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## Contaflex super BC

Instructions for use

# ZEISS IKON

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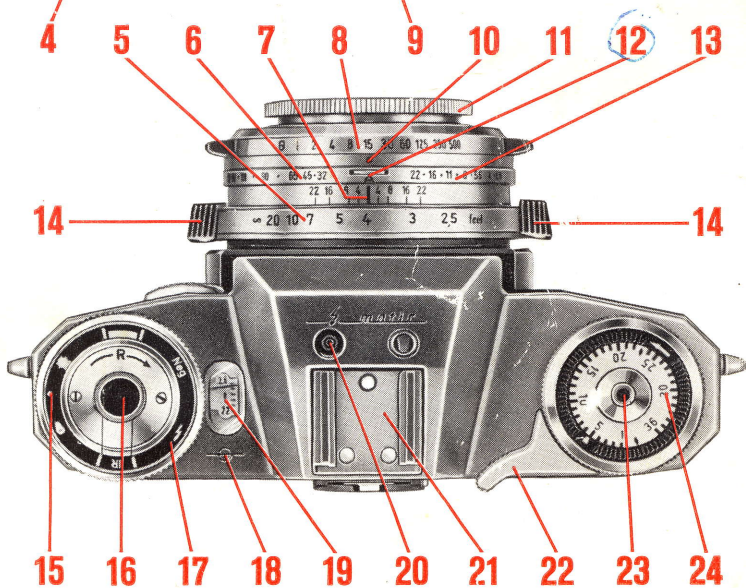
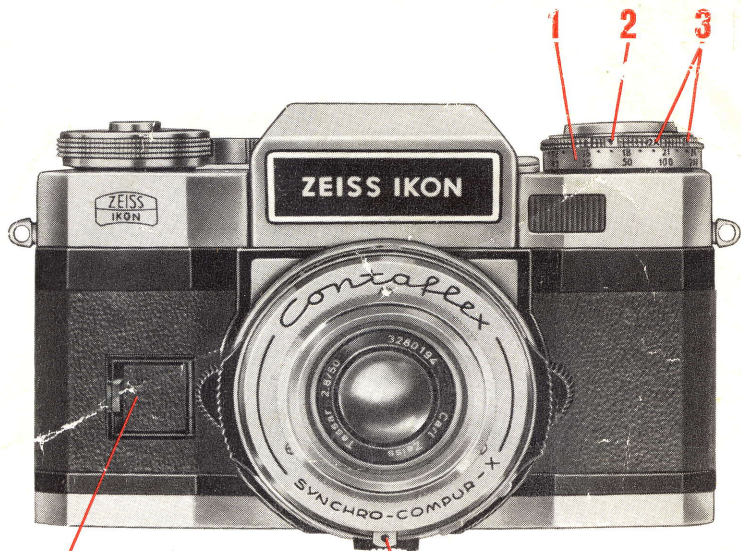
# VOIGTLÄNDER

