

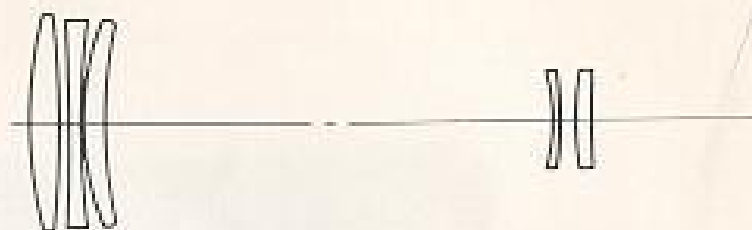


Tele-Takumar 200mm f/5.6

Small, compact and light-weight ... that's the new Tele-Takumar 200mm f/5.6 lens. It weighs only slightly more than Super-Takumar 135mm. Still it produces professional quality resolution in hand-held telephotography. Equipped with pre-set diaphragm; supplied with special lens-hood.

Lens element	5
Minimum aperture	f/22
Minimum distance	9 ft. (2.5 m)
Angle of view	12°
Weight	13.1 ozs. (370 gr.)

Tele-Takumar 1000mm f/8



Photographs subjects which are too far away to be seen by the naked eye. The ultimate in fine optics for the photographer who specializes in news, sports, scientific or wildlife photography. Fast, accurate focusing with manual diaphragm. Furnished with built-on lenshood, rigid

wooden tripod and in wooden cases.

Lens element	5
Minimum aperture	f/45
Minimum distance	98 ft. (30 m)
Angle of view	2.5°
Weight of lens	192.5 ozs. (5.5 kg.)
Weight of tripod	26 lbs. (11.8 kg.)

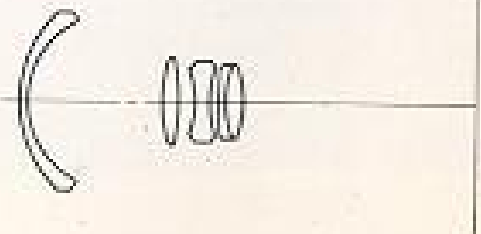
Depth-of-field table: Super-Takumar 55mm lens

Distance Scale f Setting	1' 6"	2'	3'	5'	10'	15'	30'	∞
f/1.8	1' 5.9" 1' 6.1"	1' 11.8" 2' 0.2"	2' 11.5" 3' 0.6"	4' 10.4" 5' 1.7"	9' 5.6" 10' 7.2"	13' 9.7" 16' 5"	25' 6.4" 36' 4.7"	168' 2.4" ∞
f/2	1' 5.9" 1' 6.1"	1' 11.8" 2' 0.2"	2' 11.4" 3' 0.6"	4' 10.3" 5' 1.8"	9' 4.9" 10' 8"	13' 8.3" 16' 7.1"	25' 1.3" 37' 3.2"	151' 4.8" ∞
f/2.8	1' 5.9" 1' 6.1"	1' 11.6" 2' 0.4"	2' 11.2" 3' 0.8"	4' 9.6" 5' 2.6"	9' 2.3" 10' 11.5"	13' 2.8" 17' 4"	23' 7" 41' 3.4"	108' 2.3" ∞
f/4	1' 5.8" 1' 6.2"	1' 11.5" 2' 0.5"	2' 10.8" 3' 1.2"	4' 8.6" 5' 3.8"	8' 10.7" 11' 5.3"	12' 7.1" 18' 6.7"	21' 7.2" 49' 2.8"	75' 9.5" ∞
f/5.6	1' 5.6" 1' 6.4"	1' 11.4" 2' 0.7"	2' 10.4" 3' 1.8"	4' 7.4" 5' 5.4"	8' 6.1" 12' 1.7"	11' 10.1" 20' 6.2"	19' 5.2" 66' 3.4"	54' 2.3" ∞
f/8	1' 5.5" 1' 6.5"	1' 11" 2' 1"	2' 9.8" 3' 2.5"	4' 5.6" 5' 8.2"	8' 13' 4.4"	10' 10.3" 24' 4.6"	16' 10.7" 138' 2.8"	37' 11.9" ∞
f/11	1' 5.4" 1' 6.7"	1' 10.8" 2' 1.3"	2' 9" 3' 3.6"	4' 3.6" 5' 11.8"	7' 5.4" 15' 3.7"	9' 10.1" 31' 10.8"	14' 6.2" ∞	27' 8.2" ∞
f/16	1' 5.2" 1' 7"	1' 10.3" 2' 2"	2' 7.8" 3' 5.5"	4' 0.6" 6' 6.8"	6' 8.2" 20' 3"	8' 6.2" 66' 9.2"	11' 9.4" ∞	19' 1" ∞

Super-Takumar 35mm f/3.5

A medium speed lens with extremely high resolving power, this is an excellent general purpose wide-angle optic extremely useful for scenic, industrial, and architectural photography. Compact and light in weight.

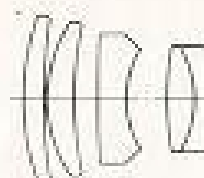
Lens element	5
Minimum aperture	f/16
Minimum distance	1.5 ft. (45 cm)
Angle of view	63°
Weight	5.4 ozs. (152 gr.)



Super-Takumar 105mm f/2.8

A quality medium telephoto lens of 5 elements, with well corrected aberrations. Light-weight design for portability and easy handling. Recommended for scenery, portrait, news photos, other moderate telephoto effects. Equipped with fully automatic diaphragm; supplied with special lenshood. (With the same optical specification, Takumar 105mm f/2.8 is available with pre-set diaphragm.)

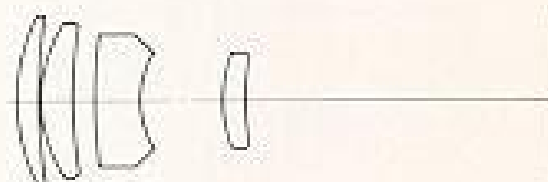
Lens element	5
Minimum aperture	f/22
Minimum distance	4 ft. (1.2 m)
Angle of view	23°
Weight	10.2 ozs. (290 gr.)



Super-Takumar 135mm f/3.5

Produces a brilliant image in all corners of the picture even with the diaphragm fully open. Indispensable for distant subject matter and for portrait. Ideal for close-ups of animals or plants even at a distance. Recommended as the ideal long telephoto lens for handheld camera operation. Equipped with fully automatic diaphragm; supplied with special lens hood.

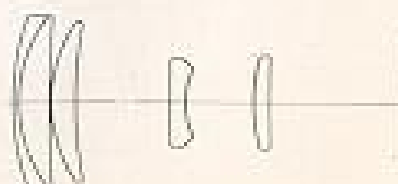
Lens element	4
Minimum aperture	f/22
Minimum distance	5 ft. (1.5 m)
Angle of view	18°
Weight	12.1 ozs. (343 gr.)

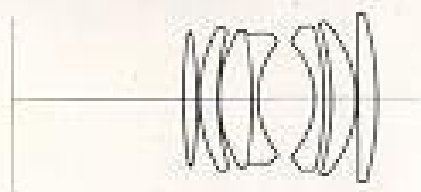


Super-Takumar 135mm f/2.5

A faster f/2.5 lens has joined the superb Takumar 135mm lens family. Well balanced, its total length is rather short so it is light in weight. Most suitable for shooting night scenes, stage, indoors, sports and snap portraits. An excellent lens also for colour photography.

Lens element	5
Minimum aperture	f/22
Minimum distance	5 ft. (1.5 m)
Angle of view	18°
Weight	15.5 ozs. (444 gr.)



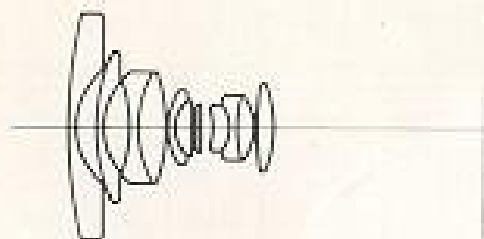


Super-Takumar 50mm f/1.4

Newest high-speed 7-element lens, utilizing latest optical glass advances. High resolving power combines with outstanding brightness for easiest focusing. An ideal all-around lens. Equipped with fully automatic diaphragm.

Lens element..... 7
Minimum aperture f/16
Minimum distance 1.5 ft. (45 cm)
Angle of view 46°
Weight..... 8.1 ozs. (230 gr.)

Super-Takumar Fish-Eye 17mm f/4

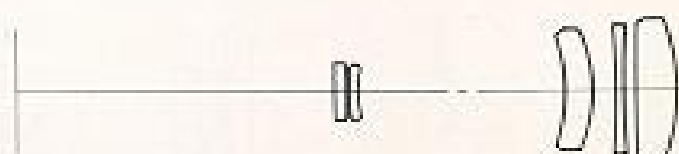


The world's most efficient fish-eye lens with maximum brightness of f/4. Covers an angle of vision of about 180°. Enables you to view and focus through the viewfinder without keeping the reflex mirror flipped up.



Lens element 11 (including 3 filters)
Minimum aperture f/22
Minimum distance 0.66 ft. (0.2 m)
Angle of view 180° (diagonal)
Weight..... 7.98 ozs.(228 gr.)

Tele-Takumar 300mm f/6.3

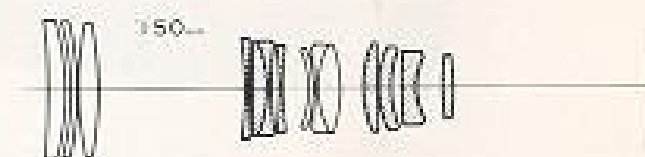


More compact and much lighter than the f/4, this lens is extremely suitable for hand-held outdoor telephotography. Features smooth helicoidal focusing and built-on lenshood. Also represents an exceptional value in long-focus lenses and is the choice of many professionals and advanced amateurs who require an extremely versa-

tile telephoto lens. Equipped with manual diaphragm.

Lens element	5
Minimum aperture	f/22
Minimum distance	18 ft. (5.5 m)
Angle of view	8°
Weight	25.7 ozs. (729 gr.)

Super-Takumar-Zoom 70mm — 150mm f/4.5



Proven by an impartial and authoritative test to be the best zoom lens for 35mm single-lens reflex. Extremely versatile zooming range from 70mm to 150mm for fast action shooting.

Lens element	14
Minimum aperture	f/22
Minimum distance	11.5 ft. (3.5 m)
Angle of view	35°—16.5°
Weight	42.6 ozs. (1209 gr.)

Super-Takumar 300mm f/4

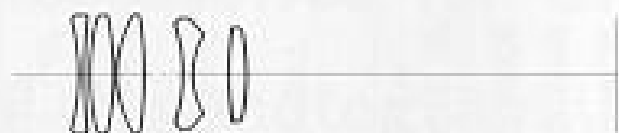


Light enough for hand-held picture taking, this lens is the most ideal for spectacular telephotographic effects. Even with the diaphragm fully open, the aberrations are corrected to the greatest extent possible. Gives needle-sharp resolution to every corner of the picture. Equipped with fully automatic diaphragm; supplied

with special lenshood.

Lens element	5
Minimum aperture	f/22
Minimum distance	18 ft. (5.5m)
Angle of view	8°
Weight	33.1 ozs. (946 gr.)

Ultra-Achromatic-Takumar 85mm f/4.5



The new Ultra-Achromatic-Takumar 85mm f/4.5 is corrected against chromatic aberration from ultraviolet to infrared wavelength bands. Not only is it a high-resolution lens for visible light photography, but also it gives unmatched optical performance in ultraviolet and infrared photography.

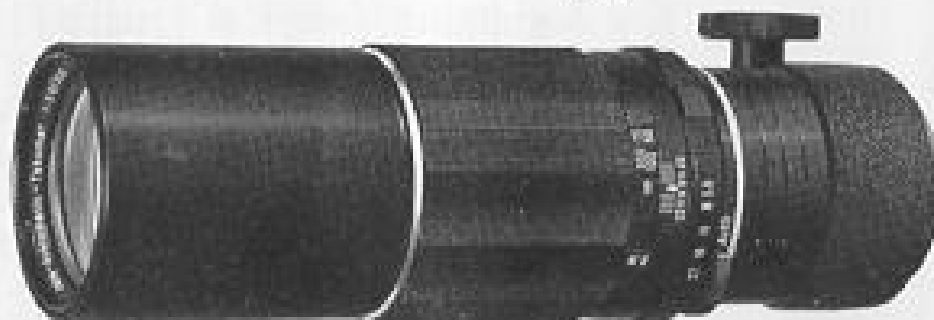
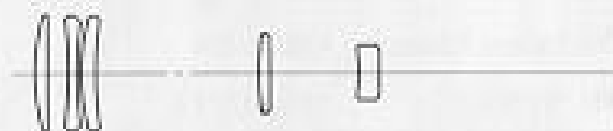
The lens uses no glass; it uses fluorite and quartz. This unique lens answers some of the optical quality and performance problems in ultraviolet and infrared photography. Although it is superb for infrared and visible light photography, its main design emphasis is placed on ultraviolet photography at a close



distance. It is corrected against chromatic aberration from $220\text{m}\mu$ to $1000\text{m}\mu$, and photographic tests without filters show good results within these wavelength bands.

Lens element	5
Minimum aperture	f/22
Minimum distance	2 ft. (0.6m)
Angle of view	29°
Weight	8.7 ozs. (248 gr.)

Ultra-Achromatic-Takumar 300mm f/5.6

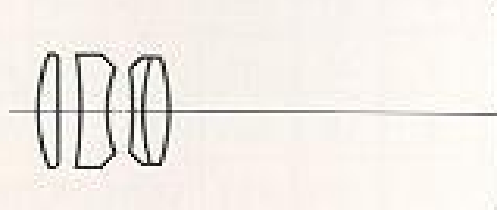


The new Ultra-Achromatic-Takumar 300mm f/5.6 uses glass and fluorite elements to achieve high resolution and extreme chromatic aberration correction over a wide range wavelength. It is corrected against chromatic aberration from $400\text{m}\mu$ up to $850\text{m}\mu$. The visible portion of the spectrum extends from $400\text{m}\mu$ to $700\text{m}\mu$. This lens is excellent for telephotography in the visible and infrared portion of the spectrum.

The use of fluorite elements allow a design that is very compact for its focal length and sharp in contrast and definition.

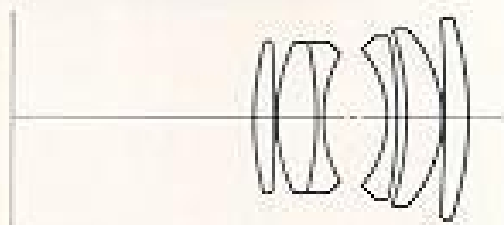
Lens element	5
Minimum aperture	f/22
Minimum distance	16 ft. (4.85m)
Angle of view	8°
Weight	29 ozs. (825 gr.)

Macro-Takumar 50mm f/4



Lens element 4
Minimum aperture f/22
Angle of view 46°
Weight..... 9.3 ozs. (265 gr.)



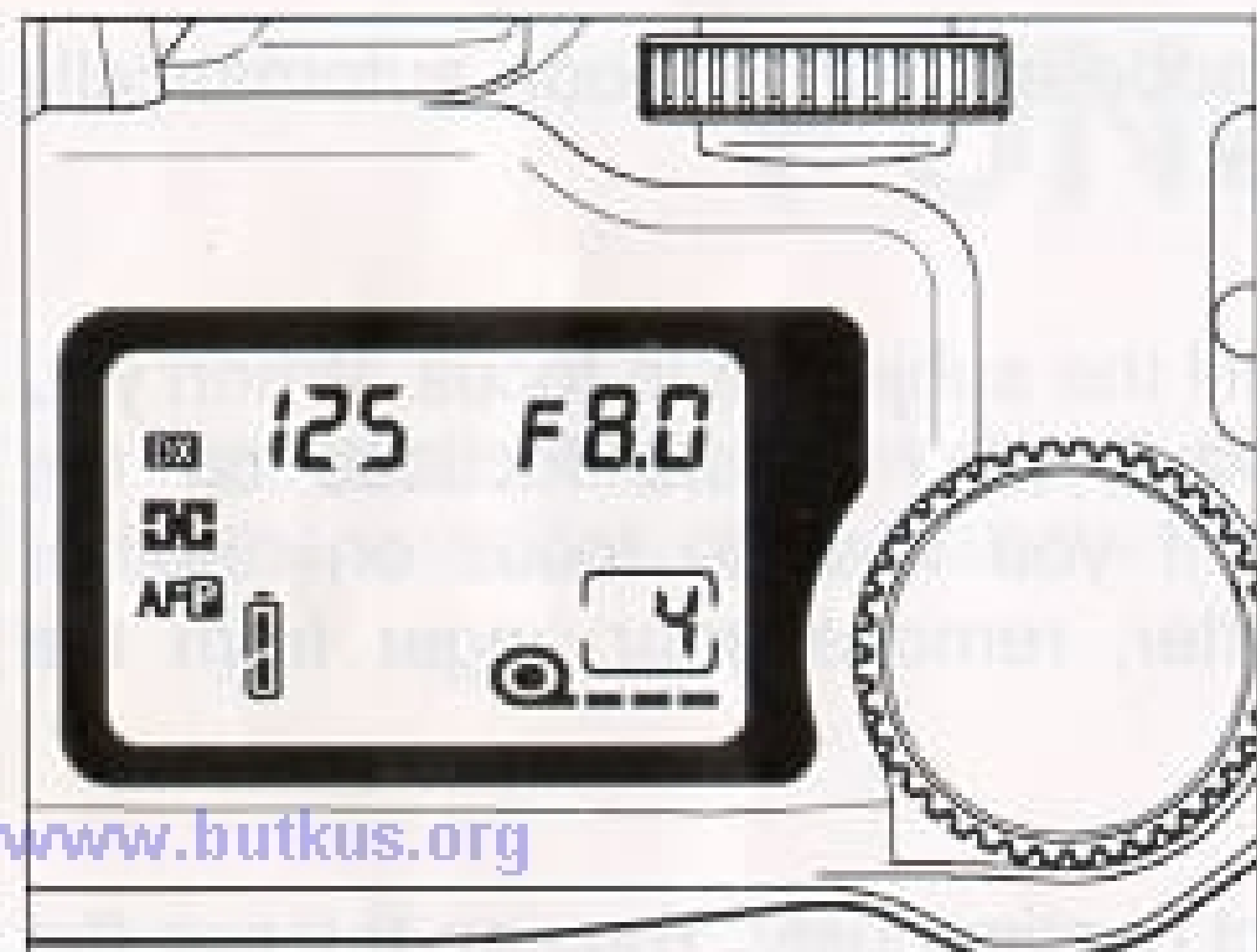


Super-Takumar 55mm f/1.8 & f/2

Razor-sharp, fully corrected, high-speed standard lenses, using rare-earth glass, designed by top lens designers. Bright f/1.8 or f/2 aperture makes viewing and focusing extremely easy. Their extremely fine resolving power is widely acclaimed by professionals and discriminating amateurs alike. Equipped with fully automatic diaphragm.

Lens element.....	6
Minimum aperture	f/16
Minimum distance	1.5 ft. (45 cm)
Angle of view	43°
Weight.....	7.5 ozs. (215 gr.)

