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back to my "Orphancameras" manuals /flash and light meter site

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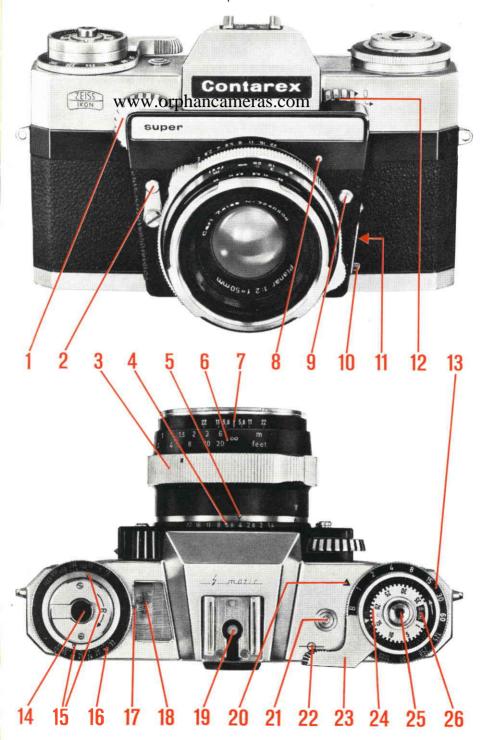
# Contarex



from the Golden Program

# ZEISS IKON VOIGTLÄNDER

Instructions for use



# Camera controls

- Light selector disc
- 2 Lever for delayed action release
- 3 Distance setting ring
- 4 Aperture scale
- Aperture setting mark Distance scale
- 7
- Distance setting mark with depth of field scale
- 8 Red dot for changing lens
- Press button for changing lens
- 10 Battery testing key
- Flash socket with lock for safety plug 11
- 12 Press button with lock for switching on exposure meter
- 13 Shutter speed ring with time scale
- 14 Folding rewind crank
- 15 Film speed setting mark
- 16 Film speed setting ring (white numbers DIN, red numbers ASA)
- 17 Lock for setting ring 16
- 18 External exposure meter window
- 19 Accessory shoe with M-contact for flash unit
- 20 Shutter speed setting mark
- 21 Push button for swinging up mirror
- 22 Focal plane mark
- 23 Rapid winding lever
- 24 Frame counter dial with setting ring
- 25 Shutter release with thread socket for cable release
- 26 Film-type indicator window

Nos. 27-36 refer to the illustration on the inside flap of the back cover

- 27 Eyelet(s) for carrying straps
- 28 Film winding lug (must engage in slot of film cartridge shaft)
- 29 Viewfinder eyepiece
- 30 Slot for data recording strip
- Lens bayonet mount for filters and lens hood 31
- Transport drum with sprocket rings for engaging the perforations 32 of the film
- 33 Film take-up spool
- 34 Back lock
- 35 »R« mark for rewinding film
- 36 Tripod socket

# Camera adjustments

We advise you to practice using the various controls and levers before loading the camera. Open out the inner flaps of the covers so that you can refer to the camera controls in the illustrations when reading the instructions for use.

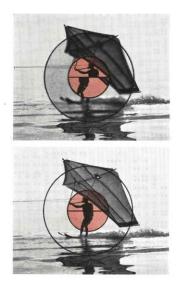
#### Distance setting, aperture and depth of field

Look through the viewfinder and turn setting ring 13 until the two parts of the split-image visible in the centre of the viewfinder are exactly aligned or, if the subject has no distinct lines, use the fine focusing ring until the image in this area is at its sharpest. The distance set on scale 6 is then opposite mark 7.

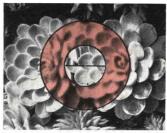
After setting the distance, the depth of field can be checked on the lens mount. The f/numbers are engraved on the left and right of setting mark 7. The depth of field reaches from the distance number opposite the aperture number on the left to the distance opposite the same aperture number on the right.

If a ground glass screen is inserted (see page 18), the depth of field can also be checked directly, provided that the shutter is not tensioned.

Exact values for the depth of field are given in the depth of field tables. As reference plane for the distances, the focal plane is indicated by the circle mark 22.

