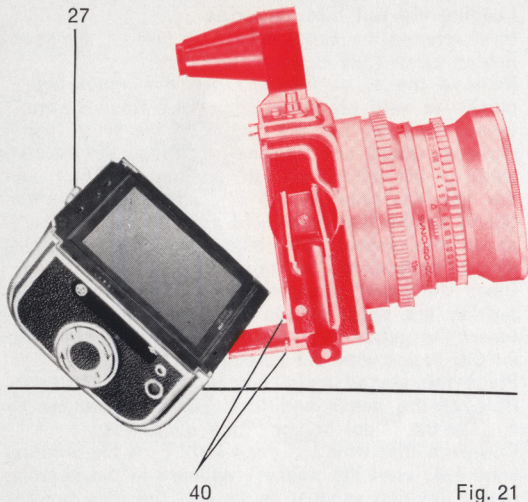


Fig. 21

Before attaching the magazine to the camera body make sure that the exposure and film-transport indicators are in the correct position (see page 20). The colors must always coincide.

### Interchangeable backs

One of the major advantages of the Hasselblad camera is that you can change magazines in the middle of a roll of film. For this reason it is especially important to learn the necessary procedure at an early stage.

Place the camera in the left hand with the lens pointing away from you. Press the magazine catch (27) to the right with the thumb of the right hand and release the magazine from the catches (40). However, before the magazine can be changed it is necessary to be sure that the magazine slide (33) is in place. The slide serves the purpose of insuring that the magazine cannot be removed as long as the film is exposed. When the slide is removed you can operate the camera, but the magazine cannot be removed. When it is in position you cannot make an exposure or transport the film, but the magazine can be removed. It is important to insure that the slide is at right angles to the camera body and that the bent section (grip) is facing the front. This is to facilitate loading.

The magazine is attached to the camera in the following manner: The magazine is locked against the catches on the camera body (40). Push the catch to the right (27) and press the magazine firmly against the catch. Release the catch and the magazine will be locked into position. Remove the magazine slide and the camera is ready for use.



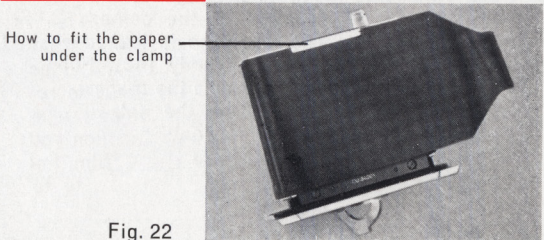
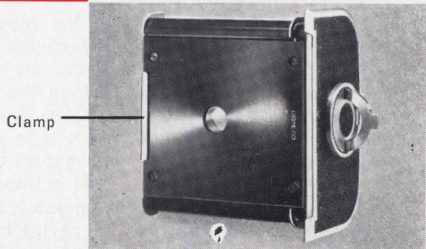
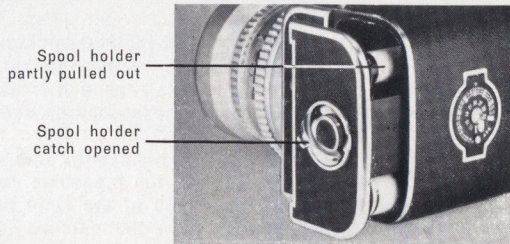


Fig. 22

### Loading the roll film magazine

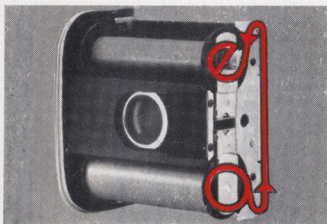
First release the spool holder by turning the spool holder catch (32) counter-clockwise. Remove the spool holder. Turn the spool holder clockwise until the film clamp opens. Open the spool holder arms so that the spool and the empty spool (take-up spool) can be inserted. Place the take-up spool in the holder with the corrugated knob, and the full film spool in the opposite one. Place the thumb on the film spool and pull out about 4 inches of the paper. The black side of the paper should be towards the operator. Place the paper under the film clamp. Lock it by turning the spool holder catch counter-clockwise. Insert the paper flap into the take-up spool. Tighten the paper with the corrugated knob. Place the loaded spool holder into the magazine. Release the paper and lock the spool holder by turning the spool holder catch clockwise. Open the film window (page 23). Turn the winding knob (16) until the figure 1 appears in the opening under the film window cover. Set the film counter by turning the film winding knob counter-clockwise as far as it will go. The figure 1 will then appear (13). After the last frame has been exposed the exposure stop comes into action automatically. The camera is then cleared and the film transport and exposure signals now show a white field. **The film is then wound onto the take-up spool by means of the magazine winding knob.** Be sure that the colors in the signal windows (12 and 14) are the same before changing a magazine. See page 20.