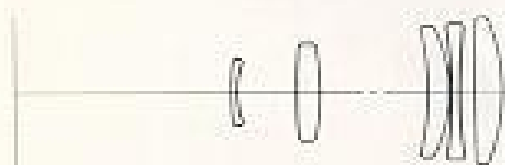




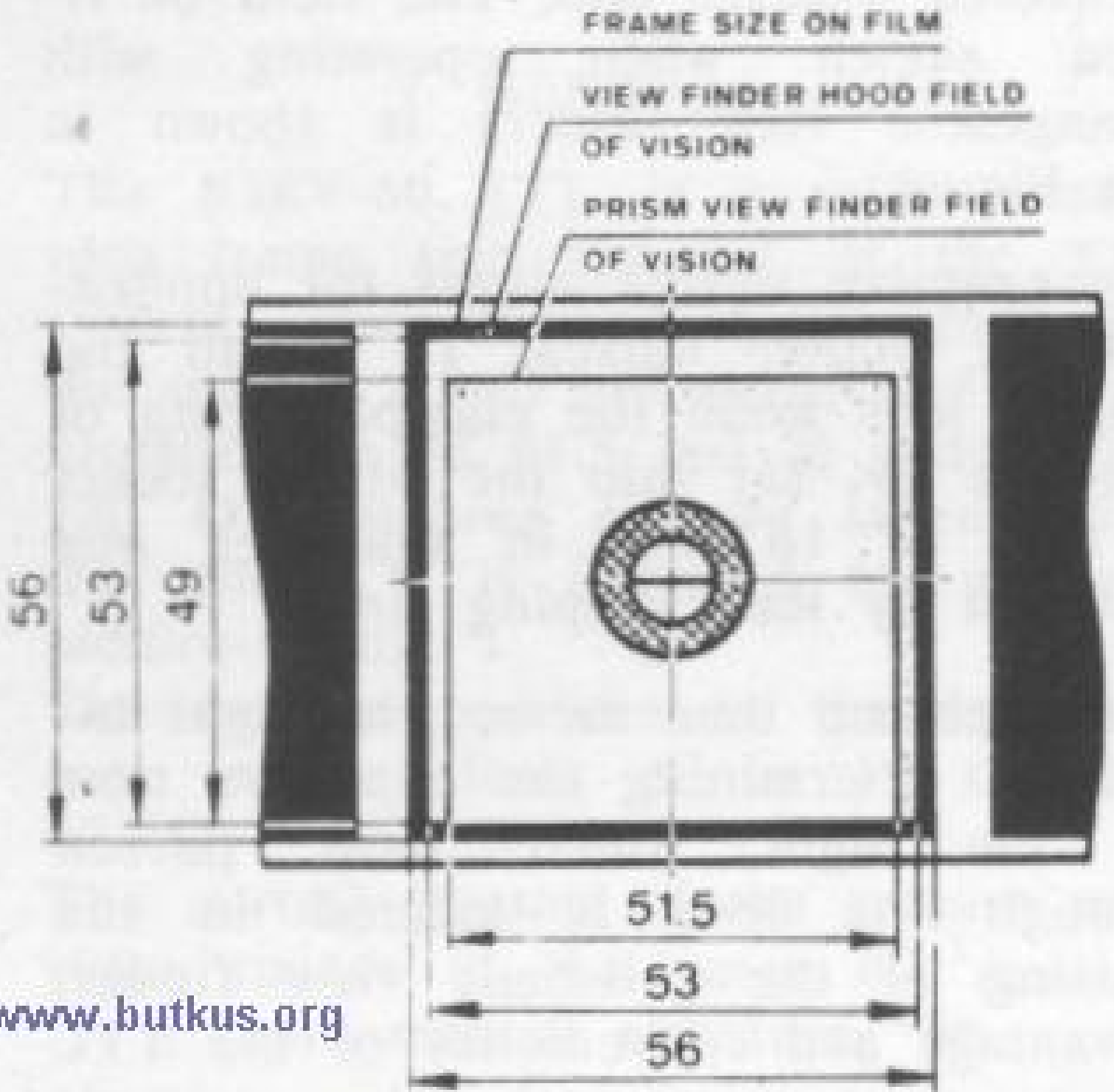


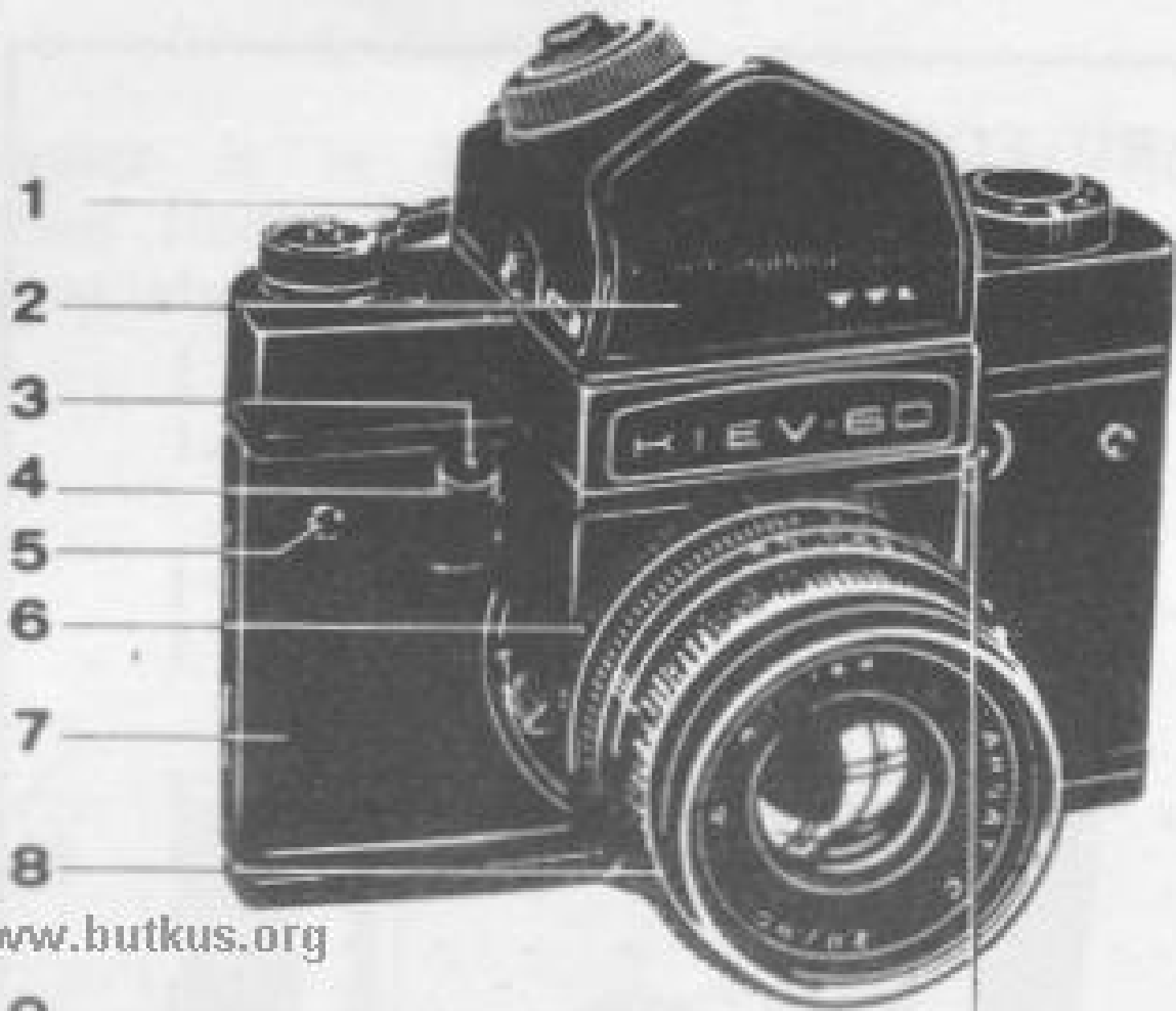
Super-Takumar 150mm f/4

This new fully automatic 150mm Super-Takumar with a focal length three times as long as the standard lens has been designed and produced to suit the purpose of photographing subjects requiring an intermediate angle between the 135mm and 200mm lenses. So compact, so light-weight, it looks like a 135mm lens, yet it is only 7mm longer. New-type, all-purpose telephoto lens... for telephoto snaps, sceneries, sports, news events, stage photographs, nature life, etc.



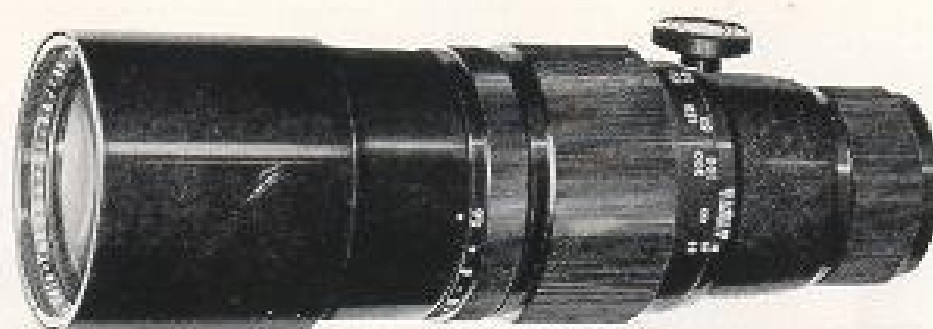
Lens element	5
Minimum aperture	f/22
Minimum distance	6 ft. (1.8 m)
Angle of view	16.5°
Weight	11.3 ozs. (324 gr.)







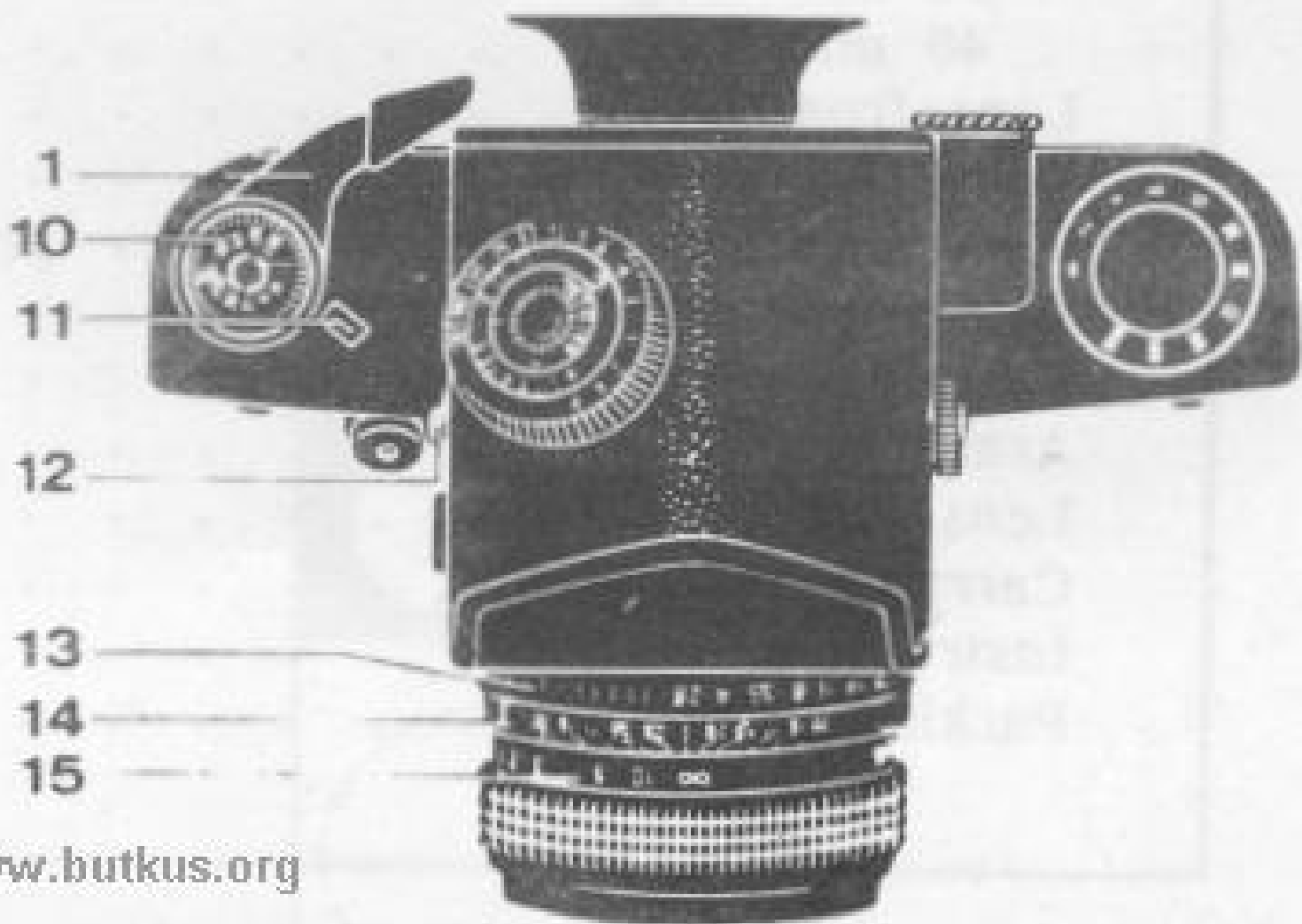
Tele-Takumar 400mm f/5.6

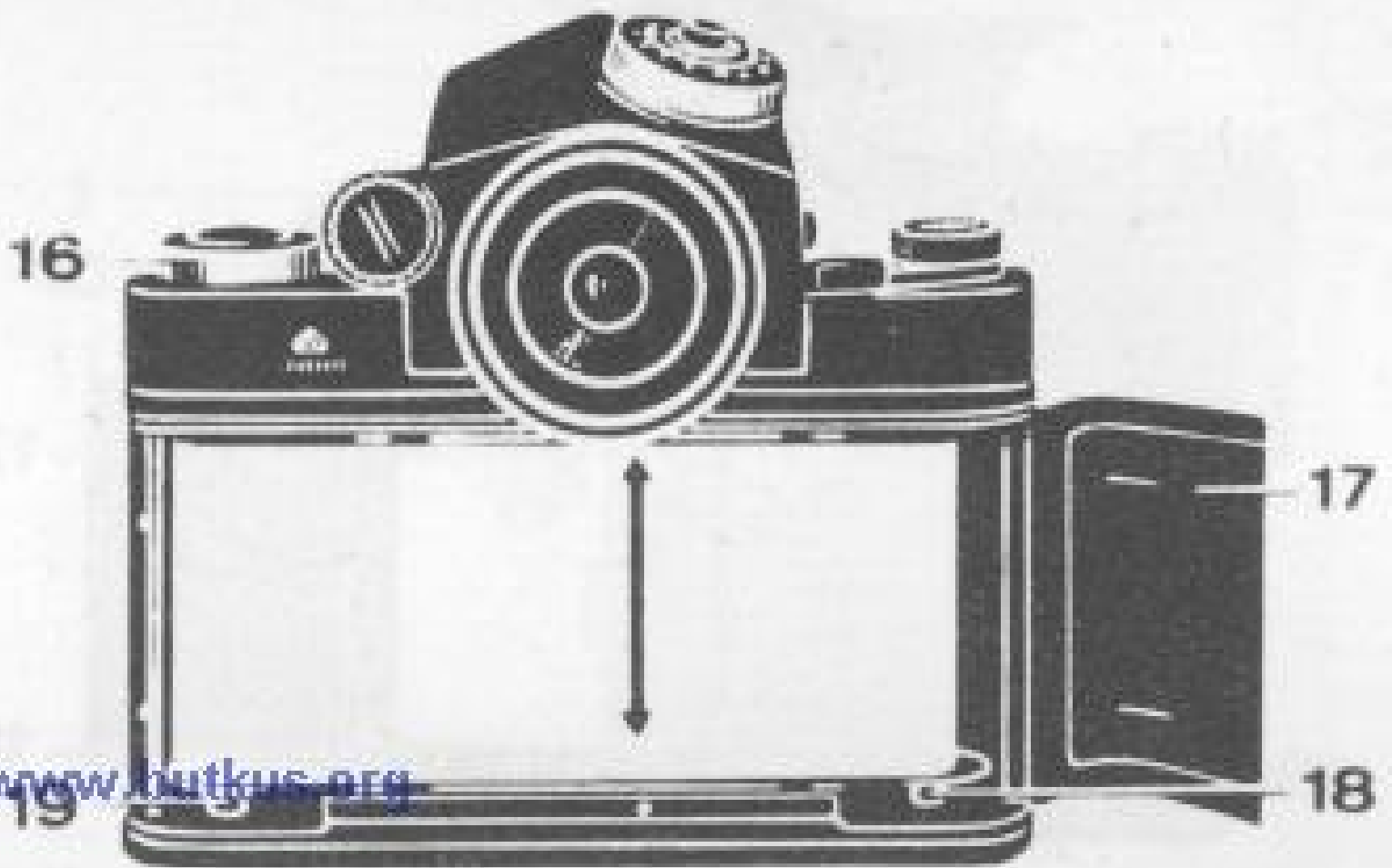


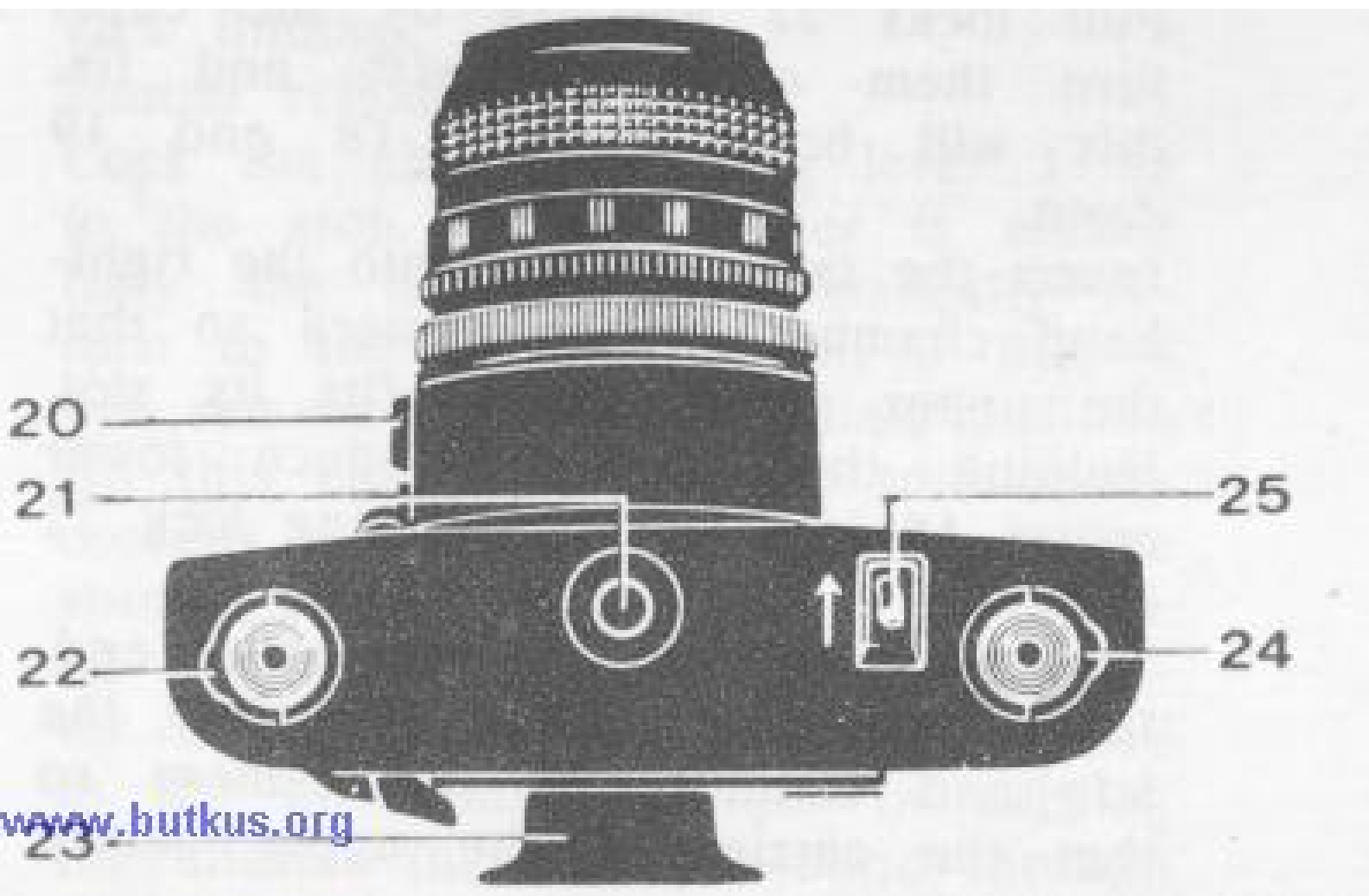
Especially designed for those professionals who specialize in outdoor sports, news and nature-life photography. Because of its f/5.6 aperture, this tele-lens is extremely compact and light for its focal length of 400mm. Also because of its portability, it can be easily hand-held for fast and successive shooting, depending upon the shutter speed to be used. Equipped with click-