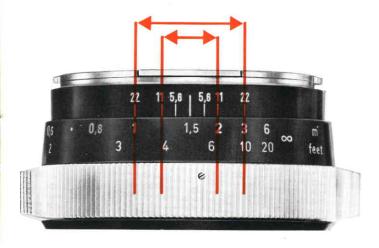








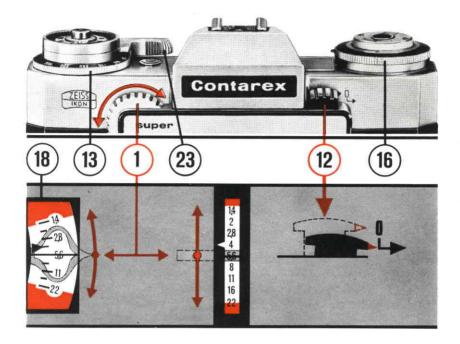
Focusing with fine focusing ring



The distance can also be set by using the depth of field scale (recommended for snapshots). Turn the lens mount so that the depth of field required is obtained with the appropriate aperture and then set this aperture with light selector disc 1. Any further distance setting is then unnecessary. An aperture setting outside the speed of the lens is not possible.

# Shutter speed setting

Lift ring 13 and turn it until the required shutter speed clicks in at setting mark 20. Do not set at an intermediate value. The pre-set value is also visible in the lower right-hand corner of the viewfinder. The shutter speed depends on the lighting conditions and the rate at which the subject is moving. The faster the subject moves, the shorter the exposure time. The numbers on ring 13 indicate fractions of a second (60 is  $^{1}/_{60}$  sec, etc.). When set at »B«, the shutter remains open as long as the release is pressed down.



# **Exposure measurement**

It is semi-automatic in the CONTAREX super, i.e., the shutter speed-aperture setting can be determined for the exposure by pre-selecting either the aperture — using light selector disc 1 — or the shutter speed using shutter speed ring 13 (cross-coupling). Important: set the film speed (see page 19) and tension the shutter with the rapid winding lever 23 before making the measurement.

Switch on the battery (see page 22) by pressing down button 12, look through the viewfinder and sight the subject.

The aperture indicated for the pre-selected shutter speed can be read off the scale to the right of the viewing zone and on the camera body. Adjust the green aperture pointer by turning the light selector disc 1 until it coincides exactly with the exposure meter needle. This pre-selects the lens diaphragm setting which is stopped down to this value on exposure.

If the exposure meter needle is in one of the red marginal areas, the exposure cannot be made under the prevailing lighting conditions or at the shutter speed that has been chosen. Alter the shutter speed (control in the viewfinder) until the needle moves back into the aperture scale range.

If, after altering the shutter speed, the meter needle remains in the red area, the available light is inadequate (use flash exposure, see page 12). Adjustment of the green pointer is limited in one direction by the largest aperture for the lens in use and in the other at aperture 22 (or aperture 16 with PLANAR 1:1.4/55 mm).

If an exposure is to be made with a pre-selected aperture, e.g., because a definite depth of field is required, adjust the green pointer by turning light selector disc 1 until it coincides with the required aperture in the viewfinder or on the camera body.

The exposure meter needle is then brought under the green pointer by turning speed ring 13. However, only a speed which clicks in can be used. If intermediate values are indicated, turn ring 13 either to the right or left until it clicks in and then centre the green pointer over the meter needle by turning the light selector disc.

When making an exposure measurement, hold the camera in a horizontal position, if possible, even if the actual exposure is to be made holding the camera in a vertical position.

The automatic exposure meter in the CONTAREX can be used with all types of lens. Only in the case of ZEISS MIROTAR 4.5/500 mm and 5.6/1000 mm telephoto lenses, must the automatic exposure setting be made with a pre-selected speed. The same applies for exposures with ZEISS monocular tele attachment  $8\times30$  B and for microphotography (see separate instructions). Further details are given below.

# Taking the exposure

(The metering principle and special instructions)

The exposure is measured through »inside metering«, i.e., the light falls on CdS cell inside the camera behind the lens. This arrangement measures exactly only the light which reaches the film through the lens. Whatever the focal length of the lens in use, the exposure measurement is extremely accurate. The arrangement of the resistance and the light path is such that not the mean overall brightness of the entire image area but only that of a small section is measured (so-called spot metering). The size of the acceptance field is identical to the area limited in the viewfinder by the rim of the fine focusing ring.