### Tips on using the roll film back

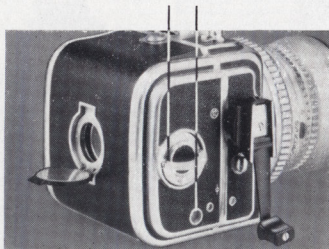
There is no need to remove the magazine from the camera when loading the roll film magazine. Immediately after attaching the magazine remove the slide, place it in the special holder in the ever-ready case. If the slide is left in the magazine you run the risk of losing valuable seconds when swinging into action. If you plan to take a large number of pictures the best method is to load several magazines and thus save valuable time.

After loading the magazine and winding the film forward, the film knob should be turned backwards to set the film counter to "1". If you forget to do this the film frames will be out of position. Pencil notes concerning exposures and developing can be made on the black metal plate showing the film plane and frame size. These notes can be removed with an eraser or a damp cloth.

How to thread the film



Loading key Exposure counter



Film window opened

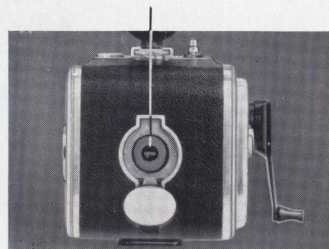


Fig. 23

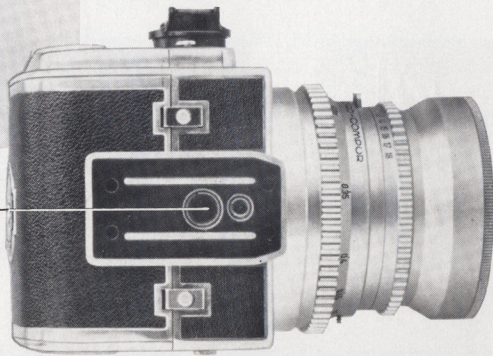


Fig. 24



11

Fig. 25



### Fastening Devices and Supports

The carrying strap is attached to the camera by means of the strap button (15). Secure attachment is assured in that the button and the strap can only be connected in one way. A safety spring prevents the fasteners from coming loose. The camera is carried with the strap over the shoulder or around the neck and the lens pointing downwards, thus protecting the lens surface from damage. The strap is adjustable with a simple buckle.

### Tripod Fastening Devices

There is a shoe (11) on the bottom of the camera for attaching the Hasselblad quick-release device. The shoe is also provided with the usual tripod threads for both American and European screws in case you prefer to use a ball-and-socket head. The shoe also can be used as a firm base if the camera is to be rested on a flat surface when no tripod is available.

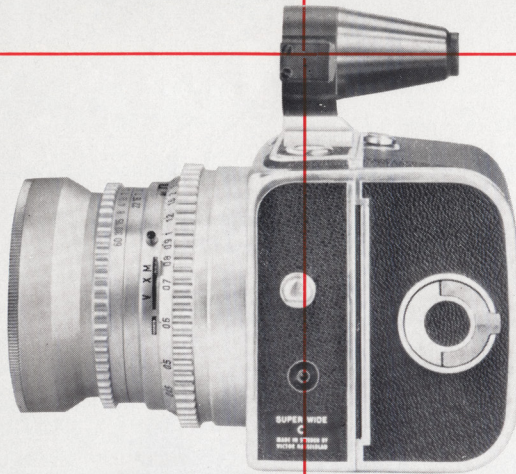
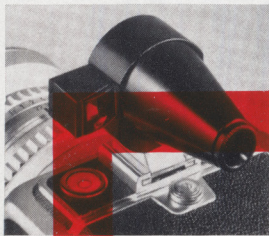


Fig. 26



### Control of vertical level

The view-finder fills two functions. It indicates the exact picture frame and, by using the prism in conjunction with the spirit level on the camera body, the vertical position can be determined. The finder is best used in the following manner. Select the picture frame and the camera angle, then check vertical alignment by means of the spirit level. When photographing hand held check the spirit level immediately prior to pressing the release button. This is very important since wide-angle lenses require the camera to be exactly in the vertical plane. If not, distortion will result. Remember that the view-finder is also a precision instrument, and it requires the same degree of care as the camera lens.

## Filters

When filters are necessary, use the Hasselblad series 63 (Series VIII) filters. The extreme wide-angle prevents the use of a sunshade and, when using filters, care must be taken to avoid lights shining directly on the filter. It is suggested that the lens be shielded from the sun with the hand, a hat or some other suitable object. The filters are attached to the lens by first removing the filter

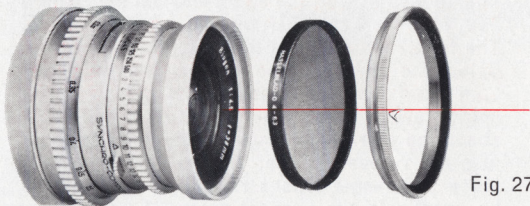


Fig. 27

ring (7) placing the filter in position and then replacing the filter ring. The filter will then be in exactly the same plane as the lens.

The original Hasselblad filters are solid glass, and include correction, contrast and haze filters. They are mounted in black anodized aluminium rings and their effect can be determined from the absorption curves shown on page 27.