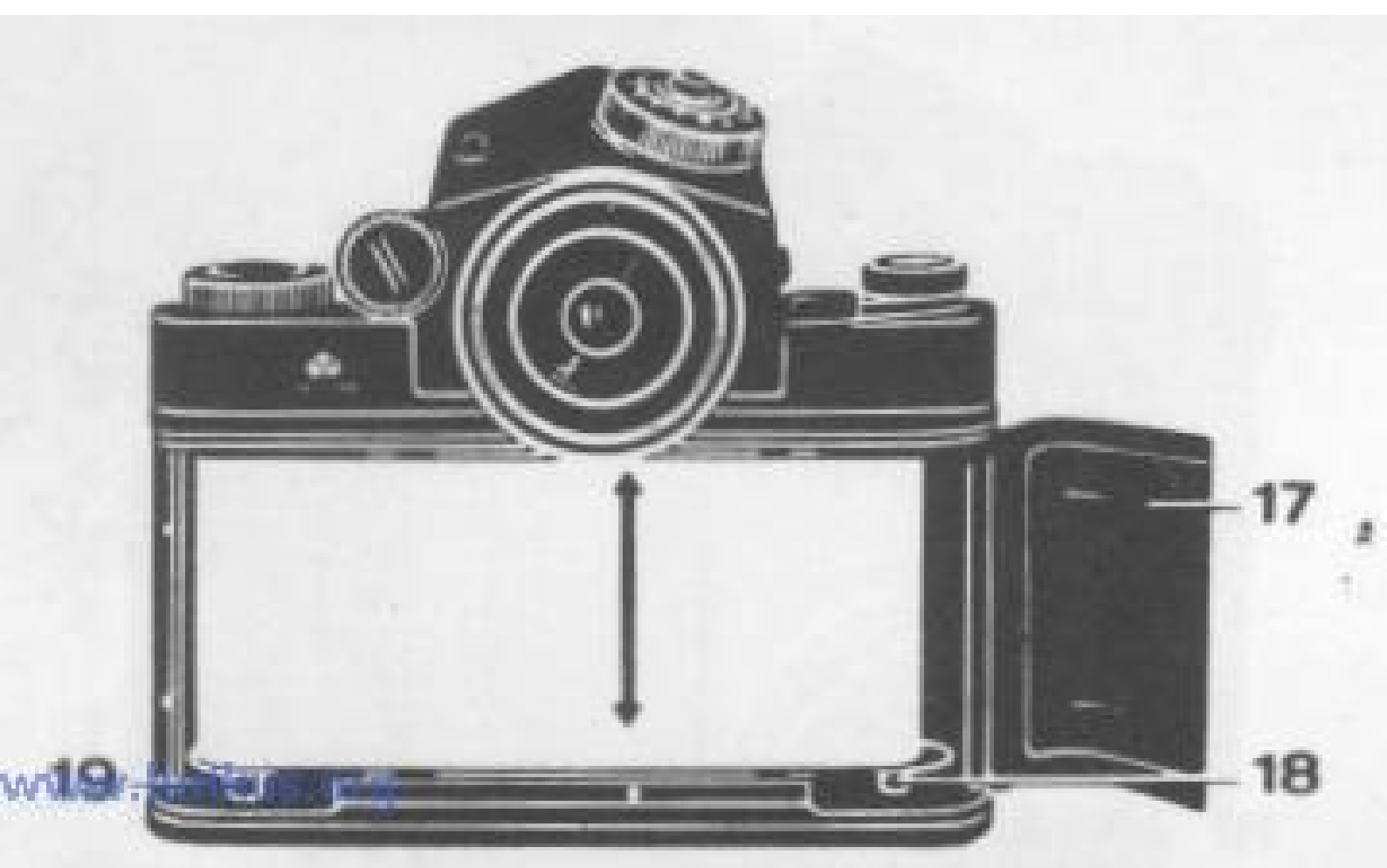
stop manual diaphragm; supplied with special lenshood.

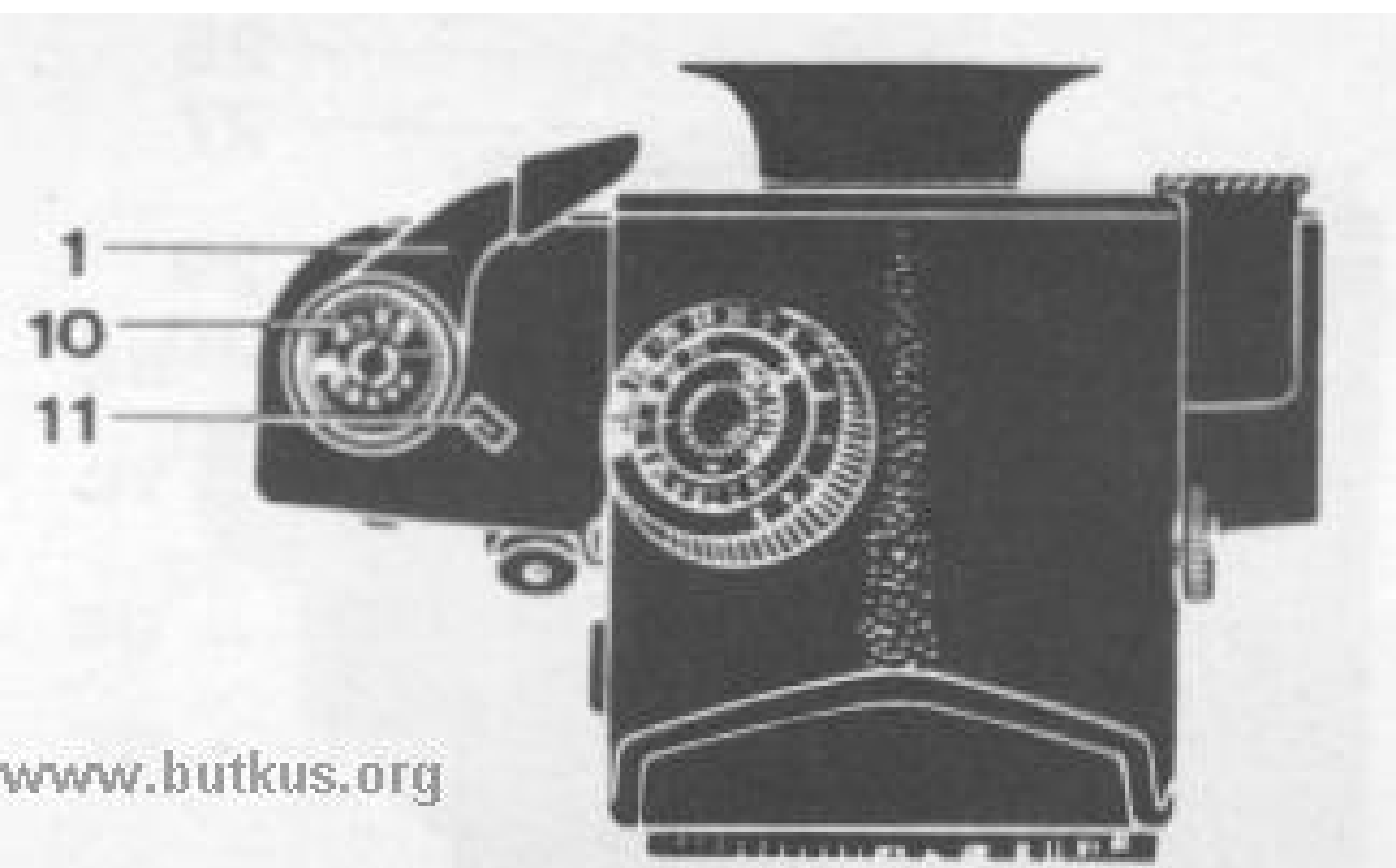
Lens element	5
Minimum aperture	f/45
Minimum distance	27 ft. (8 m)
Angle of view	6°
Weight	45 ozs. (1300 gr.)