The acceptance field is specially marked on focusing screens without a fine focusing ring. The angle of acceptance when using a standard lens with 50 mm focal length is about 7°! It is thus possible to measure the brightness in the smaller but for the final picture important parts of the subject and to set the exposure accordingly. Similarly, the brightness range of contrasty subjects can also be measured, since the aperture reading is always visible in the view-finder and a mean setting can always be made with the green pointer without moving the camera from the eye.

Example: If measurement of the shadow areas of the important parts of a picture with a pre-selected shutter speed gives an aperture of 2.8 and measurement of the highlights of the important parts of the picture an aperture of 11, the green pointer should be set in the middle of the range, i. e., at aperture 5.6. This is the best aperture setting. Then, according to size and direction, any number of corrections can be made with the camera held as for taking an exposure. If required, the external exposure meter window 18 can also be used.

According to the requirements for the subject and using the aperture indicated by the pointer on the aperture scale, adjust the green pointer the desired number of stops.

Exposure corrections will, in fact, not be necessary as often as with earlier metering systems because of the partial »inside metering«.

Thus only in extreme cases will the indicated exposure value need to be increased for against-the-light exposures.

When photographing subjects of low contrast on colour reversal film (overcast sky - snow landscapes), however, the exposure should still be made with the diaphragm opened another  $^1\!/_2$  to 1 full stop.

# Exposure measurement with special lens

The instructions for exposure measurement given above apply for all interchangeable lenses from 18 mm to 250 mm. When using a mirror lens. note the following instructions:

#### MIROTAR 4.5/500 mm

The exposure is correct if, on turning speed ring 13, the meter needle stands between aperture 2 and 2.8.

#### MIROTAR 5.6/1000 mm

Adjust the meter needle to the triangle at aperture 4 in exactly the same way.

When using the MIROTAR lenses, it is advisable to set the fastest possible speed so as to obtain the shortest possible exposure times (camera shake!). Since the "stopping down" of these lenses is achieved with neutral density filters, the depth of field is not increased. The filters should be used, therefore, only when the fastest shutter speed still cannot bring the meter needle in line with any of the above values.

# Monocular tele attachment 8 × 30 B

Measurement is also carried out by turning speed ring 13. The meter needle must be adjusted to the triangle at aperture 4.

#### Shutter release

Press down shutter release 25 rapidly — but not jerkily. This causes the mirror to swing upwards, the diaphragm to close down to the pre-set opening and the shutter to run off at the pre-set speed. The mirror then returns to the viewing position whilst the diaphragm remains at the pre-set opening as a reminder to tension the shutter before making the next exposure.

#### **Filters**

When using filters, the filter factor is usually adjusted automatically behind the lens through the position of the light cell. Only when using more dense colour filters is it advisable to add a filter factor of  $2\times$ . This can be done either on the film speed scale by setting the DIN value 3 numbers lower (3 lines on the ASA scale) or through direct adjustment of the lens aperture using the green pointer.

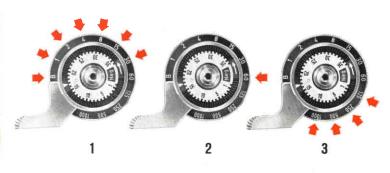
# Delayed action release

Tension the shutter beforehand with the rapid winding lever and then press down lever 2 as far as it will go. After pressing the shutter release button about 12 seconds will pass before automatic exposure. Lever 2 will then return to its normal position.

Time exposures (shutter setting »B«) are not possible with the delayed action release. Between the final and initial setting the lever can also be clicked in at intermediate settings which allow correspondingly shorter delay times.

# Flash exposures

The focal-plane shutter of the CONTAREX can be coupled to all types of flash units. The flash contact is automatically adjusted, so that the various types of flash bulbs and electronic flash units are fired at the appropriate instance, provided that the shutter is set at the correct speed. The shutter speeds are marked in various colours. They indicate:



- 1 white  $(1-^1/_{30}$  sec and »B«) for firing fast-burning flash bulbs (class M) and electronic flashes.
- 2 yellow (1/60 sec) for firing electronic flashes.
- 3 orange  $(\frac{1}{125} \frac{1}{1000}$  sec) for firing slow-burning flash bulbs (class FP) which are specially made for use with focalplane shutters.