## Guide to operational parts

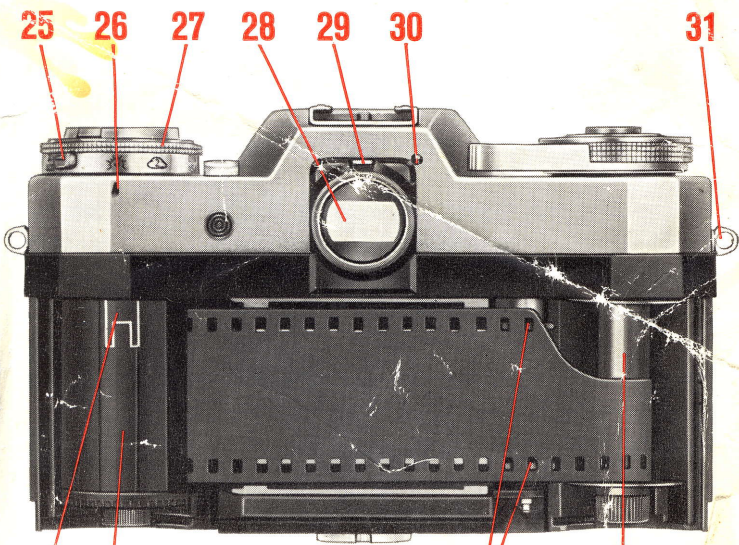
- 1 Film speed scale (DIN and ASA)
- 2 Film speed setting mark
- 3 Exposure adjustment device
- 4 Lid for insertion of exposure meter battery
- 5 Distance scale
- 6 Flash guide number scale for ZEISS TESSAR f/2.8, 50 mm lens
- 7 Depth of field scale with distance-setting mark
- 8 Shutter speed scale with setting grips
- 9 Interchangeable lens locking device
- 10 Shutter speed setting mark
- 11 Interchangeable ZEISS TESSAR f/2.8, 50 mm lens
- 12 On-off key for exposure automation. Also serves to set lens aperture and automatic flash exposure device, in conjunction with setting grip 36
- 13 Aperture scale (manual), for use when automatic exposure control is disengaged
- 14 Distance setting grips
- 15 Button for setting film reminder dial
- 16 Retractable rewind lever
- 17 Film reminder dial
- 18 Film plane indicator
- 19 Exposure meter indicator with lens stop values and red warning zones
- 20 Flash contact
- 21 Accessory shoe
- 22 Rapid film transport and shutter cocking lever
- 23 Shutter release button with screw-thread for cable release
- 24 Frame counter dial

Parts numbers 25—42 apply to the illustrations on the rear cover

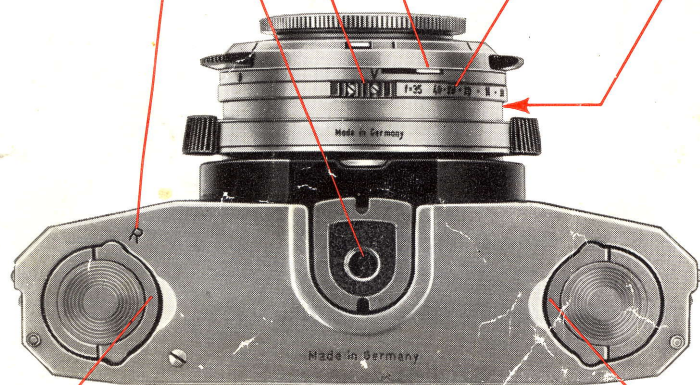
- 25 Locking device used, in conjunction with ring 27, for setting the film speed  
This also serves the purpose of setting the exposure adjustment device, e.g. under back-lighting
- 26 Setting mark for exposure adjustment device, e.g. under backlighting
- 27 Film speed setting ring







32 33 34 35 36 37 38 39 40 41



42 42



- 28 Viewfinder eyepiece
- 29 Light-excluding slide ✓
- 30 Battery testing key
- 31 Eyelets for carrying strap
- 32 Guide fork for film cassette
- 33 Film cassette
- 34 Film-rewind setting mark
- 35 Tripod socket
- 36 Grip for setting lens aperture and flash guide numbers, in conjunction with key 12
- 37 Setting lever for delayed action device V
- 38 Sprocket wheels, which engage in the film perforation
- 39 Flash guide number scale for ZEISS PRO-TESSAR 35 mm lens
- 40 Take-up spool, with slit and fastening device for start of film
- 41 Flash guide number setting mark (red line) for use with the ZEISS PRO-TESSAR 35 mm wide-angle lens
- 42 Camera back locking device

## **Loading and unloading the Camera**

Before loading the camera, turn the rapid film transport lever 22 until it comes to a stop. Then flip up the two bolts of the locking device 42, rotate them in mutually opposite directions, and remove the camera back.

### **Inserting the film**

(Do not perform this operation in direct sunlight!)