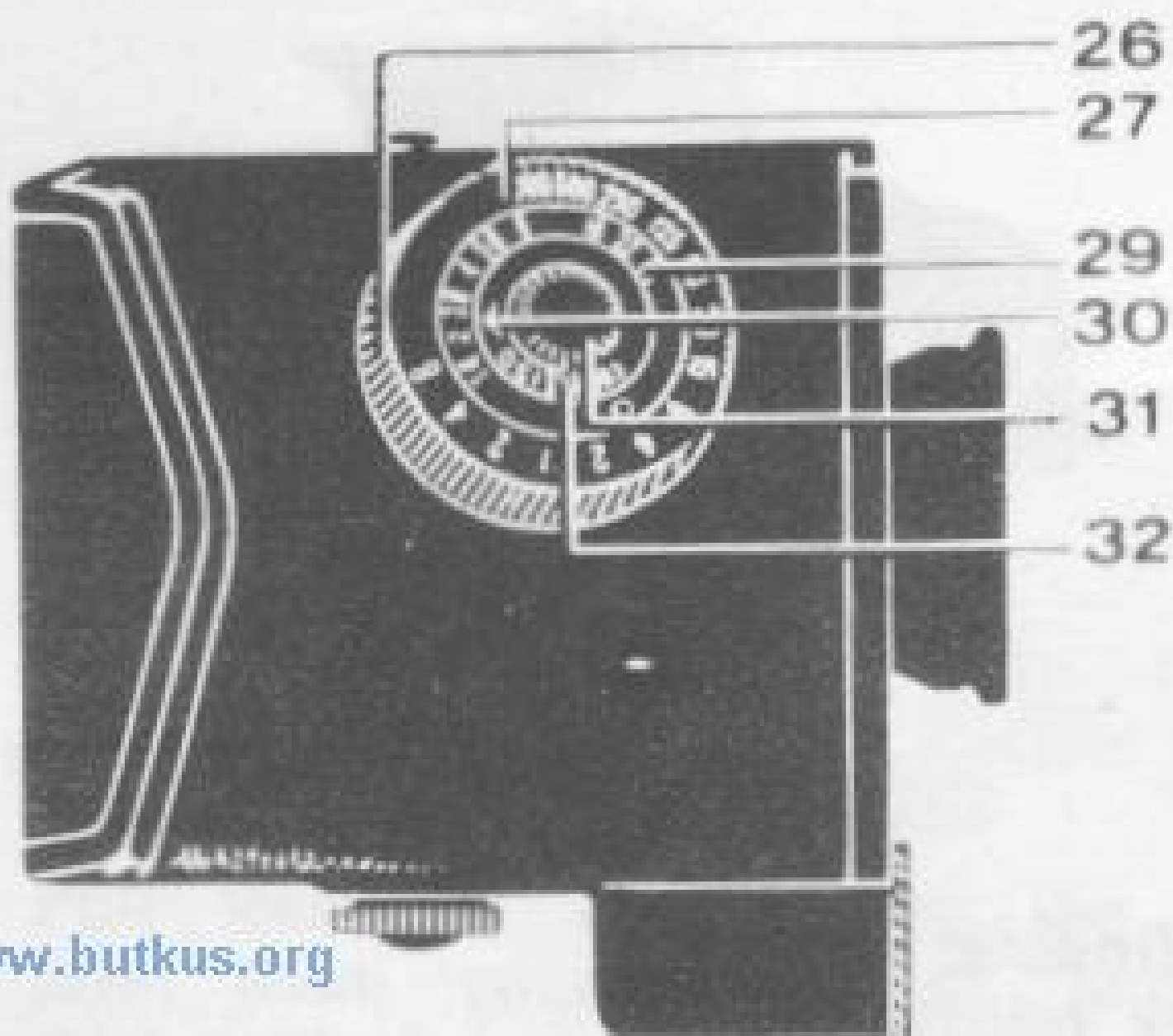








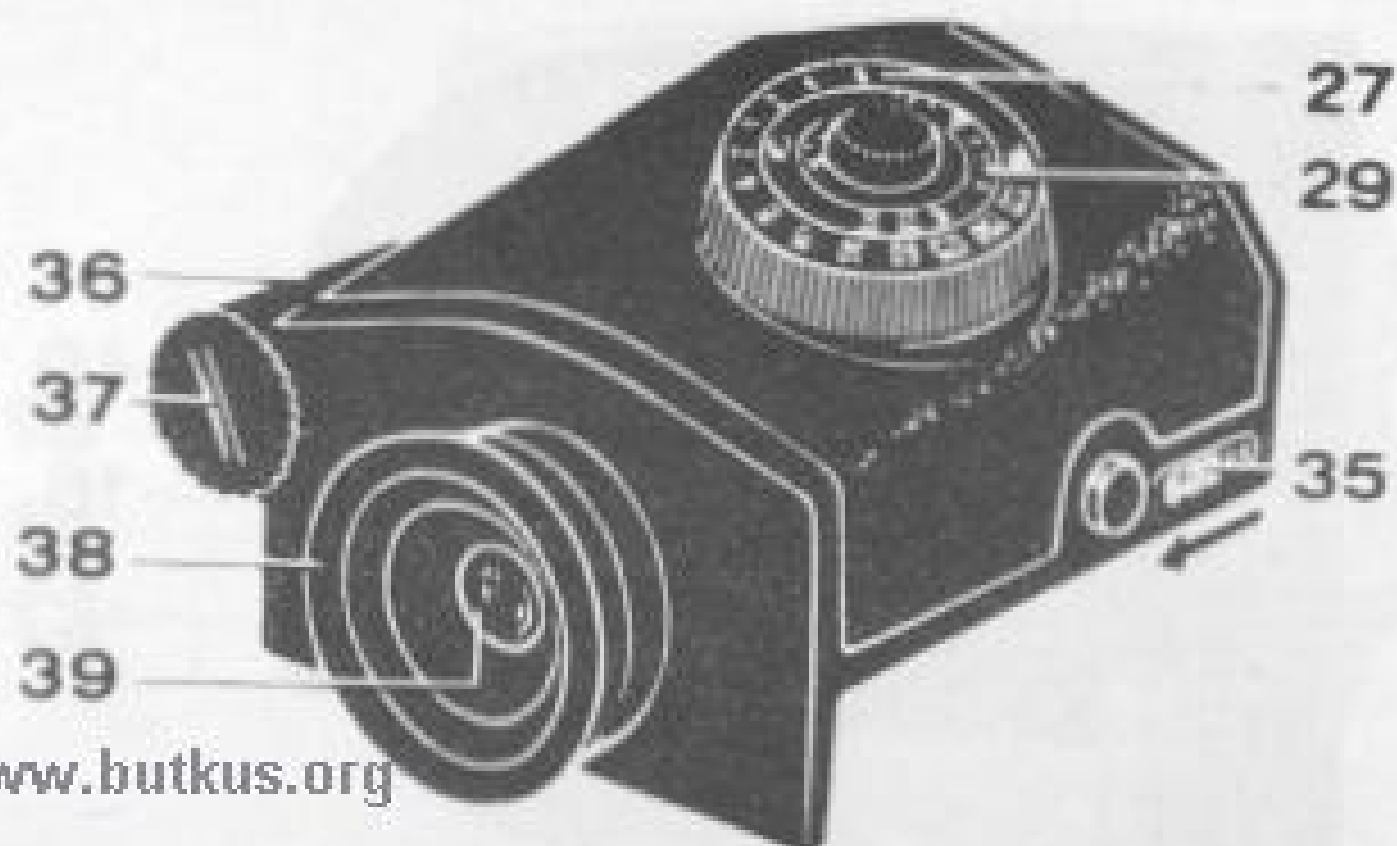
www.butkus.org

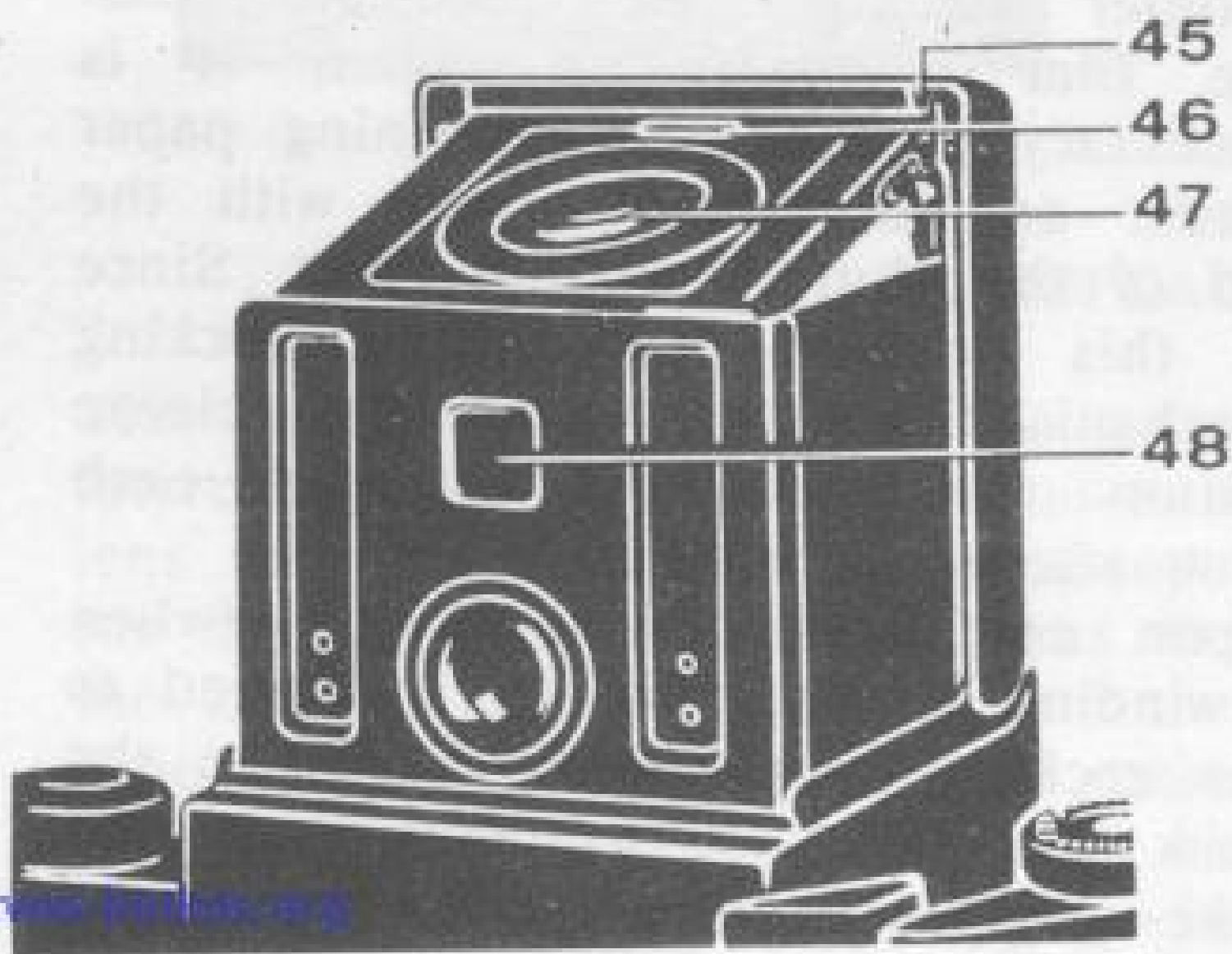


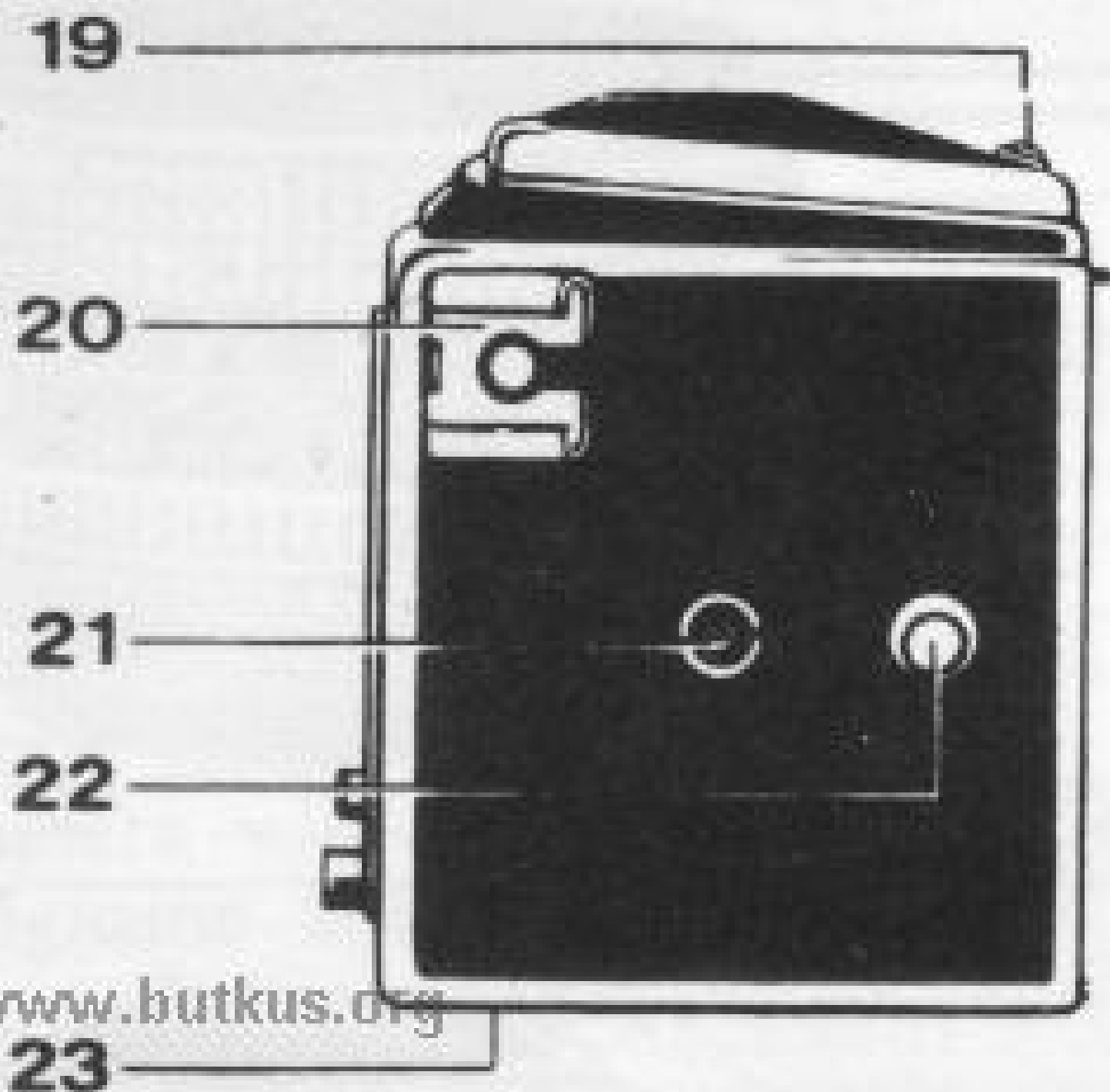
Complete System of Superb Takumar Lenses

	NAME OF LENSES	FOCAL LENGTH & MAXIMUM APERTURE	MINIMUM APERTURE	LENS ELEMENT	DIAPHRAGM	MINIMUM FOCUSING DISTANCE		ANGLE OF VIEW	WEIGHT		FILTER SIZE	LENSHOOD SIZE	LENS CAP SIZE
						m.	ft.		gr.	ozs.			
1	Super-Takumar Fish-Eye	17mm f/4	22	11	FA	0.2	0.66	180°	228	7.98	BI	—	60
2	Super-Takumar	28mm f/3.5	16	7	FA	0.4	1.3	75	218	7.6	49	*	51
3	Super-Takumar	35mm f/3.5	16	5	FA	0.45	1.5	63	152	5.4	49	49	51
4	Super-Takumar	35mm f/2	16	8	FA	0.45	1.5	63	398	14	70°	70°	70
5	Super-Takumar	50mm f/1.4°	16	7	FA	0.45	1.5	46	230	8.1	49	49	51
6	Macro-Takumar	50mm f/4	22	4	PS	—	—	46	265	9.3	49	49	51
7	Super-Takumar	55mm f/2°	16	6	FA	0.45	1.5	43	215	7.5	49	49	51
8	Super-Takumar	55mm f/1.8°	16	6	FA	0.45	1.5	43	215	7.5	49	49	51
9	Super-Takumar-Zoom	70~150mm f/4.5	22	14	FA	3.5	11.5	16~35	1209	42.6	67	*	70
10	Super-Takumar	85mm f/1.9	16	5	FA	0.85	2.75	28	350	12.3	58	58*	60
11	Bellows-Takumar	100mm f/4	22	5	PS	—	—	24	139	4.9	49	49	51
12	Takumar	105mm f/2.8	22	5	PS	1.2	4	23	250	8.8	49	49*	51
13	Super-Takumar	105mm f/2.8	22	5	FA	1.2	4	23	290	10.2	49	49*	51
14	Super-Takumar	135mm f/3.5	22	4	FA	1.5	5	18	343	12.1	49	49*	51
15	Super-Takumar	135mm f/2.5	22	5	FA	1.5	5	18	444	15.5	58	58*	60
16	Super-Takumar	150mm f/4	22	5	FA	1.8	6	16.5	324	11.3	49	49*	51
17	Super-Takumar	200mm f/4	22	5	FA	2.5	8.2	12.5	550	19.3	58	58*	60
18	Tele-Takumar	200mm f/5.6	22	5	PS	2.5	8.2	12	370	13.1	49	49*	51
19	Tele-Takumar	300mm f/6.3	22	5	PS	5.5	18	8	729	25.7	58	*	60
20	Super-Takumar	300mm f/4	22	5	FA	5.5	18	8	946	33.1	82	*	85
21	Tele-Takumar	400mm f/5.6	45	5	M	8.0	27	6	1300	45	77	*	85
22	Takumar	500mm f/4.5	45	4	M	10.0	32.8	5	3500	122.5	49	*	127
23	Tele-Takumar	1000mm f/8°	45	5	M	30.0	98	2.5	5500	192.5	49	*	143

BI=3 filters built-in. M=Manual. FA=Fully Automatic. PS=Preset. °=Diagonal





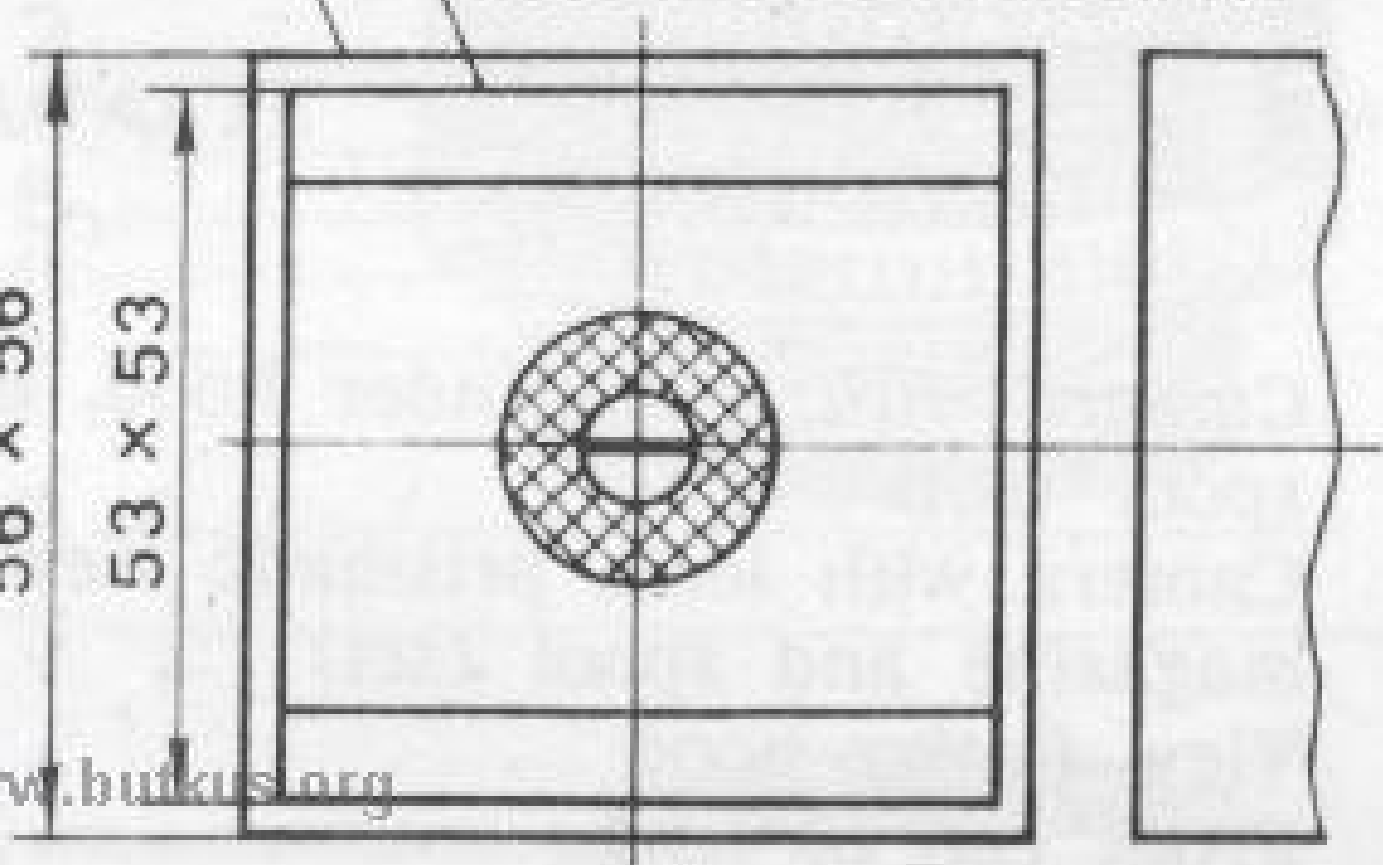


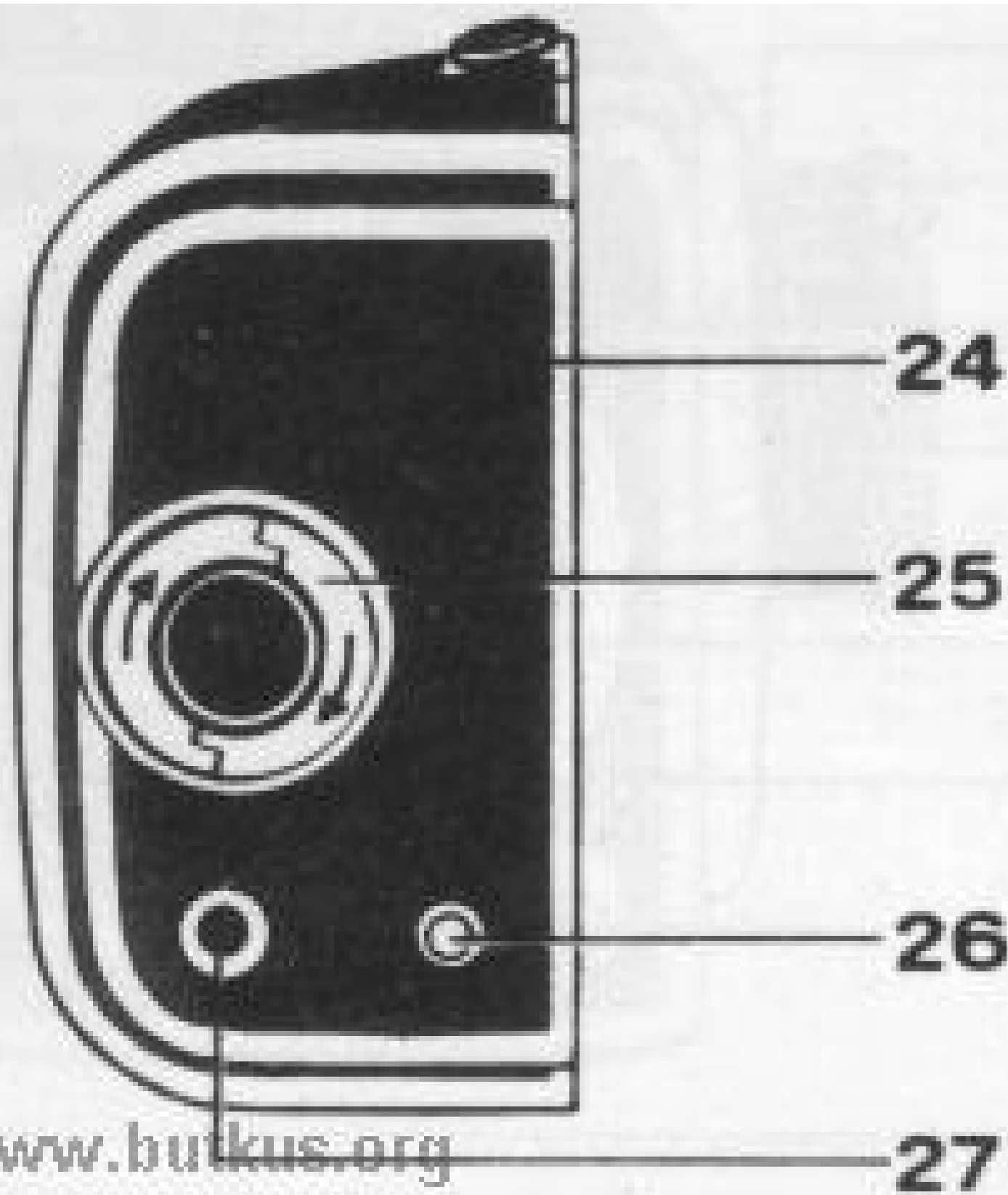
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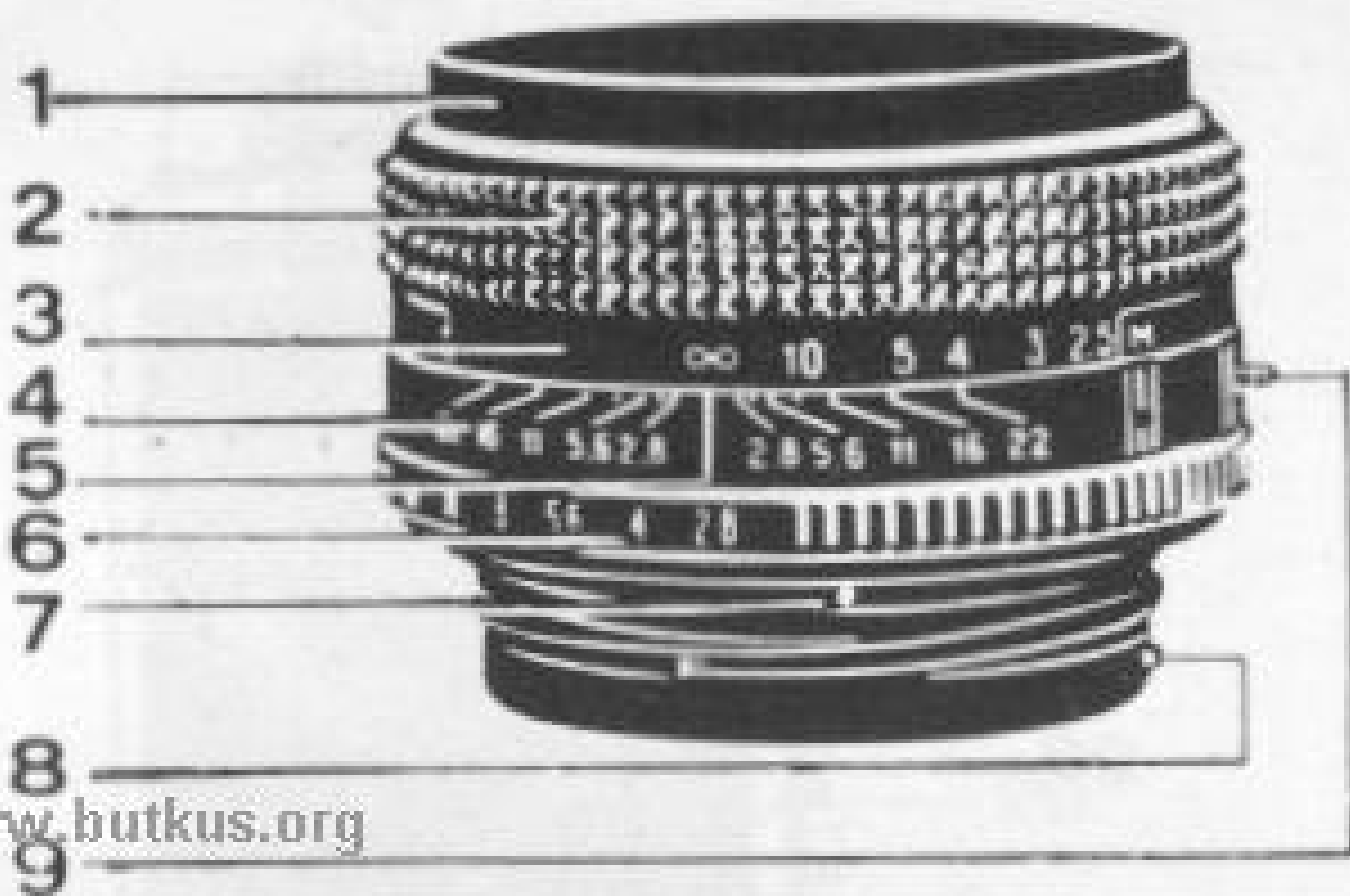
FIELD OF VISION OF VIEW FINDER
HOOD AND VIEW FINDER TTL