The correct aperture for the various types of flash bulbs is obtained from the flash guide number and the shooting distance. The delayed action device can also be used for flash exposures at all shutter speeds from 1 to  $1/_{1000}$  sec.

Insert the plug of the flash unit in flash socket 11. When using a safety plug, the lock on socket 11 should first be pushed in the direction of the arrow. The flash unit itself can either be slipped into accessory shoe 19 or fitted with a bracket to tripod socket 36.

When using flash units with M-contact (cableless), electrical connection to the camera is direct through the contact in accessory shoe 19.



#### Flash lenses

PLANAR 1:2/50 mm with automatic flash exposure DISTAGON 1:4/35 mm with automatic flash exposure

# Use of lens without automatic flash exposure

The yellow triangle should be opposite index mark A on the lens mount. If this is not the case, press key D towards the camera and use it to align the marks.

# Use of lens with automatic flash exposure

Set the guide number for the flash in use. For this purpose, there is guide number scale C on the lens mount which allows the following guide numbers to be clicked into position:

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

The white scale refers to distances in metres, the yellow scale to distance in feet. For the sake of greater clarity, the numbers in small print in the table are not engraved on the lens mount, although they can be set by using the intermediate click-in positions. If the guide number of your flash does not correspond to a value in the table or on scale C, use the nearest smaller guide number. Intermediate settings which do not click into position must not be used. To set a guide number, press down key D towards the camera and use it to line up the required guide number with index mark A. Look through the viewfinder, focus — and release the shutter

When taking pictures of subjects with greater depth, focus a spot in the central zone. The lens aperture required for correct exposure is automatically set with the focused distance. Aperture setting with the light selector disc on the camera is cut out. Any particular setting of the aperture scale is not necessary.

In order to prevent incorrect flash exposures, the distance setting is automatically locked at distances which are too short for the guide number used.

Focusing on subjects in the tele range is not limited in this manner. The maximum distance for which automatic flash exposures are possible are given in the table below:

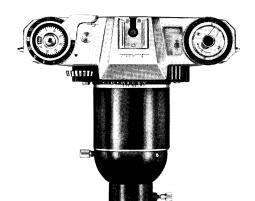
engrave num	•		maximur NAR 2/5		nce for tele range DISTAGON 4/35			
m	feet	aper- ture	m	feet	aper- ture	m	feet	
10	32	2	5	16	4	2,5	8	
14	45	2	7	22	4	3,5	11	
20	65	2	10	32	4	5	16	
28	90	2,8	10	32	4	7	22	
40	130	4	10	32	4	10	32	
56	180	5,6	10	32	5,6	10	32	
80	260	8	10	32	8	10	32	

#### Close-ups

Outside the focusing ranges of the lenses, close-ups are possible with the use of supplementary lenses and a bellows extension unit up to a scale of 3.5:1. A graph in the tables booklet gives details on the exposure ranges that are obtainable in this way. Special lenses (ZEISS LUMINAR), which are not included in the graph, extend the exposure range of the camera up to a scale of 11.8:1. Reference is made here to our table copying unit and our universal copying unit REPROPHOT. The latter unit is equipped with a focusing slide which is practically indispensable for close-ups.

# Microphotographs

Two adapter rings are all that is required to connect the CONTAREX to a microscope. The inside metering will still provide correct exposures. Adjustment is made by turning the shutter speed ring until the meter needle coincides with the triangle at aperture 4. Further details are given in separate instructions.



#### Supplementary lenses

The bayonet fitting  $\phi$  B 56 fits all suitable CONTAREX lenses in exactly the same way as the filters. In order to obtain a sufficient depth of field, the aperture should be stopped down to at least 5.6 (see tables booklet). If filters are also used, these are to be mounted in front of the supplementary lens.

# Bellows extension unit, ZEISS TESSAR 3.5/115 mm and lens hood

A separate booklet with instructions for use containing all the necessary data and tables is supplied with these units.

The bellows extension unit extends the focusing range of the CONTAREX into the field of macrophotography on a larger scale than life size. Through the lens inside metering ensures correct exposure even with the longest extensions.