Insert the beginning of the film in the slit of the take-up spool 40, which has been removed from the camera. Hook the 2nd or 3rd perforation hole on the special fastening device, wind the film twice around the spool, and hold it tight. Now insert the take-up spool and the film cassette into the camera in such a manner that the film perforation engages in both the sprocket wheels 38.

Replace the camera back from above in such a way that half of the film width remains visible. Then push the camera back home, and lock it.

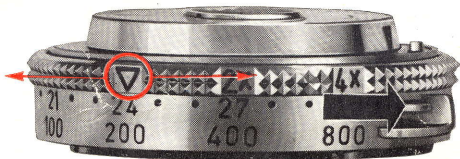


Illustration 1

**Important: Do not forget the film speed setting (Illustr. 1)**

The speed of the film, as indicated on the film package in DIN or ASA, is of decisive importance. Move the locking device 25 in the direction of the arrow until it comes to a stop, and set the ring 27 in such a manner that the film speed setting mark 2 coincides with the appropriate value on the film speed.

**Frame counter setting and film transport control**

Set the white mark on the black milled ring of the frame counter dial 24 three units ahead of the actual frame number of the film being used. For 20 and 36 exposure film lengths there are special red marks provided.

Pull out the retractable rewind lever 16 and turn it in the direction of the arrow until a resistance is felt. This serves to retighten the film on its spool in the cassette. Next alternately operate the shutter release 23 and the film transport lever 22 two times, so that the white mark now coincides with the total frame number of the film in question. In doing this, the rewind lever should be seen to rotate in a direction opposite to the arrow, to indicate that the film is being transported through the camera correctly.

The frame counter always indicates the number of frames which remain to be exposed. After the final exposure (i.e. after number 1 on the frame counter) do not operate the film transport lever 22 again, but rewind the film.

**Removing the film**

Flip up the left-hand bolt of the camera back locking device 42, and set it to "R". Pull out the rewind lever 16 and turn it in the direction of the arrow until a light resistance is felt (the film will now release itself from the take-up spool). Only now

should both camera-back bolts be opened. Remove the camera back and take out the film cassette.

Always keep the film channel and the take-up spool clean!

### Film reminder dial

This serves merely as a memory aid. It is set by means of the button 15.

The symbols on the film reminder dial have the following meanings:

black and white film, colour negative film (neg.), colour reversal film — flash, colour reversal film — daylight, colour reversal film — artificial light, infra-red film (IR).

## Taking the Photograph

### Focusing (Illustr. 2 and 3)

Look through the viewfinder and adjust the hand-grips 14 until the split image visible in the centre of the viewing screen forms one integrated image or, in the case of subject matter

Illustration 2  
Split image focusing

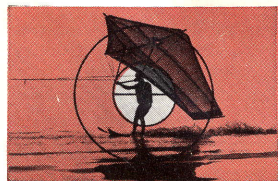
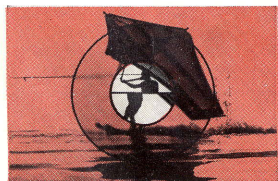
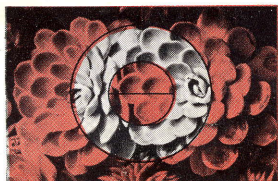


Illustration 3  
Focusing through fine focusing screen ring





which contains no distinct lines, focus through the fine focusing screen ring until the image is at its sharpest. The appropriate distance can then be read off the distance scale 5, against the setting mark 7.

The black ring on the viewfinder eyepiece 28 can be screwed off, to enable certain accessories (e.g. eye-shield) to be attached.

### Lens aperture and depth of field

The photographic lens renders only a limited zone in front of and behind the distance which has been set as sharp. This zone of sharpness, or "depth of field", becomes larger the further the lens is stopped down. Its limitations for the individual lens aperture settings are indicated by the depth of field scale 7.

Example (see illustr. 4): Lens focused on 10 feet.  
Depth of field at  $f/8$  extends from 7 to 20 feet.