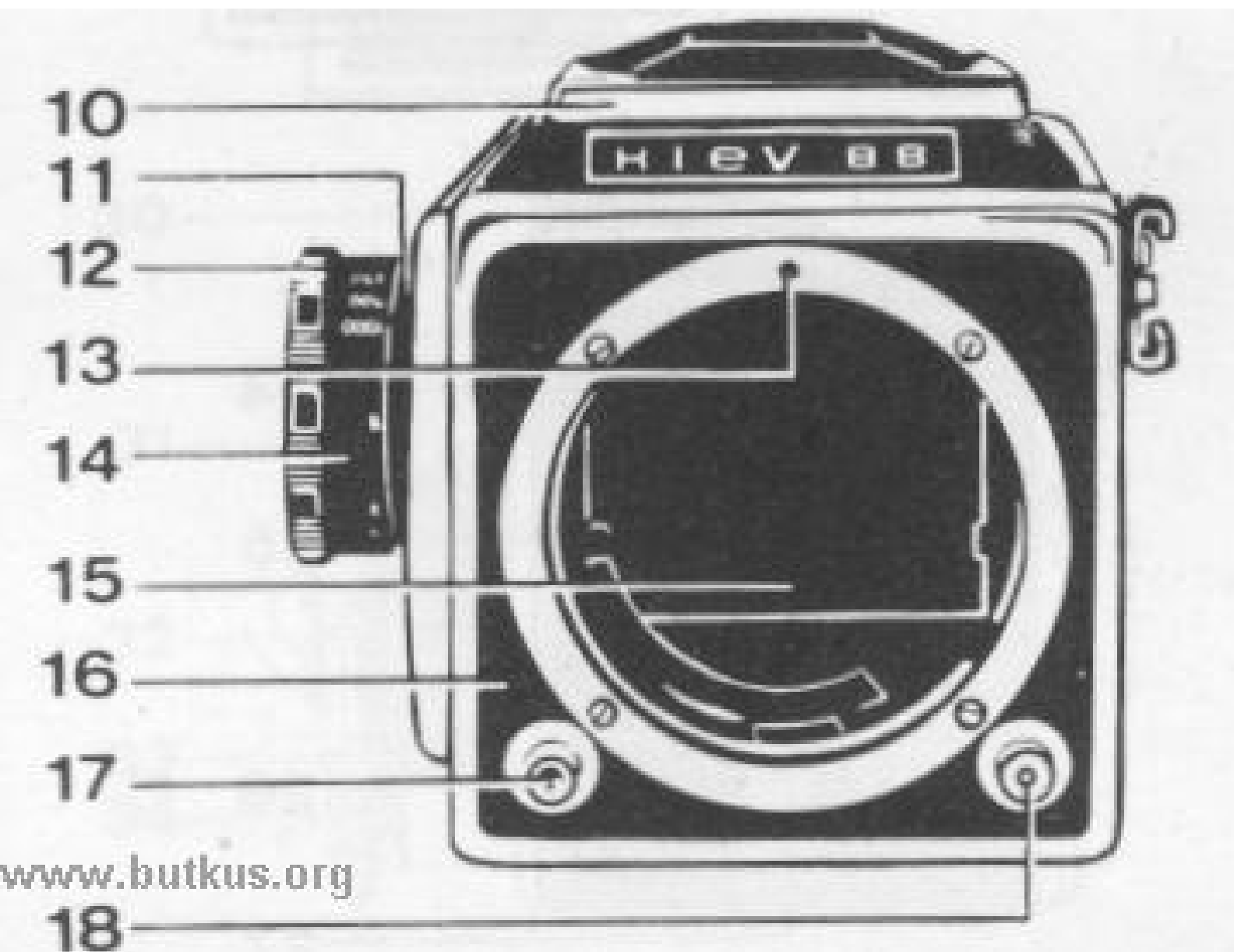
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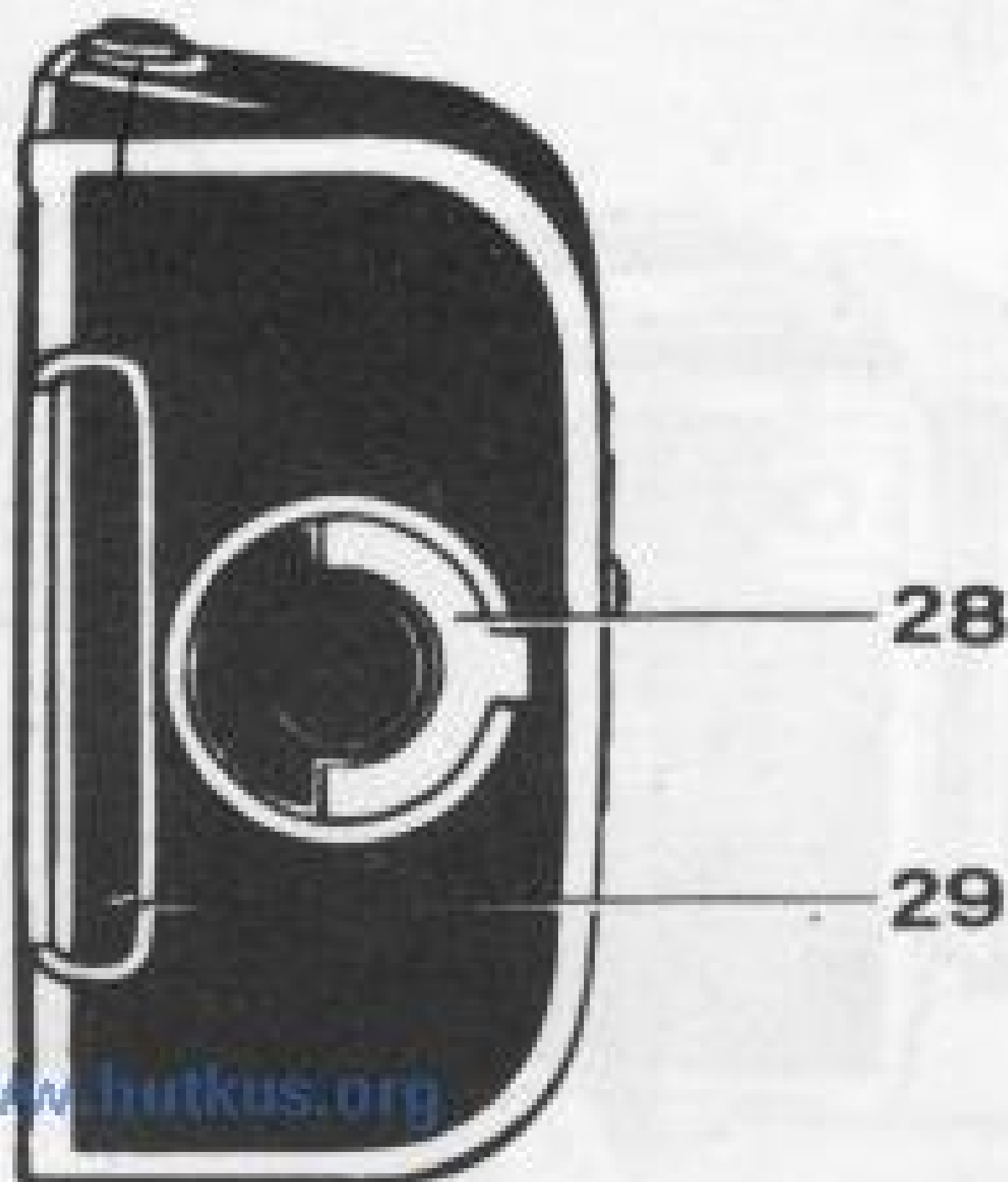


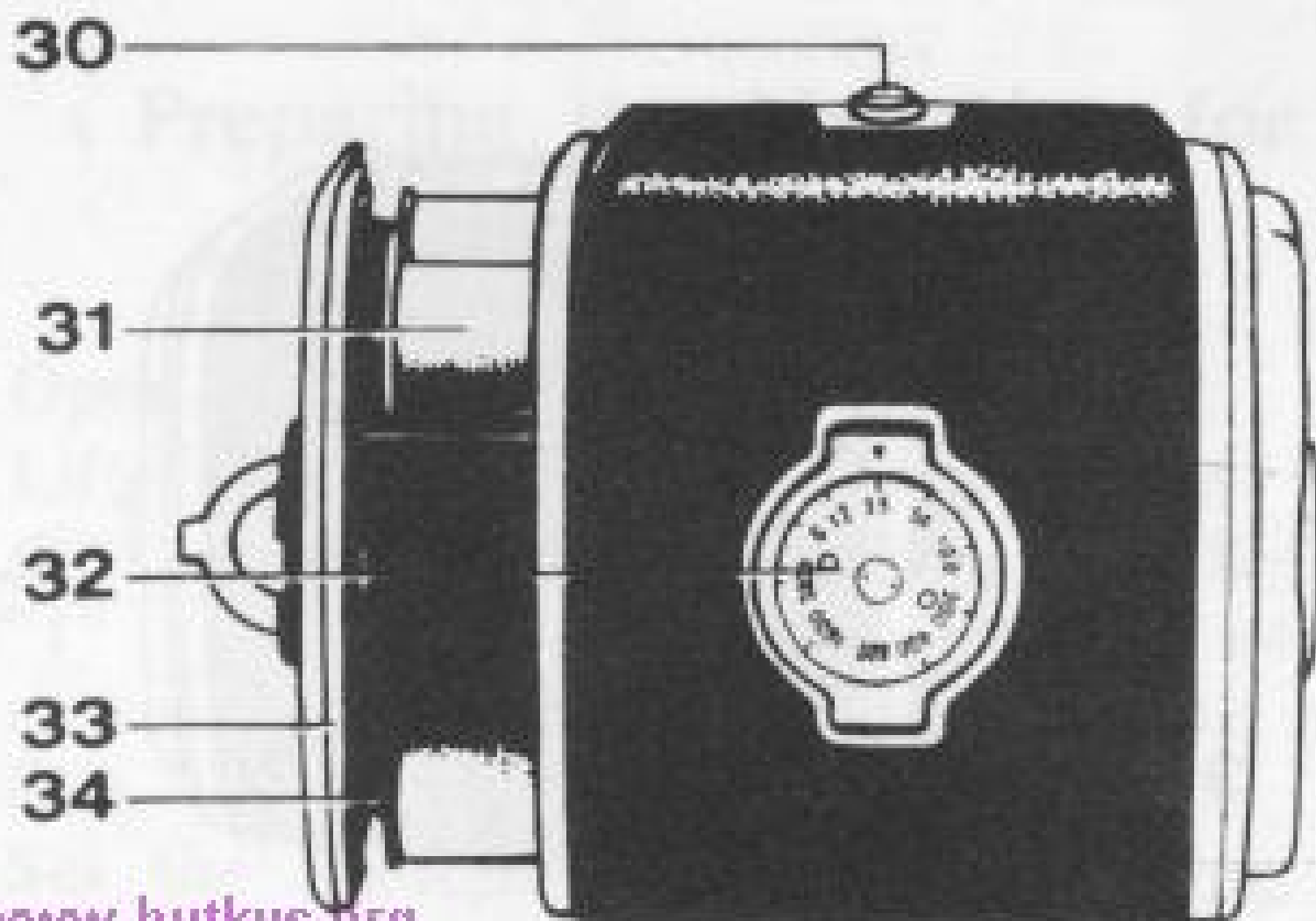


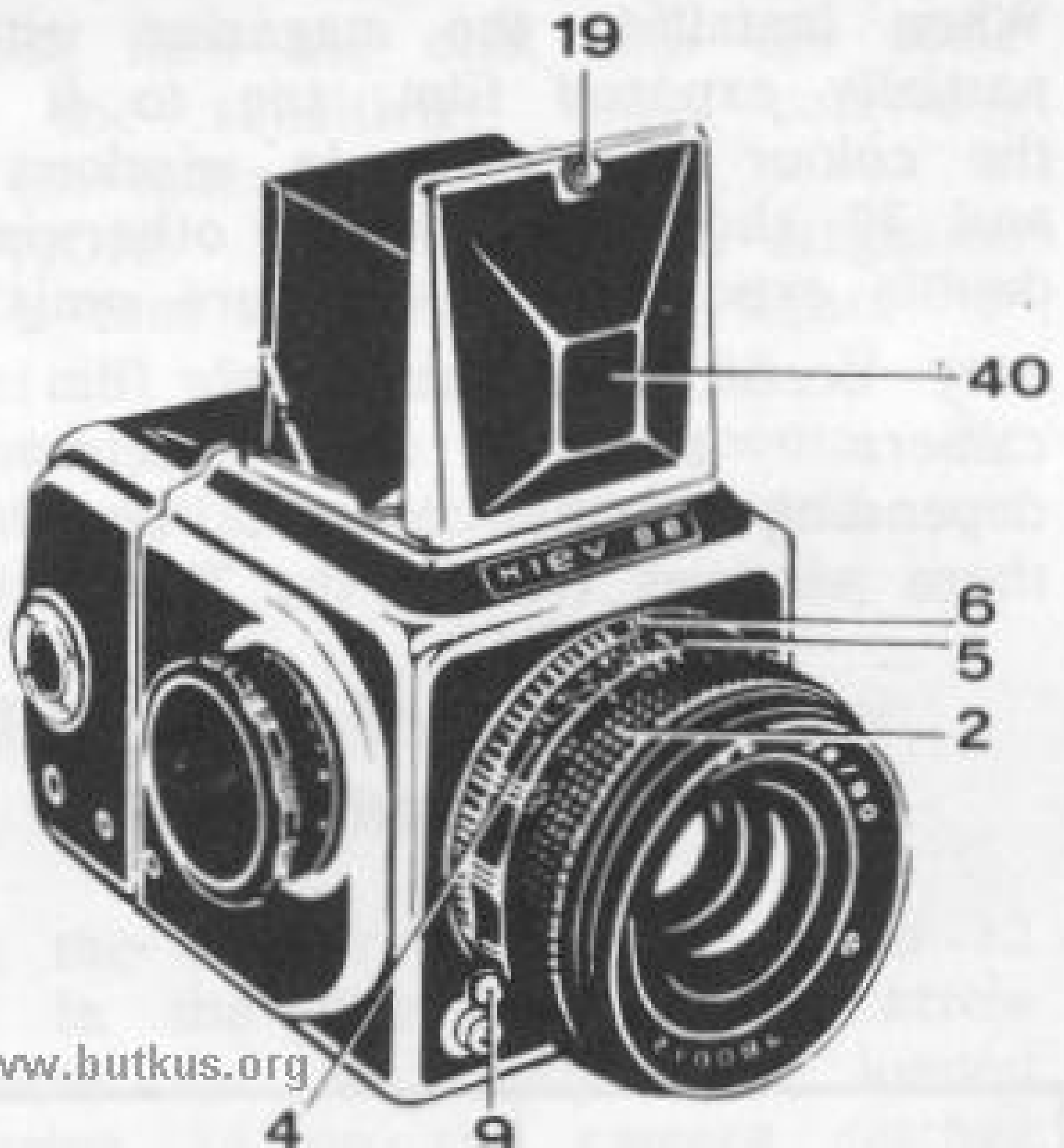


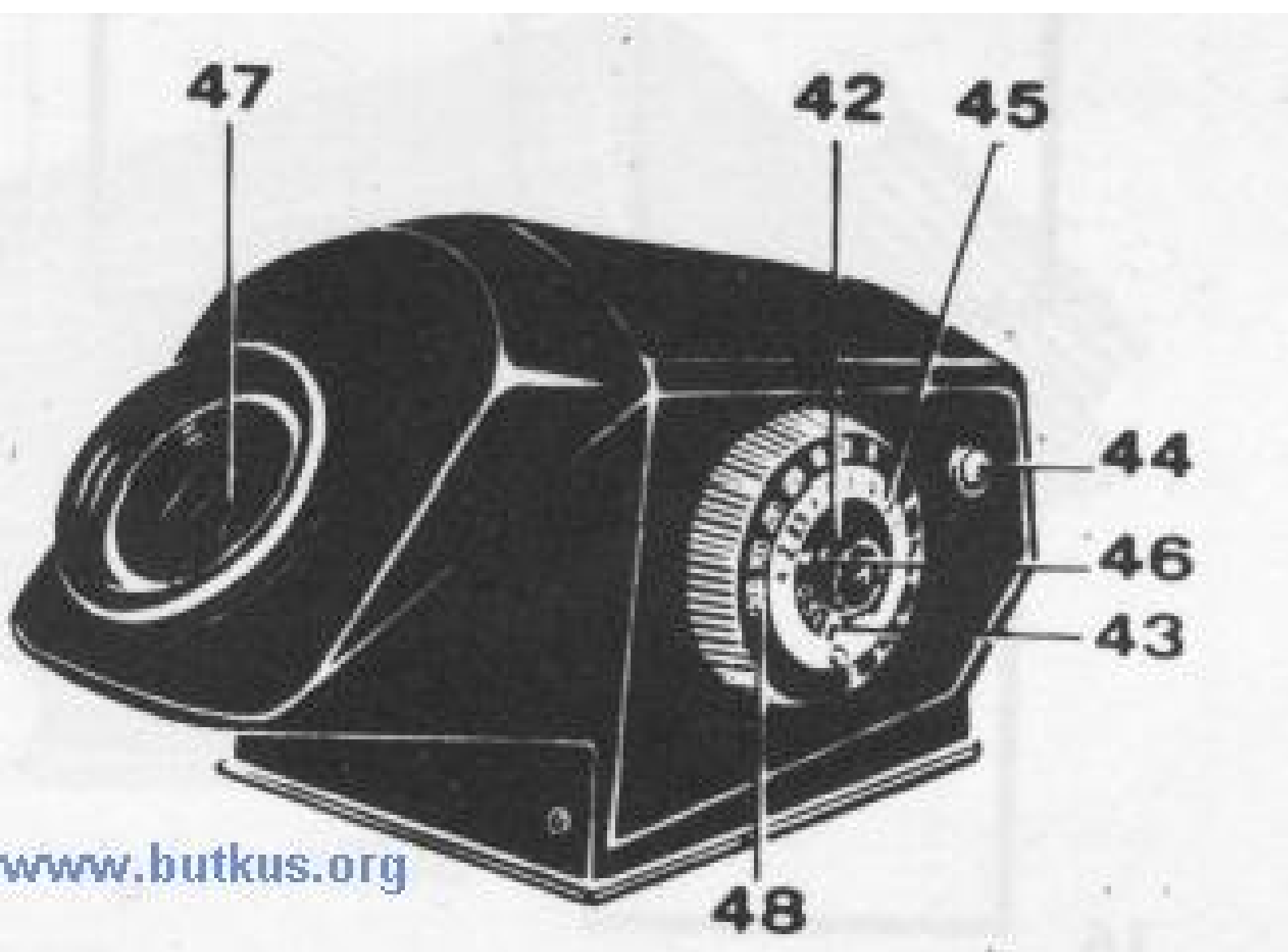
Depth of Field Table for Lens (focal length — 7.5 cm)

Distance scale divisions in metres	Diaphragm					
	1 : 4.5	1 : 5.6	1 : 8	1 : 11	1 : 16	1 : 22
1.4	1.33— 1.48	1.32— 1.51	1.28— 1.56	1.24— 1.62	1.19— 1.75	1.12— 1.93
2	1.86— 2.17	1.83— 2.22	1.77— 2.33	1.69— 2.48	1.58— 2.79	1.47— 3.26
2.8	2.53— 3.15	2.48— 3.25	2.36— 3.49	2.23— 3.84	2.04— 4.60	1.86— 6.04
4	3.47— 4.75	3.37— 4.97	3.15— 5.55	2.92— 6.48	2.61— 8.99	2.31— 16.70
5.6	4.62— 7.17	4.43— 7.70	4.06— 9.16	3.69— 12.00	3.20— 24.68	2.76— ∞
8	6.13— 11.62	5.80— 13.06	5.19— 17.90	4.58— ∞	3.85— ∞	3.23— ∞
11	7.74— 19.21	7.22— 23.48	6.29— ∞	5.43— ∞	4.42— ∞	3.62— ∞
∞	25.83— ∞	20.76— ∞	14.53— ∞	10.57— ∞	7.26— ∞	5.28— ∞