An ideal combination is the ZEISS TESSAR 3.5/115 mm. Focusing range from  $\infty$  up to a scale of 1:1.

As accessory to the bellows extension unit, the lens hood offers efficient protection against stray light. It can also be used when copying slides on a scale of 1:1 or a cut-out.





# Changing the lens

Removal: Press down knob 9 and turn the lens barrel anti-clockwise as far as it will go. The red dot on the lens barrel is now opposite the red dot on the CONTAREX. The lens is now detached from the bayonet mount.

Insertion: Place the lens on the bayonet mount so that the red dot on the lens barrel coincides with the red dot on the CONTAREX and turn to the right until a click is heard. Knob 9 will now spring out. The lens does not need any special adjustments.

When the lens is inserted, the aperture is automatically stopped down to the speed of the lens in use.

The CONTAREX lenses can be changed in full daylight without fogging the film. Nevertheless, the open camera should not be exposed to direct sunlight when changing the lens.

When removing flash lenses from the bellows extension unit, the two triangles must be opposite each other.

Note: The BIOGON 4.5/21 mm supplied for the previous CONTAREX model cannot be used with the CONTAREX super.

# Focusing screens

The fact that the photographer can change the focusing screens means that he can select the focusing method to suit the prevailing conditions.

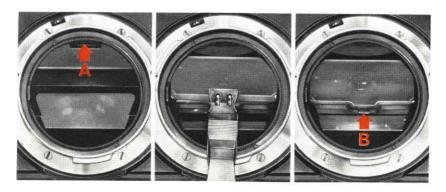
A Fresnel screen with split-image wedge rangefinder and fine focusing ring is the standard viewing screen supplied with the camera.

A focusing screen of similar construction with a bevelled front edge is used for focusing with lenses having a focal length of 250 mm and more (e. g., ZEISS OLYMPIA SONNAR 4/250 or ZEISS MIROTAR 4,5/500 mm). Both focusing screens provide rapid and accurate focusing when the viewing area is very bright.

The ground glass screen is to be recommended when a control of the sharpness over the whole picture area is required. This is usually the case with close-up and macrophotography on a scale larger than life size. If the light is adequate, the depth of field can also be checked before tensioning the shutter, even when the lens is stopped down. The ground glass screen is also useful for telephoto shots without a tripod when fixing the subject with the split-image rangefinder or the fine focusing ring can often present difficulties.

The clear glass crossline screen (micro-screen) is designed for taking photographs through microscopes and endoscopes. It is also useful where the split-image wedge rangefinder on the standard focusing screen is inadequately illuminated owing to the lens aperture being too small and the lighting conditions too poor for focusing with the ground glass screen.

For the DISTAGON 4/18 mm wide-angle lens use the special focusing screen provided.



#### Changing focusing screens

First remove the lens (see page 18). Then press catch A forward on the front edge until the frame holding the focusing screen drops down. Now gently take hold of the protruding lug with a special pair of tweezers and carefully remove the screen.

Caution: Do not touch the mirror!

Reverse this procedure when inserting the focusing screen now required. The protruding lug must fit exactly into the opening of metal frame B (fig. 17). If this is not the case, the focusing screen has been wrongly inserted and must be turned round. Finally, press frame B upwards until catch A is heard to click.

Important: Avoid touching the screen with the fingers. Use only the special pair of tweezers in container 20.7074. Remove any dust particles with a soft hair brush.

# Loading and unloading

Before inserting the film, tension the shutter by advancing the rapid winding lever as far as it will go. Then raise the two locks 34, turn them in opposite directions and pull off the camera back.

# Inserting the film (Do not insert the film in direct sunlight!)

Insert the film leader in the slot of take-up spool 33 which has been removed from the camera. Hook the second or third perforation onto the lug of the slot, wind the film twice round the spool and hold it in place. Then insert the film spool and cartridge in the camera so that the teeth of the transport sprockets 32 engage the film perforations on both sides.

Slide on the camera back until the film is visible for only half its width. Then slide the back right on and lock.

# Very important: set the film speed!

The DIN or ASA number on the film pack must be used. Press down

lock 17 and turn ring 16 until the number given on the pack is beside setting mark 15.

On the scale, DIN numbers are in white and ASA numbers in red.