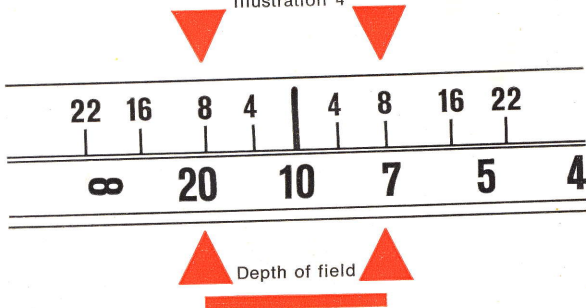
#### Remember:

**Large aperture ( $f/2.8$ ) = limited depth of field**

**Small aperture ( $f/22$ ) = extensive depth of field**

For specific photographic tasks which might call for it, the exact values can be found in the table on the front cover.

Illustration 4



## Setting the shutter speed

Rotate the ring 8 by means of its two grips until the required shutter speed lies opposite the shutter speed setting mark 10. The selected speed value will also be visible in the lower right hand corner of the viewfinder.

The shutter speed to be selected is dependent on the lighting conditions as well as on the rate of movement of the subject matter. The faster such motion, the shorter must the exposure time be. The figures on the scale 8 represent fractions of a second (e.g. 60 means 1/60th sec., etc.).

When using the "B" setting, the shutter remains open for as long as the shutter release button 23 remains depressed.

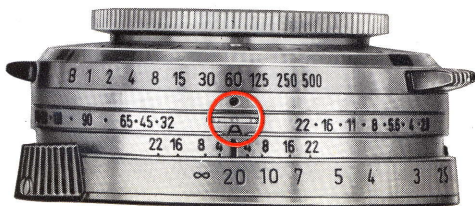
## Automatic exposure control (Illustr. 5 and 6)

First the key 12 ("A" stands for "automatic") must click into position opposite the setting mark 10. Select the shutter speed, but do not use intermediate settings! (The "B" setting can not be used in conjunction with the automatic exposure control). Look through the viewfinder and aim the camera at the subject. If the exposure meter needle (to the right of the image area) is in the green zone, then there is sufficient light for making an exposure — and a picture may therefore be taken.

The lens aperture, which sets itself automatically, can be read off, both in the viewfinder and on the scale 19 on the camera body.

If the lens stop indicator should lie in one of the two red marginal zones, then a correct exposure is not possible under the existent lighting conditions with the shutter speed which has been chosen. In such a case alter the shutter speed (it

Illustration 5



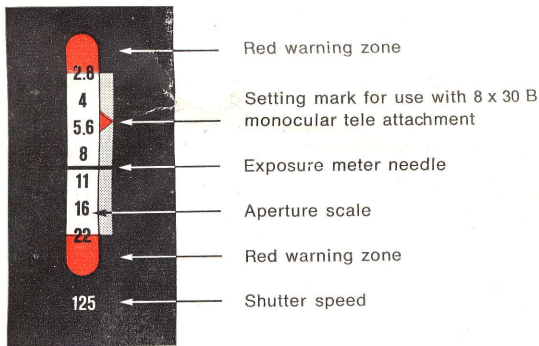


Illustration 6

can be controlled through the viewfinder) until the indicator moves to then green zone.

When the lighting conditions are not sufficient for the operation of automatic exposure control, it will not be possible to make an exposure. The indicator will remain in the red zone. no matter how the shutter speed is adjusted. (The solution in this situation is the use of flash, see page 14).

On releasing the shutter the exposure meter needle is locked in position.

Should it be desired to use a specific lens aperture, this can be done even when the automatic exposure control is in operation by rotating the shutter speed ring 8 until the exposure meter needle lies on the required aperture value. But only full shutter speed settings, which click into position, may be used.