SCREW-PLATE

LIGHT FILTERS

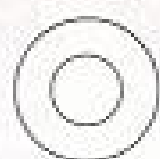
CAMERA KIEV 88

MAGAZINE

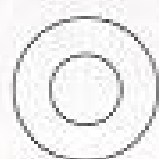




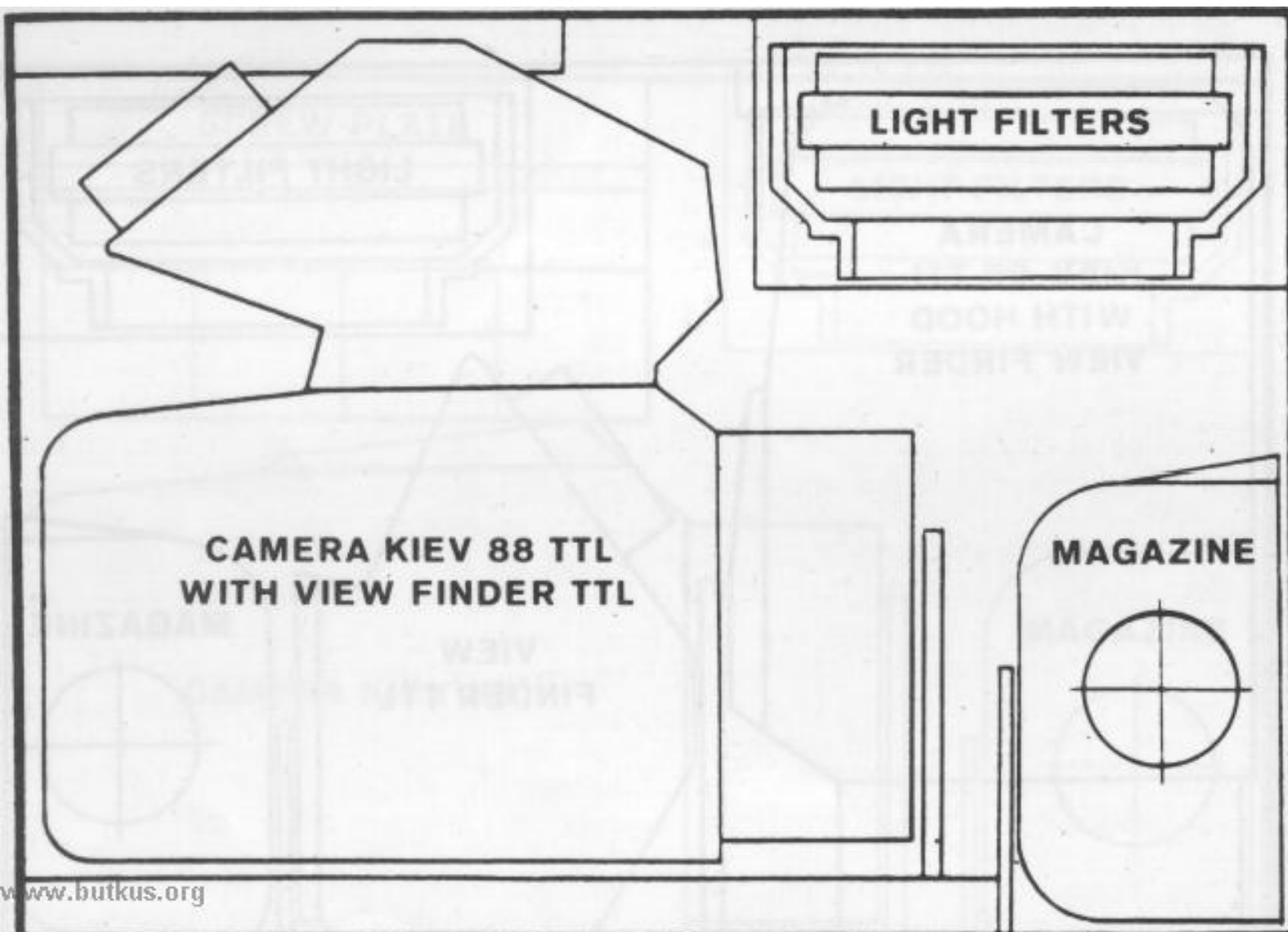
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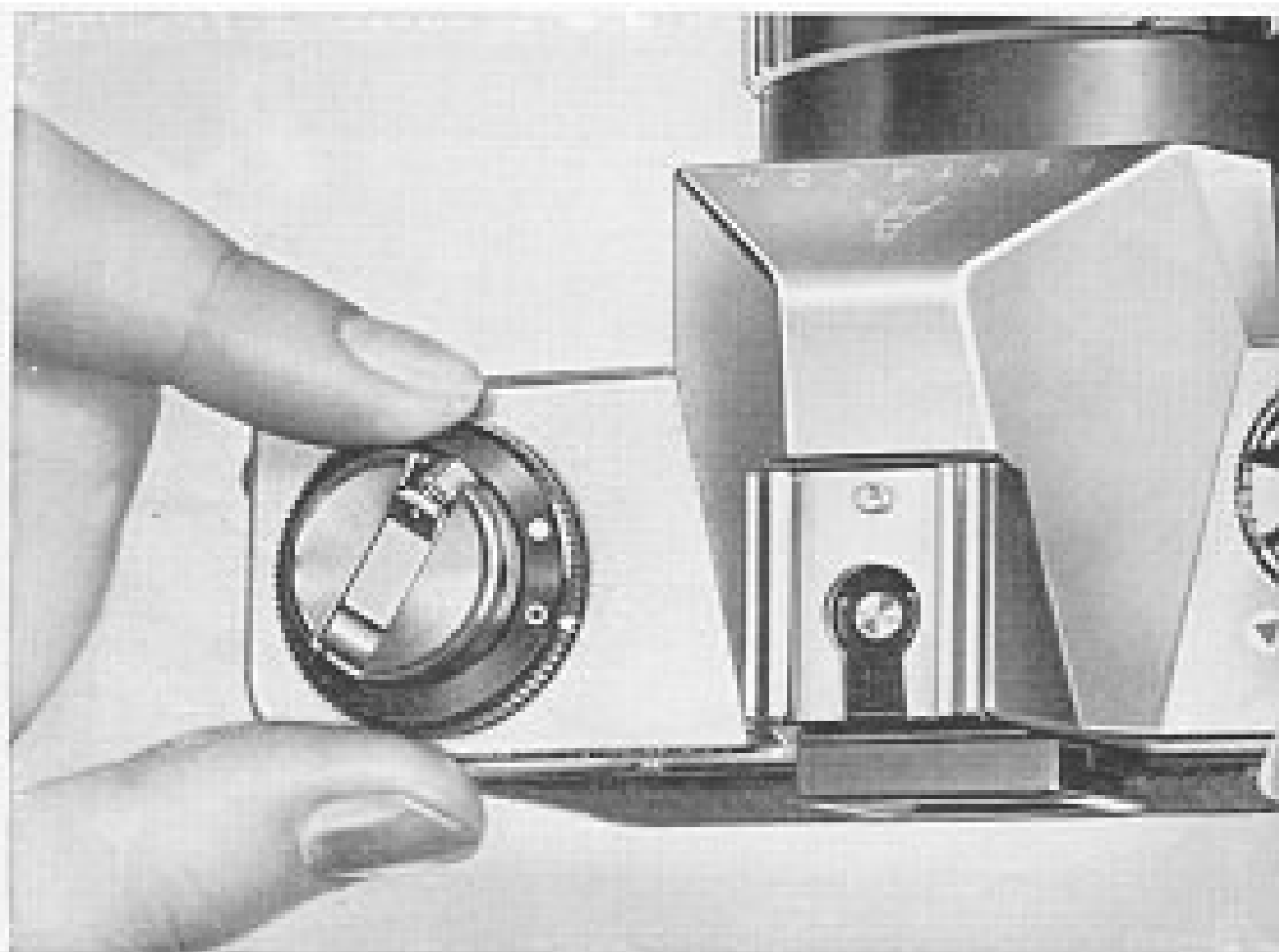
**CAMERA
KIEV 88 TTL
WITH HOOD
VIEW FINDER**

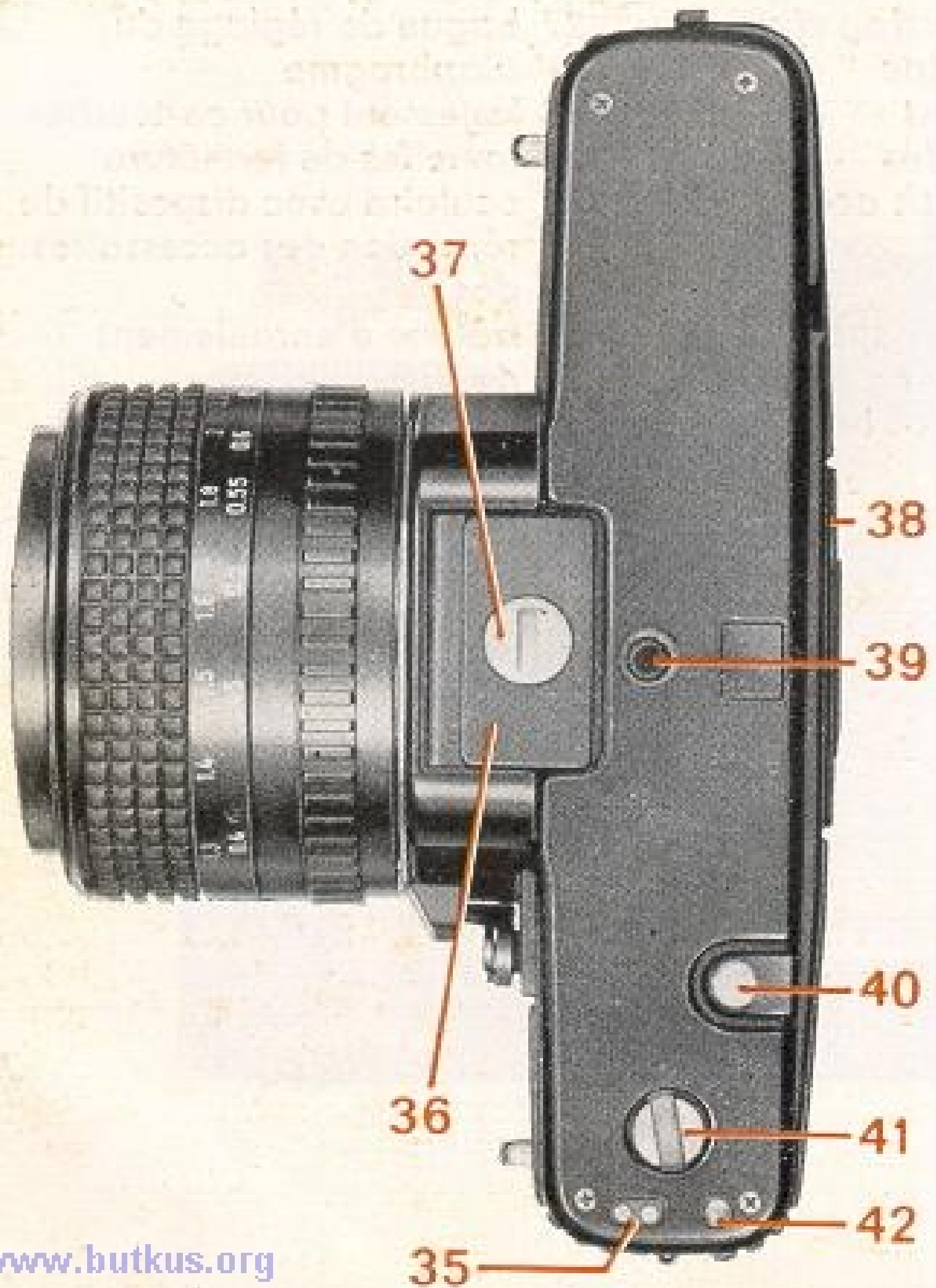
LIGHT FILTERS

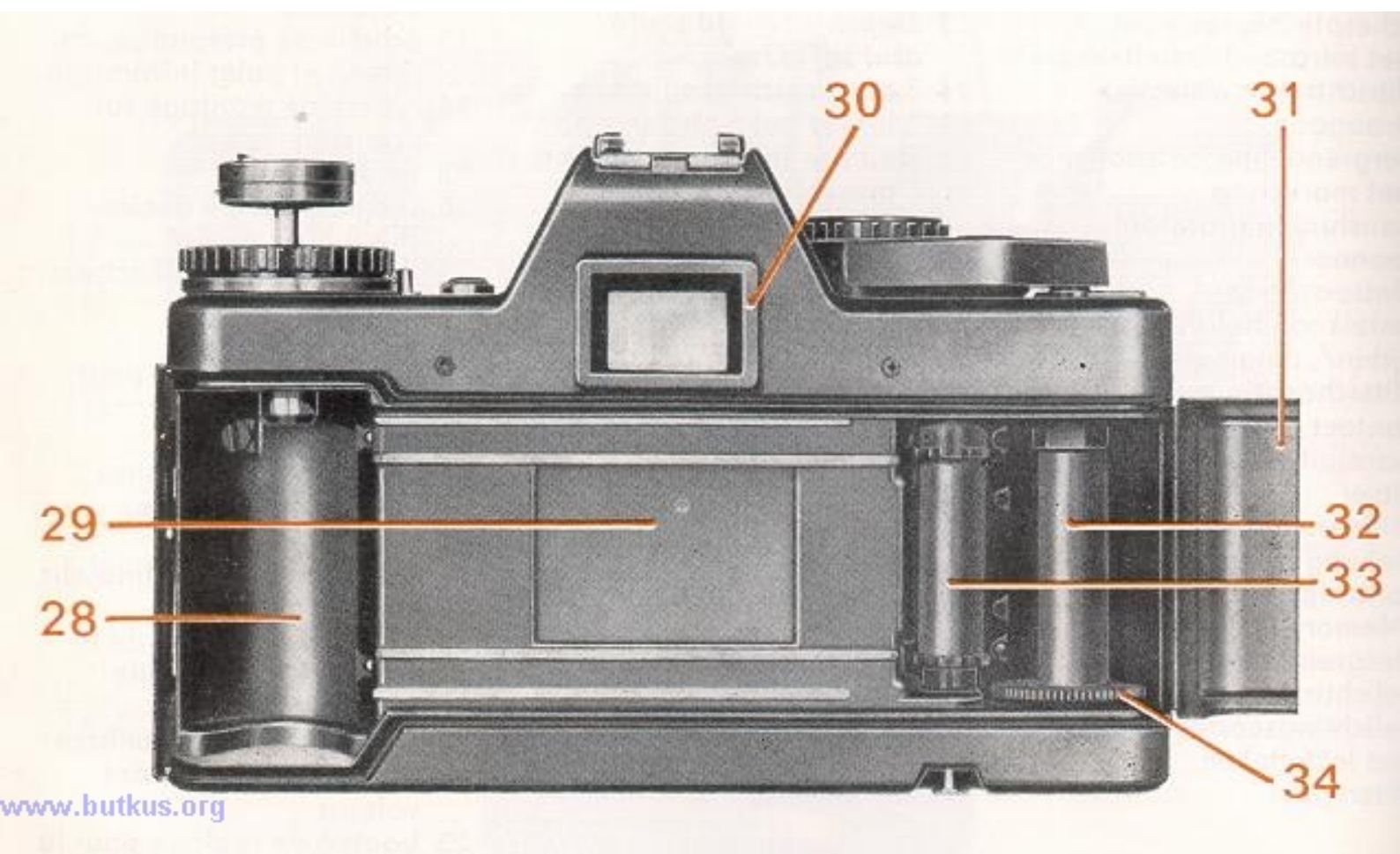
**VIEW
FINDER TTL**

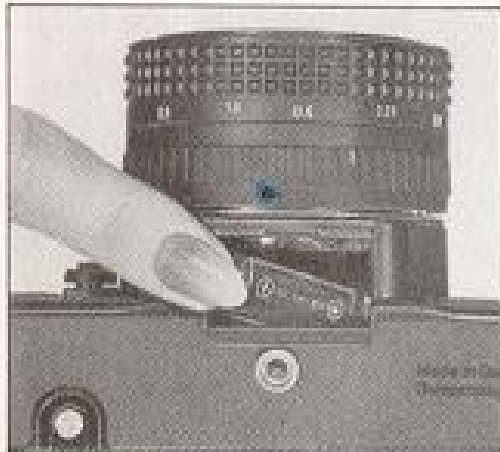
MAGAZINE







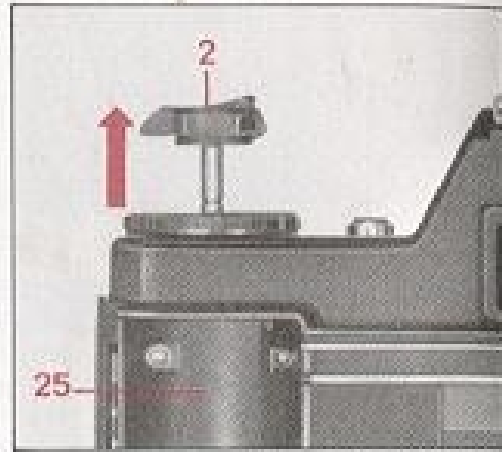




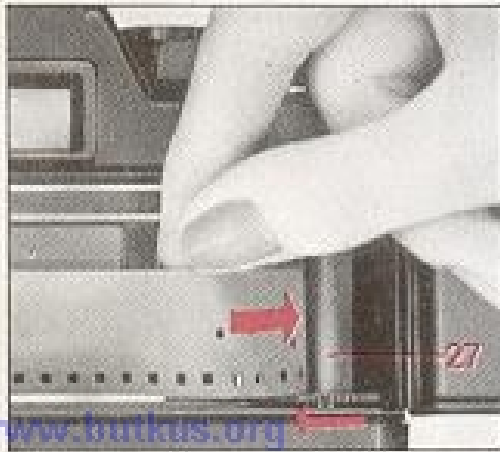
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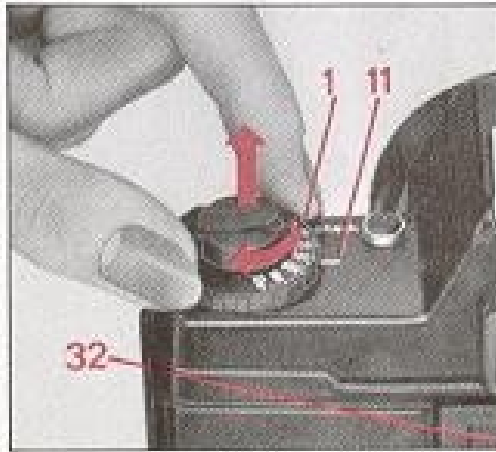
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3