# Frame counter and film transport control

Set the white mark on the black milled ring of the frame counter dial 24 three strokes beyond the number equivalent to the number of exposures on the film in use. Unfold rewind crank 14 and turn in the direction of the arrow until a slight resistance is felt. This indicates that the film has been tightened on the spool inside the cartridge. Then operate shutter release 25 and the rapid winding lever 23 alternately until the white mark coincides with the number of exposures on the film in use. The rewind knob must move in the opposite direction to the arrow as a check that the film is being advanced correctly.

The frame counter always indicates the number of frames still to be exposed (reverse counting). After the final exposure (frame counter on »1«), do not advance the repid winding lever but rewind the film.

# Inserting film

Flip up the left-hand lock 34 on the camera back and set at »R«. Turn the rewind crank 14 in the direction of the arrow until a slight resistance is felt (this indicates that the film is disengaged from the take-up spool). Now open both locks in the camera back, remove the back and take out the film cartridge.

Always keep the take-up spool and film track clean.

# Film-type indicator

This serves merely as a memory aid and does not influence camera action.

The symbols visible under window 26 indicate:



- 1. no film in camera
- 2. black-and-white film
- 3. negative colour film
- 4. colour reversal film for flash exposure
- 5. colour reversal film for daylight exposure
- 6. colour reversal film for artificial light

The indicator is set by turning the frame counter.

# Data recording strips

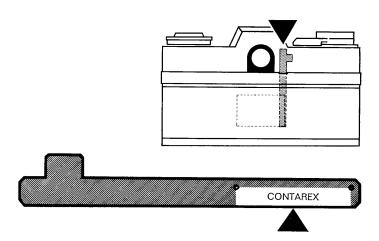
Using these strips — either with a standard camera back or interchangeable film cartridges — any data referring to the picture are recorded on the film during exposure.

When using black ink or similar material, the tab must be at the top and pointing to the left. The writing itself must be restricted to the area indicated on the shaft by the two small perforations. Insert the data strip in slot 30 as far as it will go; the writing must be the right way round in the back of the camera (tab pointing to the right).

The data strips should be inserted and removed in shade provided by the body or in subdued light.

The writing will appear on the developed film in a strip 4 mm wide at the edge of the negative or positive. To ensure that the writing is visible on the negative or positive, make sure when taking the picture that the background is as light as possible in the strip area (e.g., light walls, sky, etc.).

The focusing screens (20.1310, 20.1311 and 20.1314) have thin etched lines which serve to indicate in the viewfinder the area taken up by the strip on the film. After exposure, do not forget to remove the data strip immediately, otherwise wrong captions will be recorded on the following frames.



# **Battery instructions**

The »Mallory PX 13« type battery provided in the camera for the exposure meter will last about two years under normal use. To ensure a constant current supply, the battery should be protected against extreme temperatures (below  $-10^{\circ}$  C). If this is not possible, use »Mallory PX 652« type battery.

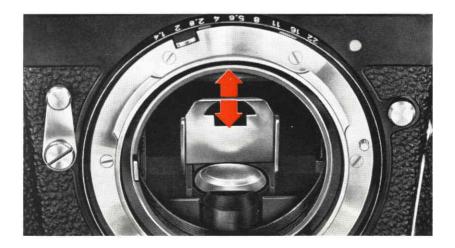
# Testing and changing the battery

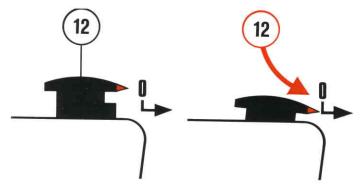
Switch on the exposure meter. Tension the shutter and hold the camera against the light so that the meter needle lies roughly in the centre of the white zone with the aperture numbers. Then press down battery testing key 30 briefly. If the meter needle drops more than one stop within 1 to 2 seconds, the battery should be changed.

To do this, remove the lens (see page 17) and raise the mirror by pushing button 21 towards setting mark 20 (possible only when the shutter is tensioned).

Lift out the battery holder, which is underneath, and insert the new battery with the +pole facing the camera base. The holder should click audibly into place on shutting; if not, the battery has been wrongly inserted.

New batteries are obtainable from photographic dealers.





Exposure meter switched off

Exposure meter switched on

In order to avoid unnecessary battery drainage, the exposure meter should be switched off when the camera is not in use.