### Releasing the shutter

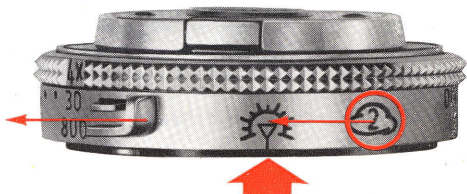
Expose the film by depressing the shutter release button 23 gently and steadily — and not jerkily. At the moment of exposure the viewing image will disappear. It only reappears when the rapid film transport and shutter cocking lever 22 is activated. With longer exposure times, from 1/30th sec., we would recommend the use of a tripod.

## The exposure Meter

The light is directed at a CdS photo-resistance cell, which is situated in the camera viewfinder. This arrangement enables an exact measurement of only that light which will reach the film through the lens to be made. The result is a very exact exposure assessment, no matter what focal length lens is being used.

The exposure meter conforms to agreed standard specifications, and yields a correct exposure under normal conditions. In the case of landscapes with large areas of sky, and especially when shooting against the light, the exposure can be adjusted accordingly by opening the lens aperture by an extra stop. Such an adjustment should also be made in the case of photographing subjects of low contrast on colour reversal film, e.g. when shooting under an overcast sky. The necessary aperture correction is achieved through the special exposure adjustment device. Use the grip 25 to rotate the ring bearing the cloud symbol, positioning the latter opposite the setting mark 26, and holding it there while making the exposure, (illustr. 7). This adjustment is indicated both through the viewfinder and also on the camera by the needle position going back by one stop value on the aperture scales. On being released, the ring automatically springs back to the sun symbol. The "2" included with the cloud symbol indicates that the exposure adjustment in question corresponds to a filter factor of 2x. If an adjustment of less than one stop is to be made, the ring must be held at an intermediate position. When using the delayed action device, or when shooting from

Illustration 7



a tripod, while taking meter readings from the external indicator 19, it would be possible for light to reach the highly sensitive CdS cell through the viewfinder eyepiece, as this would not be shielded by the eye. In such cases the eyepiece should be closed through the lightexcluding slide 29.

The "Mallory PX 13" type battery, which is inserted into the camera for operation of the exposure meter, has a life under normal conditions of use of about two years. Nonetheless, to avoid unnecessary battery drainage, the battery should be switched off when the camera is not in use by setting the shutter onto "manual" or onto automatic flash operation. To be assured of consistent current supply, the battery should be protected from extreme temperatures (below  $-10^{\circ}\text{C}$ ). If this should not be possible, then the "Mallory PX 625" type battery should be used.

### **Testing and changing the battery**

Operate the film transport lever, and hold the camera to the light in such a way that the exposure meter needle lies roughly in the centre of the green zone. Then depress the battery testing key 30 briefly. If the needle goes back by more than one stop within 1 to 2 seconds, the battery should be changed.

The battery is reached by raising the lid 4. When inserting a new battery, care should be taken that the positive pole lies on the lower side, for only in this position is it possible to close the lid 4 again.

New batteries can be obtained from photographic dealers.

## **Manual operation**

### **Disengaging the auto-control (Fig. 8)**

Depress key 12 and at the same time turn the aperture scale 13 (marked "manuell") to the setting mark 10 by means of grip 36. By setting the shutter to "manuell" it is possible to select the shutter-speed and aperture settings according to choice: either independently of the exposure meter or in accordance with its readings.

In this way the exposure can be corrected — preferably by varying the aperture setting in either direction — to a greater extent than can be achieved with the dull weather/backlight corrector.



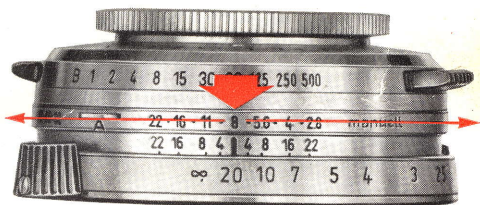


Illustration 8

### Example:

Close-up readings with high brightness-contrasts. Hold the camera (with the auto-control engaged) close up to the subject whilst taking care not to cast a shadow upon it. Read off the aperture indicated (here the external meter window will prove most useful) and set it by means of the aperture setting ring marked "manuell". Then take the picture from the desired position.