The identification code shows the color, exposure factor and diameter.

Example: The yellow filters are designated Y-1,5-63, where Y = Yellow, 1,5 = 1,5 times normal exposure, and 63 = 63 mm diameter.

### Correction filters

#### Y - 1,5 Color: yellow

Landscapes, snow, cloudy skies  
Yellow and red - lighter  
Blue - darker  
For short exposure times

### Contrast filters

#### G - 3. Color: green

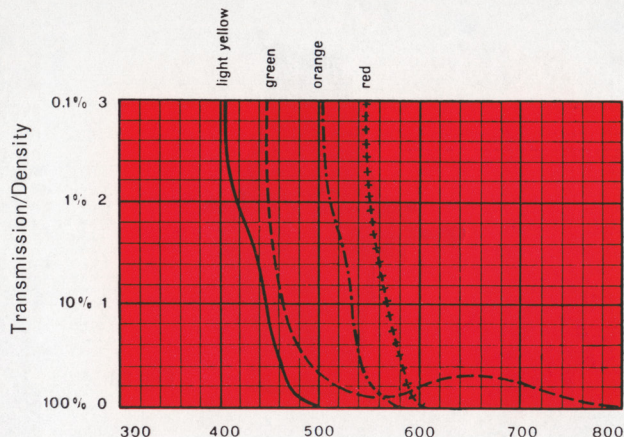
Multicolored subjects in daylight  
Portraits daylight or artificial light

#### O - 4. Color: orange

Sky contrasts, richer texture outdoors  
Absorbs ultraviolet at far distance shots

#### R - 6. Color: red

Emphasizes the effect of the orange filter



### Absorption curve

The Hasselblad range of filters for black-white films contains a selection from those in most common use today. Efficiency can easily be read off the absorption curve, where all the filters are plotted. Further useful information on filter applications will be found under the headings "Correction filters" and "Contrast filters".  
Filter factors for pan film.

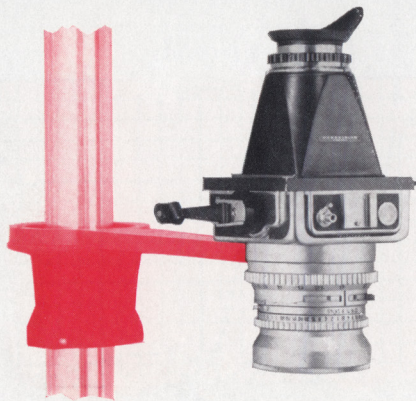


Fig. 28

### Reproduction

If you plan to use your Superwide as a reproduction camera you would do best to acquire a copying table with fixed illumination devices. With the lens set to 1 foot you can photograph at a scale of 1:5. The length of the side of the picture frame will then be 275 mm.

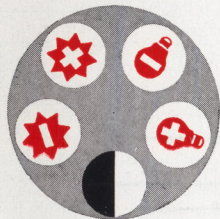
Fine-grain standard roll film 120 in the magazine will meet all copying requirements.

### Indoor photography

It is particularly advisable in the case of indoor photography to provide the camera with a firm support when the exposure is made. If a tripod is not available you can use the quick-action fitting on the bottom of the camera as a firm base. Place the camera on a flat surface, for example a table (fig. 29). Hold it lightly against the surface and expose with a cable release.



Fig. 29



### Film indicator

When working with different magazines you must make absolutely sure to note the type and speed of the film after loading the magazine. Make these notes on the film speed plate on the back of the magazine (marked ASA 6–1600 and DIN 12–33). Set the exposure meter to the required film speed. The type of film is marked by symbols designating black-white, color, daylight, positive, negative.

Fig. 30

### Different negative sizes

Three different roll film magazines can be used: No. 12 gives 12 exposures on 120 roll film and a negative size of  $2\frac{1}{4} \times 2\frac{1}{4}$ ; no. 16 gives 16 exposures of size  $2\frac{1}{4} \times 1\frac{5}{8}$  and No. 16S gives 16 so-called "superslides" frames of  $1\frac{5}{8} \times 1\frac{5}{8}$ . The magazines are distinguished by the designations 12, 16 and 16S (24). The metal plate on which the number is engraved also shows the film plane markings (19).

You can personalize your Hasselblad by having your name engraved on the plate facing the film window. This plate is removable for engraving – no need to part with your Hasselblad while this is being done. The plate is easily removed by putting an acute curved tool underneath by the hinge. Then undraw the plate.





Your HASSELBLAD is produced in Göteborg, Sweden, by Victor Hasselblad Aktiebolag. This is to inform you that your HASSELBLAD camera is guaranteed for one year against defective materials or workmanship, if the enclosed Registration Card is returned within ten days of the date of purchase of the equipment. Transportation charges for shipment of equipment to and from the manufacturer's service center assumed by customer. No liability is assumed for damaged or faulty film. The guarantee does not apply where the camera is subject to abnormal treatment.