The exposure meter is switched off when the arrow on button 12 is on  ${\rm "o}$ 0".

# Care of the CONTAREX super

From time to time the film track and film transport bearings of the CONTAREX as well as the inside of the camera back should be carefully cleaned with a soft brush. (Note: Do not scratch the shutter blind.) Dust or threads on the focusing screen and mirror can be carefully removed with a soft hair brush when the lens is removed. Fingermarks should be carefully removed with a soft linen cloth from the lens surface and the viewfinder eyepiece. Dust particles should be removed beforehand with a soft hair brush.

# **Accessories**

Order No.	Lenses
11.2418	DISTAGON 1:4/18 mm
	with focusing screen, adapter ring and leather case
11.2408	DISTAGON 1:2.8/25 mm
11.2414	DISTAGON 1:2/35 mm
11.2413	DISTAGON 1:4/35 mm, with automatic flash exposure
11.2412	PLANAR 1:2/50 mm, with automatic flash exposure
11.2501	TESSAR 1:2.8/50 mm
11.2415	S-PLANAR 1:4/50 mm
11.2407	PLANAR 1:1.4/55 mm
11.2404	SONNAR 1:2/85 mm
11.2417	TESSAR 1:3.5/115 mm for bellows extension unit
11.2405	SONNAR 1:4/135 mm
11.2409	OLYMPIA SONNAR 1:2.8/135 mm
11.2425	OLYMPIA SONNAR 1:2.8/180 mm
11 0401	with lens hood and leather case
11.2421	OLYMPIA SONNAR 1:4/250 mm with lens hood and leather case
11.2423	VARIO SONNAR 1:2.8/40–120 mm
11.2423	with lens hood and leather case
20.1629	ZEISS monocular tele attachment $8 \times 30 \text{ B}$ (f = 400 mm)
20.1639	Adapter ring, for PLANAR 50 and TESSAR 50
11.2420	MIROTAR 1:4.5/500 mm
11.2720	with filters: G, GR, O, UV,
	turret with 2 neutral density filters and leather case
11.2422	MIROTAR 1:5.6/ 1000 mm
	with filters: G, GR, UV, infrared
	turret with 2 neutral density filters and carrying case
	,,,,
	Focusing screens, accessories
20.1310	Fresnel screen, standard, for $f = 25-135 \text{ mm}$
20.1311	Fresnel screen 250, from f = 250 mm
20.1312	Ground glass screen
20.1313	Micro-screen
20.1314	Ground glass screen with indicator
20.7074	Container for focusing screens (with brush and tweezers)

Order No.	
23.7757	Leather case for DISTAGON 2.8/25 and 2/35,
	PLANAR 55 and SONNAR 85
23.7758	Leather case for 135 mm lenses

23.1203 Leather case for ZEISS monocular tele attachment

23.7694 Carrying straps for leather cases, single strap

23.7838 Leather container for lens hood 20.0710 (21–35 mm lens) 23.7837 Leather container for lens hood 20.0712 (50–135 mm lens)

23.2001 Leather container for 1 filter or

1 supplementary lens or 1 CONTAPOL  $\oplus$  B 56

#### Other accessories

20.0001	Take-up spoot
20.0504	Eyepiece correction lens $\pm 0.5$ to $\pm 5$ dptr.
35.0207	Eyepiece shield
20.0281	Cable release with locking device

20.0002 Tripod socket adapter bush

20.0300 Cassette with core and container (for exchanging partially exposed films)

20.0301 Spool core for cassette 20.0300
23.0211 Carrying straps with holders
(for cameras without case)

20.0202 100 data strips in pack

20.1813

# Copying and microphotography accessories

20.1617	Bellows extension unit
20.1631	Lens hood for bellows extension unit
20.1636	Adapter ring for 20.1632 with PLANAR 2/50
20.1634	Angle telescope with adapter ring
20.1628	Adapter ring for micro attachment
20.1616	Connecting head for micro attachment
20.1853	REPROPHOT universal copying unit
20.1850	Table copying unit
20.1826	consisting of: 1 table clamp
20.1819	1 column 32 ⟨⟨ × 600
20.1828	1 tripod head adapter
20.1824	1 tripod head
20.1852	Lighting equipment
20.1810	consisting of: 1 cross joint 32/22
20.1820	1 lateral bar 22 × 600
20.1811	2 cross joints 22/15
20.1808	2 light bars 15 × 400
20.1812	4 cross joints 15/15
	. 2. 222 jointo 10, 10