When the camera is set to a manually-selected aperture, the exposure meter is disconnected (the pointer remains within the red sector). This is a built-in precaution to avoid the possibility of erroneous readings. So long as the pointer is visible within the green sector, you can be certain that the automatic exposure control is in operation.

## Using the delayed action release

Tension the shutter by operating the film transport lever 22, and then set the lever 37 to "V". On pressing the shutter release button some ten seconds pass before the exposure is automatically made. During this time the lever 37 returns to its normal position. Time exposures (shutter setting "B") are not possible with the delayed action device.

## **The use of filters**

When using filters, the filter factor of the filter in question is generally taken into consideration quite automatically in view of the positioning of the exposure meter cell behind the lens. In the case of the more dense colour filters it is advisable to use an additional factor of 2x, and this is done by using the exposure adjustment device 3 to set that factor, instead of the setting mark 2, opposite the appropriate DIN or ASA value on the scale 1.

The 2x and 4x setting marks further serve the purpose of giving a fuller exposure than that which is indicated by the exposure meter.

## **Photography with the 8 x 30 B tele monocular attachment**

When the 8 x 30 B tele monocular is attached, the lens is automatically operating at a smaller and fixed aperture value. The exposure meter must thus be used to select an appropriate shutter speed for the lighting conditions in question. The shutter speed scale 8 is adjusted so that, while the camera is being aimed at the subject, the exposure meter needle comes to lie opposite the triangular mark near the aperture f 5.6. (See also illustr. 6). Further details on the use of the tele monocular attachment are to be found in the special instruction booklet for this unit.

## **Flash photography**

The cord-free ZEISS IKON IKOBLITZ can be fixed directly on to the flash contact 20.

Other flash units can be attached either to the accessory shoe 21 or, through a flash bracket, to the tripod socket 35. The synchronising cable is then attached to the contact 20.

Set the guide number which corresponds to the type of flash light and the speed of film being used. This can be found on the package or in the instruction sheet of the light source being used.

The CONTAFLEX super BC has X-synchronisation.

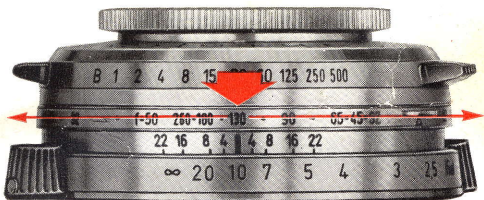


Illustration 9

### Automatic flash exposure

The automatic flash exposure device works basically with all shutter speeds. The choice of shutter speed is unlimited in the case of electronic flash, and does not in any way affect the guide number. Flash bulbs should be used with the shutter set to 1/30th sec (marked in yellow). Using the key 12 and the grip 36, position the appropriate flash guide number on the scale 6 opposite the setting mark 10 — when the standard ZEISS TESSAR f 2.8 50 mm lens is being used (illustr. 9).

When using the ZEISS PRO-TESSAR 35 mm wide angle lens with flash, use the guide number scale 39. The setting is made to the red setting mark 41.

The switch from "A" to guide numbers is most easily made with the camera shutter tensioned and the lens set to a distance of about 3 metres.

If the exact guide number for the flash being used is not included on the flash scale, then the guide number value which is closest to it should be set. Intermediate settings which do not click into position must not be used.

The following guide numbers can be set:

On the black scale (50 mm focal length) for the standard ZEISS  
TESSAR f 2.8 50 mm lens:

(Corresponding guide numbers for distance settings in feet.)