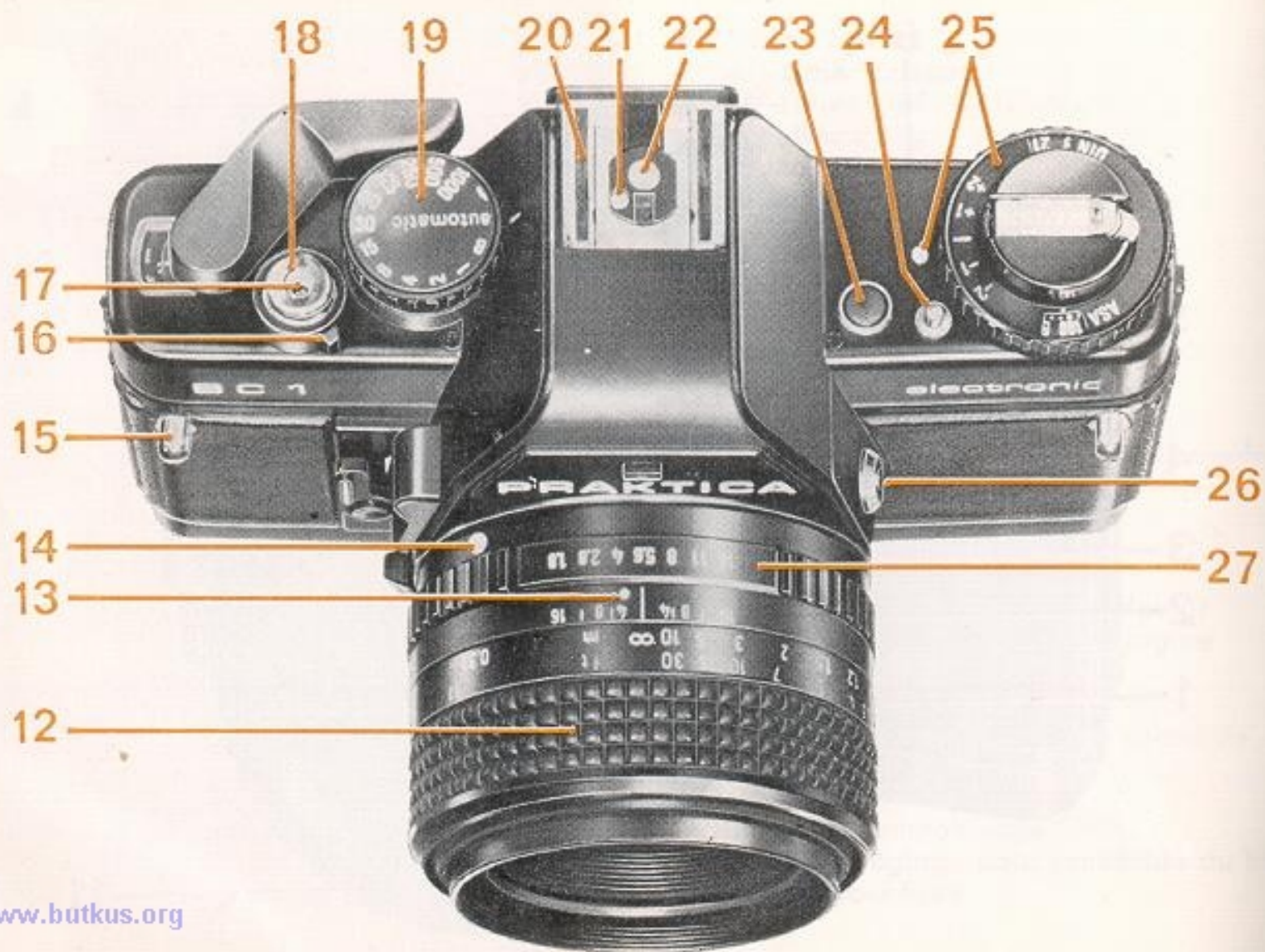
4



5



6



PREPARING TO SHOOT

Check shutter speed
and diaphragm

Tension shutter
(with film advance crank)

Check film frame number

Set light value
Select shutter speed-diaphragm opening

Double exposures:
unlock crank to re-cock shutter

Before exposure:
unlock shutter release

Release shutter

Check focus and composition

Sports and flash pictures:
use direct view finder

When required:
reverse the exposure meter
sensitivity range control

Flash pictures:
adjust M-X lever
Exposures with self-timer:
cock self-timer

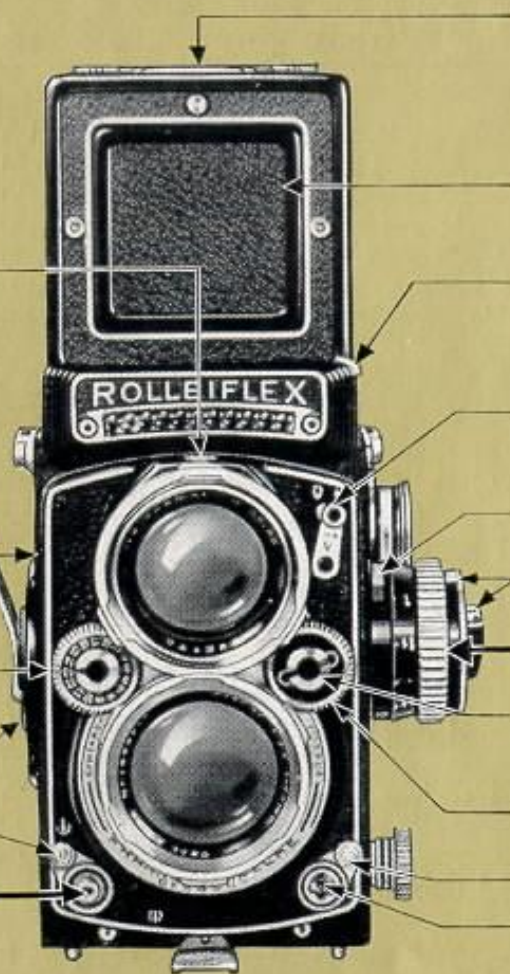
Check depth of field

Measure for required exposure

Focus

Uncouple when adjusting
light value

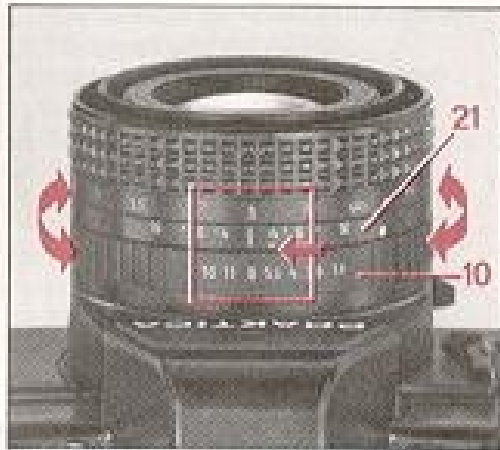
Flash pictures:
set diaphragm,
unlock flash cord plug before
pulling it out,
connect flash gun



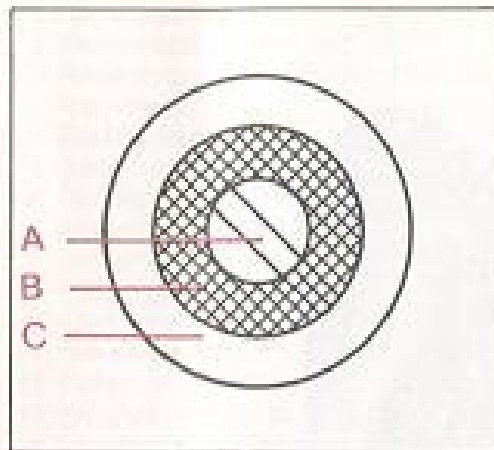


	1	2	3	4	5	6	7	8
f: 22	250	125	60	30	15	8	4	2
16	125	60	30	15	8	4	2	1
11	60	30	15	8	4	2	1	
8	30	15	8	4	2	1		
5,6	15	8	4	2	1			
4	8	4	2	1				
3,5	6	3	1,5					
2,8	4	2	1					
sec								

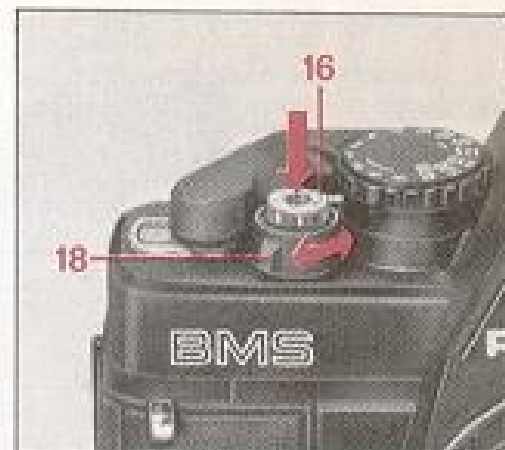




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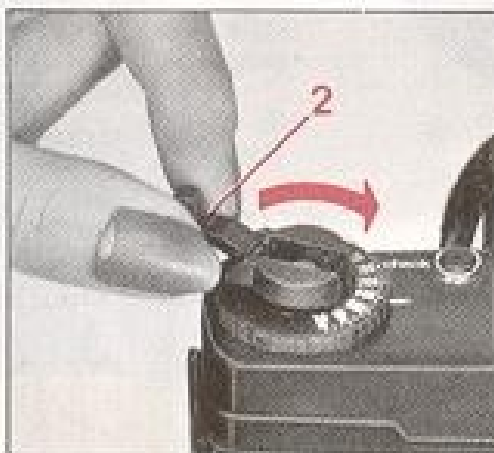
8



9



10



11



12

Focusing for sharpness → page 26

The sharpness of the ground glass is certain proof of the correct focusing of the camera.

Checking depth-of-field

→ page 26

The depth-of-field indicator on the focusing knob gives the exact extent of the depth-of-field.

The subject matter, of course, must determine whether you are to give first consideration to depth-of-field or to the choice of a suitable shutter speed.

Measuring exposure

→ page 19

The exposure meter supplies the correct light value for the speed of the film being used and to which the camera's subsequently set.

Shutter speed adjustment

→ page 24

Shutter speed, of course, is chosen in accordance with requirements set by the motion of the subject (→ table page 25).

Adjusting light value → page 24

After setting the light value and locking the coupling mechanism, the needed combination of speed and diaphragm opening may be quickly chosen (within the permissible range) without further calculation.



Speed of Moving Subjects and Shutter Speeds

[illegible]

For focal length	Tube No.	Length of Tube (mm)	Scale of Reproduct. β	Distance of object* (mm)	Size of object (mm)	Proportionate time of exposure
50 mm	1	5,8	0,11 to 0,25	455 to 224	207×311 to 96×144	1,2
	2	17,4	0,35 to 0,49	167 to 126	69×104 to 49×74	1,7
	1+2	23,2	0,46 to 0,60	131 to 106	52×78 to 40×60	2,0
	3	34,8	0,69 to 0,83	95 to 83	35×52 to 29×43	2,6
	1+3	40,6	0,81 to 0,94	84 to 76	30×45 to 26×38	2,9
	2+3	52,2	1,05 to 1,19	71 to 65	23×34 to 20×30	3,6
	1+2+3	58,0	1,16 to 1,30	66 to 61	21×31 to 19×28	4,0
58 mm	1	5,8	0,1 to 0,174	622 to 374	240×360 to 138×207	1,2
	2	17,4	0,3 to 0,374	234 to 198	80×120 to 64×96	1,7
	1+2	23,2	0,4 to 0,474	187 to 165	60×90 to 50×76	2,0
	3	34,8	0,6 to 0,674	139 to 128	40×60 to 35×53	2,6
	1+3	40,6	0,7 to 0,774	125 to 117	34×51 to 31×46	2,9
	2+3	52,2	0,9 to 0,974	107 to 103	26×40 to 24×36	3,6
	1+2+3	58,0	1,0 to 1,074	100 to 96	24×36 to 22×33	4,0

* from front rim of lens with filter

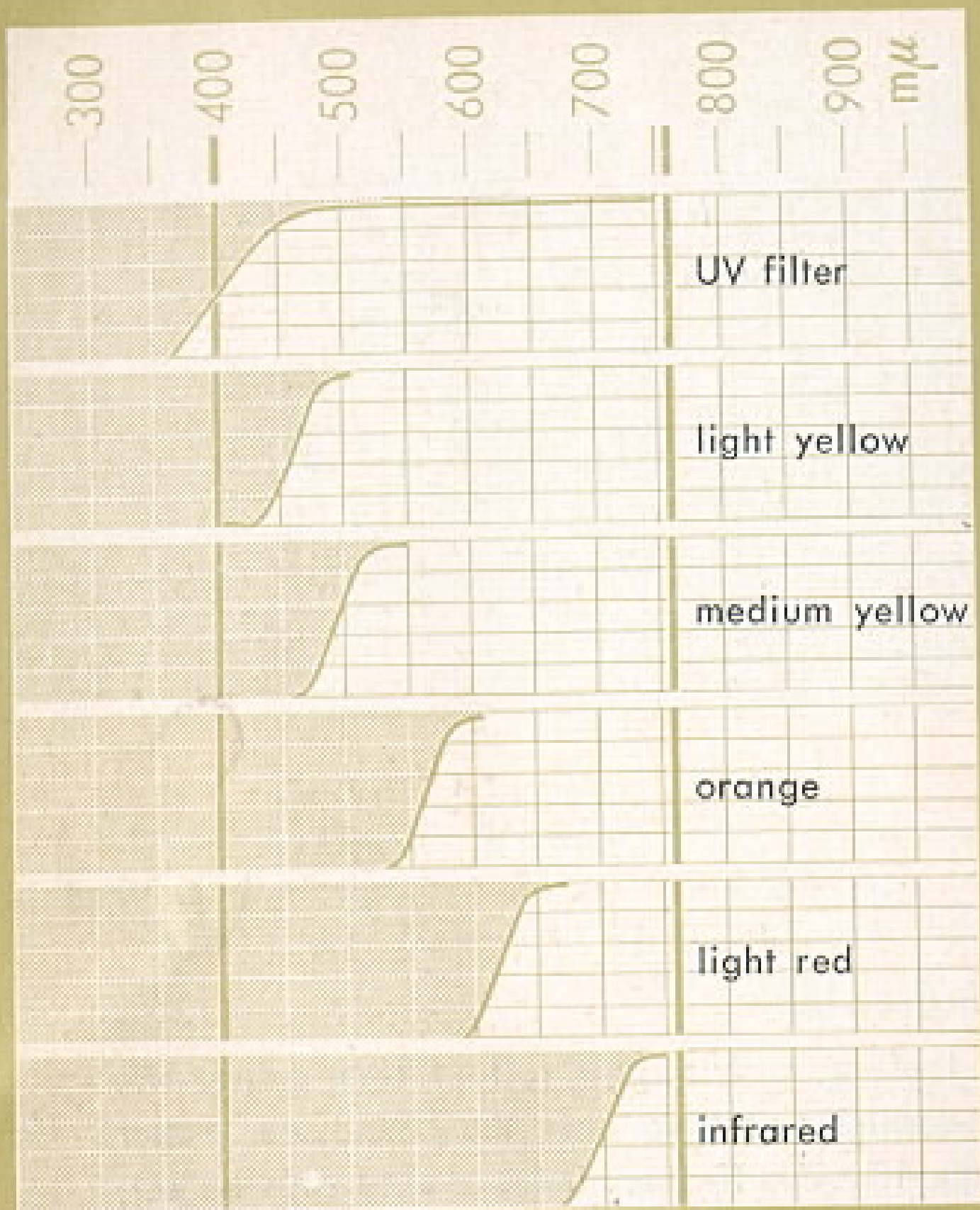
Flash Contact and Permissible Shutter Speeds

FLASH LIGHT SOURCE			Contact	Shutter Speed: Fastest Slowest Recommended			Symbol
Make	Type						
I. Electronic Flash		Without Relay (1/2000)	X	1/500	1/250	1	
II. Flash Lamps	General Electric Westinghouse	SM (1/200)	X				
	Sylvania	SF (1/200)		1/60	1/60	1	
	West, Japan	SS (1/200)					
	Osram	F0 (1/100) F1, F2 (1/50) XP, X0 (1/200)	X	1/30 1/30 1			
	West, Japan	12 (1/100)					
	Osram	S2	M	1/500	1/30	1	
		S0, S1	M				
	Philips (Mazda)	PF 3 N, PF 14, PF 25, PF 56					
	General Electric Westinghouse	5, 11, 22		1/500	1/60	1	
	West, Japan	0, 3, 5, 11, 22	M				
	Sylvania	Press 25, 40, 0, Bantam 8					
		2	M	1/125	1/60	1	
	Philips (Mazda)	PF 110	M				
	General Electric Westinghouse	50		1/60	1/30	1	
	Sylvania	3					
	General Electric Westinghouse West, Japan	6, 31	M	1/250 1/30 1			
	Sylvania	FP 26, 2A					
III. Capsule Flash		Average	M	1/125	1/30	1	

Rollei filters for black and white shots

Special compensation factors for light values are given when using filters, and these may be varied to suit type of film and lighting conditions.

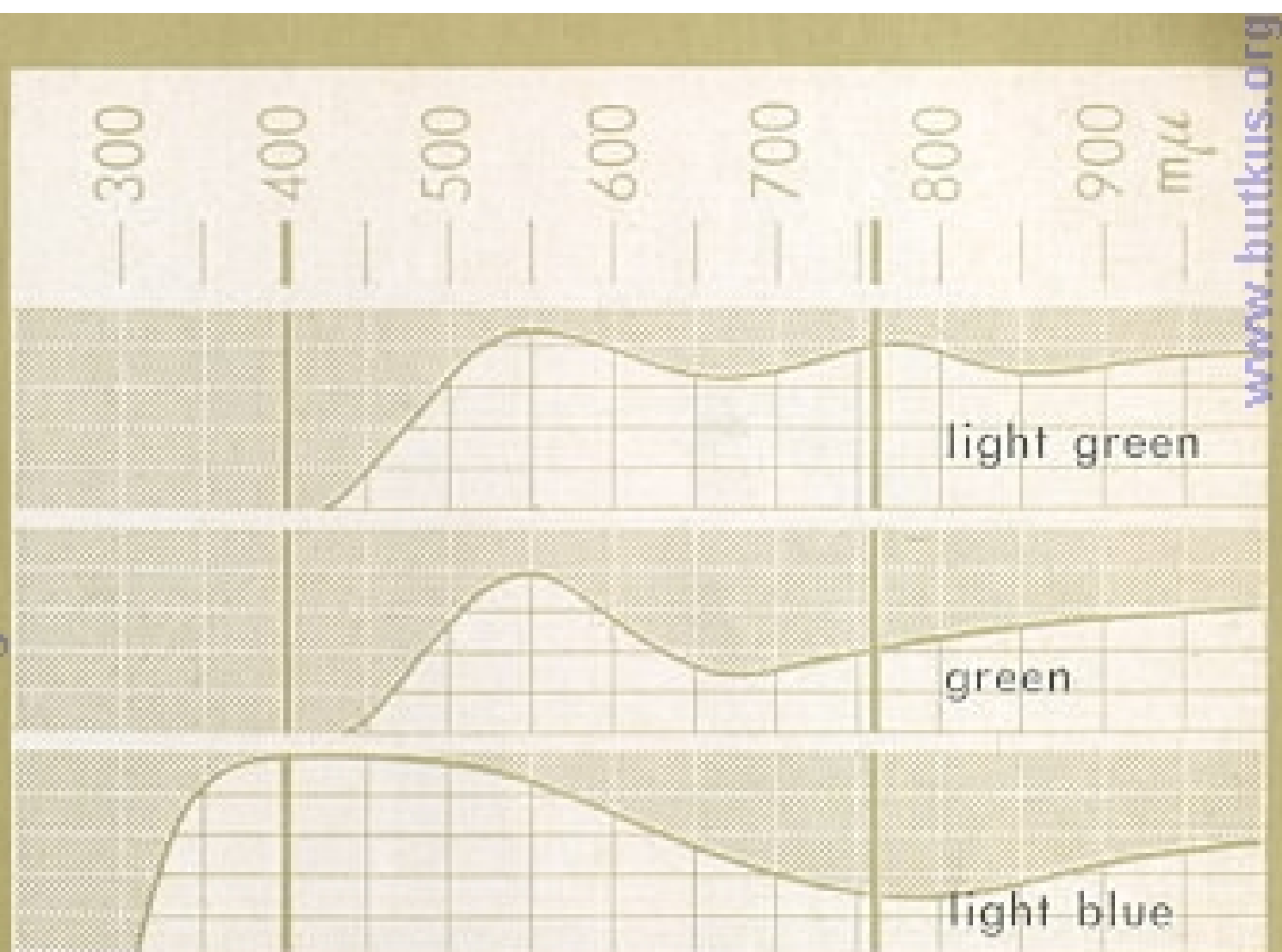
Rollei Filter	Light value compensation		Application and effect
	Pan	Orlho	
Light yellow	-1	-1.5	Landscapes, snow, clouds. Renders yellow and green lighter, blue darker.
Medium yellow	-1.5	-2	
Light green	-1	-1.5	Landscapes, snow, clouds. Renders green lighter, red (complexion) and blue darker. For pan emulsions.
Green	-1.5	-2	
Orange	-1.5 to -3		Hazy distant views. Renders yellow-red lighter, blue darker, distant objects clearer.
Light red	-2 to -3.5		Hazy distant views. Renders red lighter, blue-green darker. Gives stronger effects than orange filter.
Light blue	-0.5	-0.5	Artificial light. Renders red darker. For ultra-pan emulsions.
UV	-0.5	-0.5	High altitudes above 6000 feet. Seascapes. Eliminates ultra-violet rays which reduce contrast.
Infrared	Exposure depends on the type of emulsion		Special filter for infra-red emulsions. Transmits dark red above 700 mμ and infrared.