4 reflectors with hinged bar

#### Interchangeable cartridge

Full interchangeability between black-and-white and colour film

Order No. Instant change in full daylight without fogging film

20.0304 Interchangeable cartridge 20.0203 Tripod extension Case for 1 cartridge 23.7856 23.0200 Case for 2 cartridges

# Filters, supplementary lenses, lens hoods

Colour filter Ø B 56 (25-135 mm lens)

yellow 20.1061, green 20.1062, orange 20.1063, red 20.1064,

UV 20.1065, Ikolor A 20.1066, Ikolor B 20.1067.

skylight 20.1068

CONTAPOL polarizing filter  $\bigcirc$  B 56 (25-135 mm lens) 20.1206

Colour filter Ø S 67 (180 and 250 mm lens)

yellow 20.1041.

UV 20.1045, Ikolor A 20.1046, Ikolor B 20.1047,

skylight 20.1048, neutral 20.1209

Colour filter Ø B 96 (DISTAGON 18 mm and

VARIO SONNAR 40-120 mm)

yellow 20.1071. UV 20.1075, Ikolor A 20.1076, Ikolor B 20.1077,

skylight 20.1078

20.0710 Lens hood for 25-35 mm lens Ø B 56

20.0712 Lens hood for 50-135 mm lens Ø B 56

# Supplementary lenses

20.0843  $f = 1.00 \text{ m 1 dptr.} \circlearrowleft B 56$ 

 $f = 0.50 \text{ m 2 dptr. } \dot{\oslash} \text{ B 56}$ 20.0844 20.0845

 $f = 0.35 \text{ m 3 dptr.} \ \% B 56$ 

20.0840  $f = 0.20 \text{ m 5 dptr. } \hat{\phi} \text{ B 56}$ 

20.0831- Supplementary lenses for monocular tele attachment 35 1, 2, 3, 5 and 6 dptr.

# Cases and containers

23.0008 Hold-all case

23.0203 De-luxe carrying case

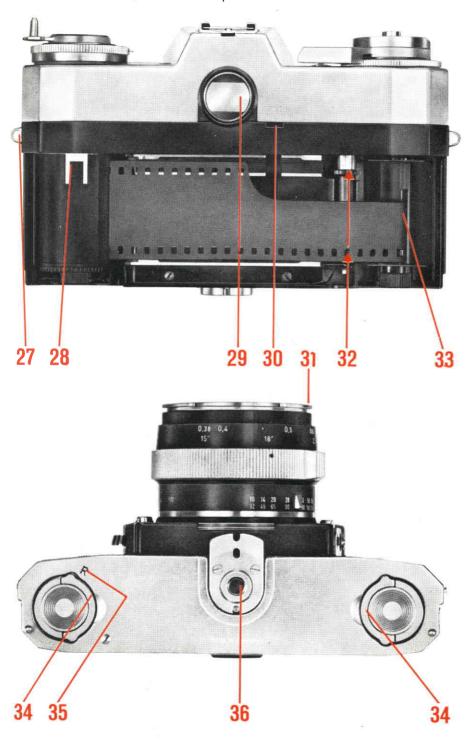
23.0204 Small universal case

Large universal case 23.0205

20.7842 Lens case for 3 lenses, 2 filters and 2 lens hoods

Leather case for 35 and 50 mm lenses 23.7756

(except DISTAGON 2/35)



#### Serial number

Every CONTAREX has a serial number on the body part of the camera (number preceded by a serial letter). Every lens also has its own serial number.

We advise you to make a note of these numbers, so that you can establish ownership in the case of loss or a mistake.

#### Special note:

Your photographic dealer or the photographic advisory service of ZEISS IKON — VOIGTLÄNDER Vertriebsgesellschaft mbH, Stuttgart, Postfach 540, will gladly advice you free of charge, if you have any photographic problems or require any information.

We reserve the right to make alterations in line with technical progress.

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# ZEISS IKON VOIGTLÄNDER