<b>80</b>	<b>68</b>	<b>56</b>	<b>48</b>	<b>40</b>	<b>34</b>	<b>28</b>	<b>24</b>	<b>20</b>
<b>260</b>	<b>220</b>	<b>180</b>	<b>155</b>	<b>130</b>	<b>110</b>	<b>90</b>	<b>78</b>	<b>65</b>
<b>17</b>	<b>14</b>	<b>12</b>	<b>10</b>					
<b>55</b>	<b>45</b>	<b>38</b>	<b>32</b>					

On the red scale (35 mm focal length) for the ZEISS PRO-  
TESSAR 35 mm wide angle lens:

<b>40</b>	<b>34</b>	<b>28</b>	<b>24</b>	<b>20</b>	<b>17</b>	<b>14</b>	<b>12</b>	<b>10</b>
<b>130</b>	<b>110</b>	<b>90</b>	<b>78</b>	<b>65</b>	<b>55</b>	<b>45</b>	<b>38</b>	<b>32</b>

For the sake of better clarity, those guide numbers reproduced here in small figures are represented merely by dots on both scales.

Look through the viewfinder, focus the lens on the subject by means of the split-image rangefinder, and release the shutter. If the subject matter has some depth, focus somewhere half-way along this zone. The lens aperture for correct exposure is set automatically through the distance setting.

In order to prevent incorrect flash exposures, the distance setting is automatically locked when it becomes either too great or too small for the guide number in question.

Flash exposures with the ZEISS PRO-TESSAR 85 mm and the ZEISS PRO-TESSAR 115 mm telephoto lenses must be made in the conventional manner, without automatic control.

Depth-of-field table for the CONTAFLEX super BC with ZEISS TESSAR f/2.8 50 mm

Dis- tance	Aperture f/2.8	Aperture f/4	Aperture f/5.6	Aperture f/8	Aperture f/11	Aperture f/16	Aperture f/22
∞	64'4"-∞	45'1"-∞	32'4"-∞	22'9"-∞	16'8"-∞	11'6½"-∞	8'6"-∞
20'	15'4"-28'9"	14'-35'6"	12'6"-51'7"	10'8¾"-162'5"	9'2"-∞	7'4½"-∞	5'11¾"-∞
10'	8'8½"-11'9"	8'3"-12'8"	7'8¾"-14'3"	7'½"-17'5"	5'¼"-11'8"	5'5½"-71'4"	4'8"-∞
7'	6'4¼"-7'9½"	6'1½"-8'2¼"	5'10"-8'9½"	5'5¼"-9'10½"	5'¼"-11'8"	4'5½"-17'	3'11¼"-37'4"
5'	4'8"-5'4½"	4'6½"-5'6¾"	4'4¼"-5'9¾"	4'2"-6'3"	3'11¼"-6'11"	3'7"-8'5"	3'3"-11'5"
4'	3'9½"-4'2¾"	3'8½"-4'4"	3'7¼"-4'6"	3'5½"-4'9"	3'3½"-5'1¼"	3'¾"-5'10"	2'9¾"-7'1"
3'	2'10¾"-3'1½"	2'10¾"-3'2"	2'9½"-3'3"	2'8½"-3'4½"	2'7¼"-3'6½"	2'5½"-3'10½"	2'3¾"-4'4¼"
2.5'	2'5"-2'7"	2'4¾"-2'7¼"	2'4¼"-2'8"	2'3½"-2'9"	2'2¾"-2'10¼"	2'1½"-3'½"	2'½"-3'3¼"

The distances are measured from the film plane (indicator 18)



## Accessories

Adapter ring for use of the S 67 filters with the PRO-TESSAR 35 and 85 mm	20.1643
Lens hood (elastic) for PRO-TESSAR 35 and 85 mm, $\phi$ S 60	20.0716
Lens hood for PRO-TESSAR 115 mm, $\phi$ S 67	20.0714
Leather container for lens hood, $\phi$ S 67	23.2003
Leather case for 1 PRO-TESSAR and 1 filter	23.1001
Leather case for 2 PRO-TESSARS, 2 filters and lens hoods	23.1201
Case for ZEISS monocular tele attachment	23.7812
Lens bag for 3 PRO-TESSARS, 1 interchangeable magazine, 3 filters or 3 supplementary lenses	23.0202
Universal case for camera, with carrying strap, and also 3 PRO-TESSARS, monocular tele attachment, interchangeable magazines, filters, supplementary lenses and lens hoods	23.0206

## Interchangeable magazines

Container for 1 magazine	20.0302
Container for 2 magazines	23.7855
tripod extension	23.0201
	20.0203

## Copying equipment

Table copying unit	20.1850
Lighting set-up	20.1852
REPROPHOT universal copying unit	20.1853

## Copying and photomicrography accessories

Angle telescope	20.1614
Adapter ring for microscope attachment	20.1620
Microscope attachment head	20.1616
Cable release with locking device	20.0281

## Accessories

Ever-ready case	23.0007
Colour filters, S 27 $\phi$	
G 20.1021 GR 20.1022 O 20.1023 R 20.1024 UV 20.1025	
IKOLOR-B 20.1027 Skylight 20.1028	
Lens hood (elastic), $\phi$ S 27	20.0713
ZEISS PROXAR close-up attachments, $\phi$ A 28.5	
from 100 to 49 cm (focal length 1 m)	20.0800
from 51 to 34 cm (focal length 0.5 m)	20.0801
from 34 to 25 cm (focal length 0.3 m)	20.0802
from 21 to 17 cm (focal length 0.2 m)	20.0803
ZEISS PROXAR doublet close-up attachment,	
for working distances down to 9 cm, $\phi$ S 27	20.0804
1 set of PROXAR close-up attachments	
with depth of field calculator and container	20.7070
CONTAPOL polarising filter, $\phi$ S 27	20.1200
Eye-piece correction lens of $\pm 0.5$ to $\pm 5$ dioptres	20.0504
Cassette, with core and container	20.0300
Camera carrying strap with fastening facility	20.0211

## ZEISS interchangeable lenses and accessories

ZEISS PRO-TESSAR f 3.2 35 mm wide-angle lens with container	11.1201
ZEISS PRO-TESSAR f 3.2 85 mm telephoto lens with container	11.1202
ZEISS PRO-TESSAR f 4 115 mm telephoto lens with container	11.1203
ZEISS PRO-TESSAR 1:1, for same-size close-up photography, with leather container	11.1204
ZEISS monocular tele attachment 8 x 30 B, giving telephoto effect of 400 mm focal length	20.1629
Colour filters for PRO-TESSAR 35 and 85 mm, S 60 $\phi$	
G 20.1031 GR 20.1032 O 20.1033 R 20.1034 UV 20.1035	
Skylight 20.1038 IKOLOR-F 20.1009	
Colour filters for PRO-TESSAR 115 mm, S 67 $\phi$	
G 20.1041 UV 20.1045 Skylight 20.1048	

## Manufacturer's number

Engraved in the lower part of the housing of every CONTAFLEX super BC there is a manufacturer's number (a figure, preceded by a serial letter). The lens, too, has a number. It is very advisable to make a note of both these numbers so that, in the case of loss, a positive search or claim can be made. In the event of loss of the front component of the convertible TESSAR lens it is also important to be able to quote the lens number.

## Care of the CONTAFLEX super BC

Before inserting a film, thoroughly clean the film channel, the spool area and the inside of the camera back with a soft hair brush (important: do not depress the film cover plate with force, as this could cause damage to the mechanism). If necessary, the lens may be carefully wiped with a soft linen cloth which has been thoroughly washed. Before doing this, remove all dust with a fine hair brush.

We reserve the right to make alterations in the interest of technical progress.

In addition to your photographic dealer, the photographic advisory service of the ZEISS IKON-VOIGTLÄNDER Vertriebsgesellschaft m.b.H., will gladly supply advice and information on all photographic problems.

Address: Fotoberatung der ZEISS IKON-VOIGTLÄNDER Vertriebsgesellschaft m.b.H., 7 Stuttgart, Postfach 540, W. Germany.

# ZEISS IKON

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# VOIGTLÄNDER

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Author

W. Kaiser

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