ultra violet

infrared

violet
blue
blue green
yellow green
yellow
orange
light red
dark red



Speed of Photographic Emulsions

(Comparison values approximated)

ASA (BS)	DIN	Weston	General- Electric	Scheiner (Europe)
6	9/10	5	7,5	20
8	10/10	6	9	21
10	11/10	8	12	22
12	12/10	10	15	23
16	13/10	12	18	24
20	14/10	16	24	25
25	15/10	20	30	26
32	16/10	24	36	27
40	17/10	32	48	28
50	18/10	40	60	29
64	19/10	50	75	30
80	20/10	64	100	31
100	21/10	80	120	32
125	22/10	100	150	—
160	23/10	125	200	—
200	24/10	160	250	—
250	25/10	200	300	—
320	26/10	250	400	—
400	27/10	320	500	—
500	28/10	400	600	—
650	29/10	500	800	—
800	30/10	650	900	—

Depth of Field Table (distance in feet)

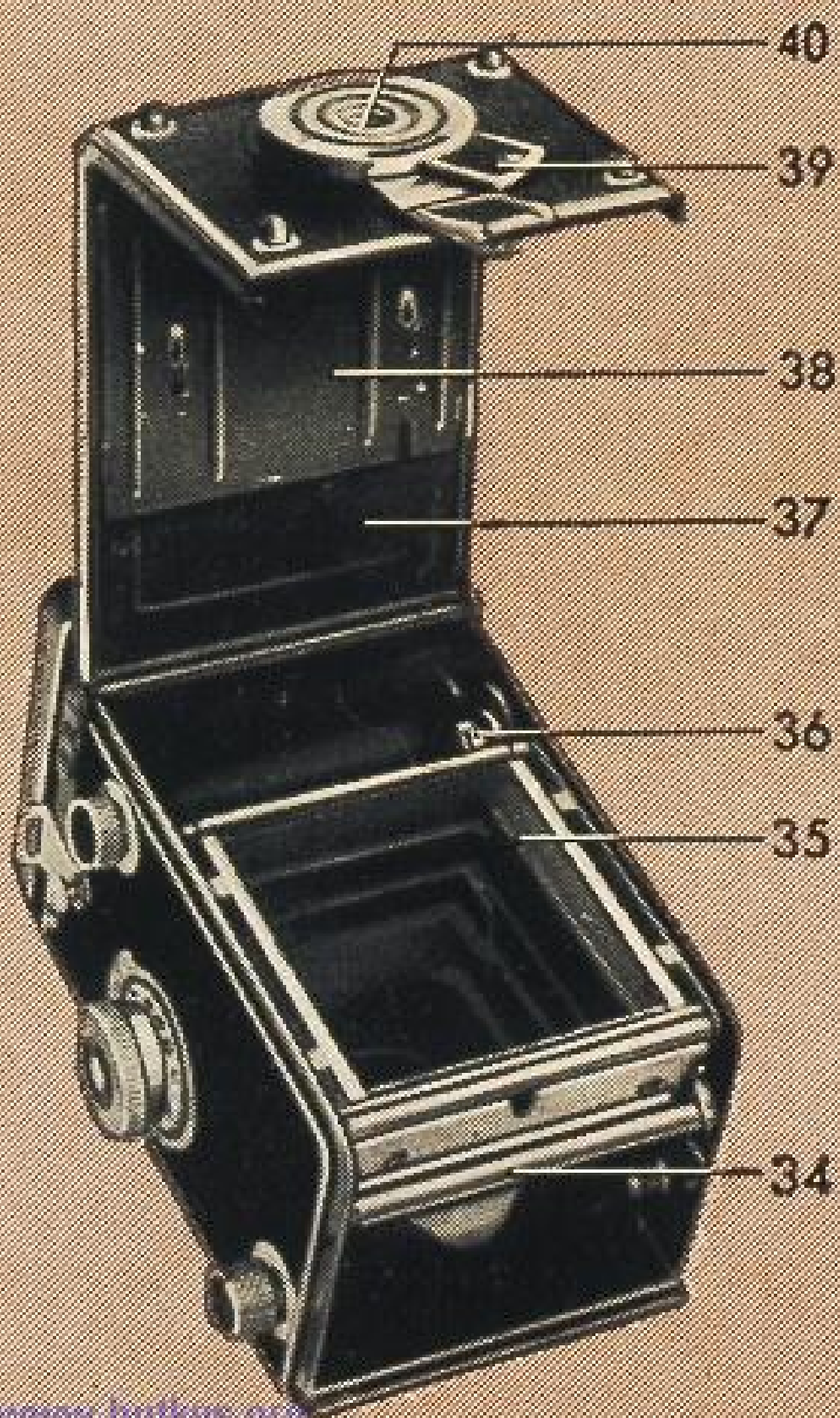
Diaphragm		2.8	4	5.6	8	11	16	22	
Taking distance (in feet)	∞	187' 4" — ∞	131' 3" — ∞	93' 10" — ∞	65' 7" — ∞	47' 9" — ∞	32' 10" — ∞	23' 10" — ∞	16' 5" — ∞
	60'	43' 11" — 85' 4"	41' 4" — 109' 9"	36' 10" — 164' 4"	31' 8" — 690' 7"	26' 10" — ∞	21' 6" — ∞	17' 4 1/2" — ∞	13' 2" — ∞
	30'	25' 11" — 35' 7"	24' 6" — 38' 8"	22' 11" — 43' 9"	20' 11" — 55' 6"	18' 7 1/4" — 78' 7"	15' 11" — 312' 8"	13' 6 1/2" — ∞	10' 11" — ∞
	20'	18' 1 1/2" — 22' 4"	17' 5" — 23' 6"	16' 7" — 25' 3"	15' 5 1/4" — 28' 5 1/2"	14' 3" — 33' 10 1/2"	12' 7" — 49' 9 1/2"	11' 1" — 114' 11"	9' 2 1/2" — 197' 5"
	15'	13' 11" — 16' 3"	13' 6" — 16' 10 1/2"	12' 12" — 17' 9"	12' 3 1/2" — 19' 3 1/2"	11' 6 1/2" — 21' 7"	10' 5" — 27'	9' 4 1/2" — 38' 10"	8' 1 1/4" — 145' 7"
	12'	11' 4" — 12' 9 1/2"	11' 1 1/2" — 13' 2"	10' 8 1/2" — 13' 8"	10' 3" — 14' 6 1/2"	9' 8 1/4" — 15' 10"	8' 11" — 18' 7"	7' 10 3/4" — 23' 5"	7' 1 1/4" — 41' 5"
	10'	9' 6 1/4" — 10' 6 1/2"	9' 4" — 10' 9 3/4"	9' 1" — 11' 1"	8' 9" — 11' 8 1/2"	8' 4 1/4" — 12' 6"	7' 9 1/4" — 14' 1 1/4"	7' 2 1/8" — 16' 8 1/2"	6' 4 1/2" — 24' 3"
	8'	7' 8 1/2" — 8' 4"	7' 6 3/4" — 8' 5 3/4"	7' 5" — 8' 8 1/4"	7' 2 1/4" — 9' 1 1/4"	6' 11" — 9' 5 3/4"	6' 6 1/4" — 10' 4 1/2"	6' 1 1/4" — 11' 8 1/2"	5' 6 1/4" — 14' 11"
	7'	6' 9 1/4" — 7' 3"	6' 7 7/8" — 7' 4 3/8"	6' 6 5/8" — 7' 6 1/4"	6' 4 1/2" — 7' 9 1/4"	6' 2" — 8' 1 1/4"	5' 10 1/8" — 8' 8 7/8"	5' 6 1/8" — 9' 7 3/4"	5' 3/8" — 11' 8 1/2"
	6'	5' 10" — 6' 2 1/4"	5' 9 1/8" — 6' 3 1/8"	5' 8" — 6' 4 1/2"	5' 6 3/8" — 6' 6 1/2"	5' 4 5/8" — 6' 9 3/8"	5' 1 5/8" — 7' 2 1/2"	4' 10 5/8" — 7' 9 3/4"	4' 6 1/8" — 9' 1"
	5'	4' 10 3/8" — 5' 1 1/2"	4' 10" — 5' 2 1/8"	4' 9 1/4" — 5' 3"	4' 8 1/8" — 5' 4 3/8"	4' 6 7/8" — 5' 6 1/4"	4' 4 7/8" — 5' 9 5/8"	4' 2 5/8" — 6' 2 1/8"	3' 11 1/4" — 6' 11 1/8"
	4'	3' 11 1/8" — 4' 7/8"	3' 10 3/4" — 4' 1 1/4"	3' 10 1/4" — 4' 1 3/4"	3' 9 5/8" — 4' 2 5/8"	3' 8 3/4" — 4' 3 3/4"	3' 7 1/2" — 4' 5 5/8"	3' 6" — 4' 8 1/8"	3' 3 7/8" — 5' 1"
	3.5'	3' 5 3/8" — 3' 6 3/4"	3' 5" — 3' 7"	3' 4 3/4" — 3' 7 3/8"	3' 4 1/4" — 3' 8"	3' 3 5/8" — 3' 8 3/4"	3' 2 5/8" — 3' 10 1/8"	3' 1 1/2" — 4'	2' 11 3/4" — 4' 3 3/8"
Diaphragm	2.8	4	5.6	8	11	16	22		

Rolleiflex 2.8 E and the Practical Accessories*

Code: FICEX	Rolleiflex 2.8 E / Xenotar with meter	Code: CESET	Leather Case containing: 1 Lens Hood and your choice of 2 Filters
FICAP	Rolleiflex 2.8 E / Planar with meter		
BERFI	Ever Ready Case	CESOF	Leather Case only
BEMET	Metal Ever Ready Case	CESIX	Leather Case with 6 color conversion filters
FODRY	Desiccant Cartridge	CEVER	Leather Case only
CEOBE	Lens Hood	CESYN	Rolleiflash -2.8- Attachment
	Rollei Filters:		
CEIHE	Light yellow	BOXIN	Boxin Case for 1 Rollei- flash + 1 Rolleiflash comb.
CEIMI	Medium yellow		
CELIN	Light green	CEKAB	Extension Cord for Flash-Attachment 10 ft.
CEEEN	Green		
CEORA	Orange	FLACO	Extension Flashholder Rolleiflash comb. with Connecting Cord 80 in.
CEUBI	Light red		
CEBLA	Light blue	TRIKA	Extension Cord for Rolleiflash comb. 10 ft.
CEFIR	Infrared	BLIKA	Flash Connecting Cord 32 in.
CESKY	Ultra violet filter		
	Rollei Color Conversion Filters:	CEDIS	Rolleimeter 2.8, Optical Range Finder
CERWO	R 2	ROLCE	Rolleikin 2.8
CERFU	R 5	FOSET	Plate adapter outfit (1 adapter back, 3 slides, 3 cut-film sheaths)
CEREL	R 11		
CEWOB	B 2	FOAPT	Adapter back
CEFUB	B 5	FOSLI	Slide
CEELB	B 11	FOPLA	Cut-Film Sheath
CETAR	Rolleipol	FOCAS	Leather Case for 2 Slides
CEPUN	Rolleinar Lenses, set 1 (40-18½ in.)	FOFOC	Focusing Screen Slide
CEODO	Rolleinar Lenses, set 2 (20-12½ in.)	FOFIX	Rolleifix Tripod Head
CETNU	Rolleisoft 0	FOEAD	Panorama Head
CETON	Rolleisoft 1	FOGRI	Rolleigrid Lens
KOECE	Leather Case containing: 1 Lens Hood, 2 Sets of Rolleinar Lenses and your choice of 5 Filters	FOHOD	Extension Hood
CELEE	Leather Case only		

* to fit Xenotar 2.8 and Planar 2.8, bayonet size III.

To avoid errors when ordering accessories please specify camera-number.
Full information on the use of Rollei accessories in the booklet "The
Practical Accessories".



40

39

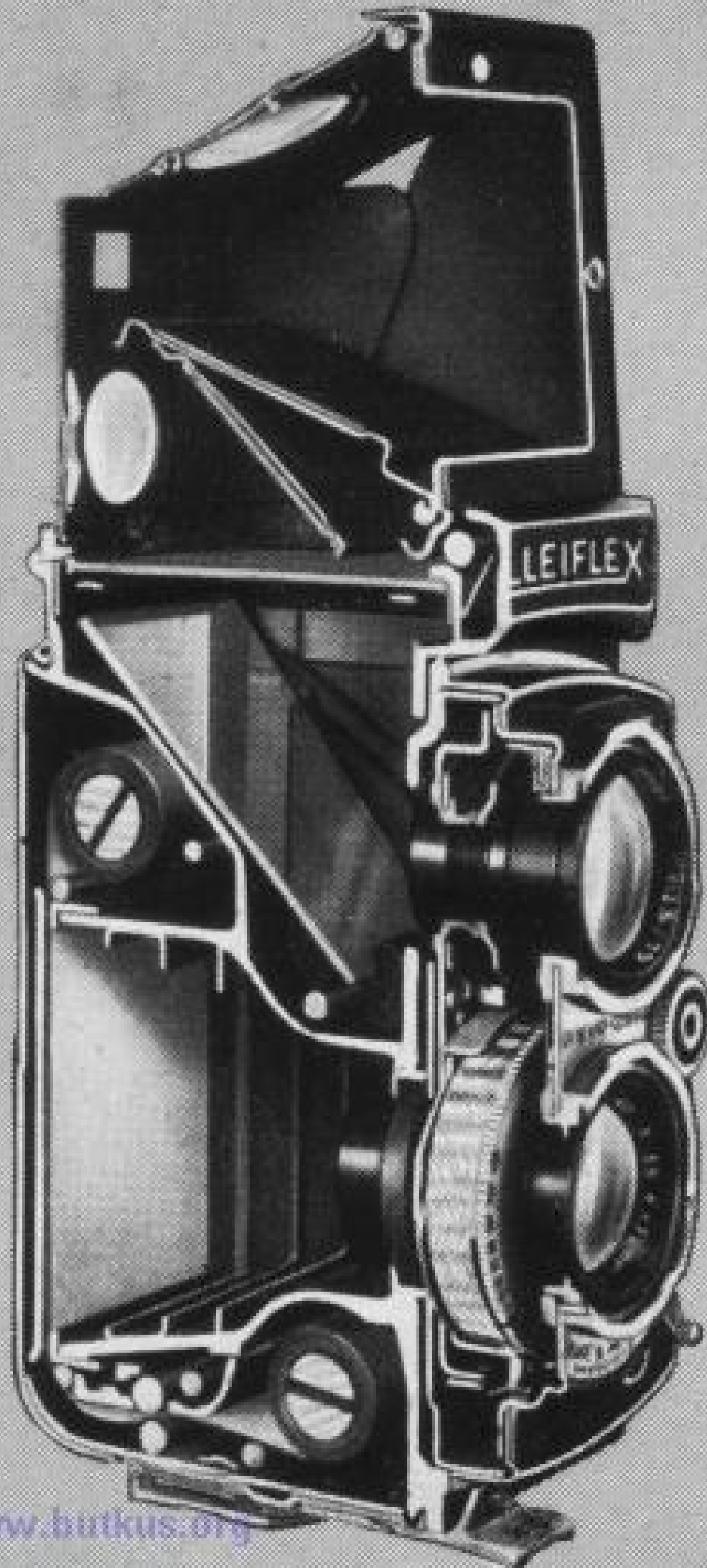
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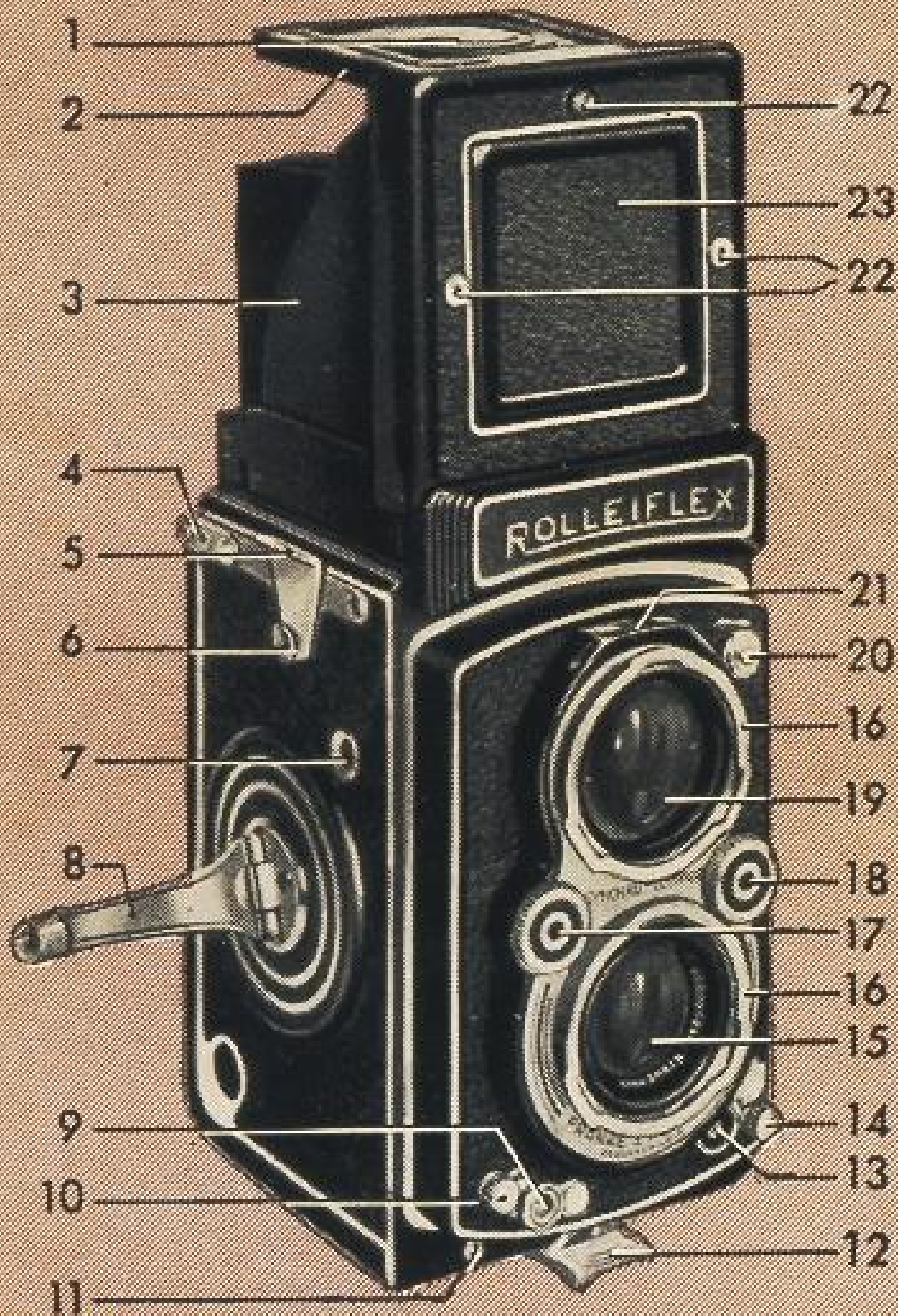
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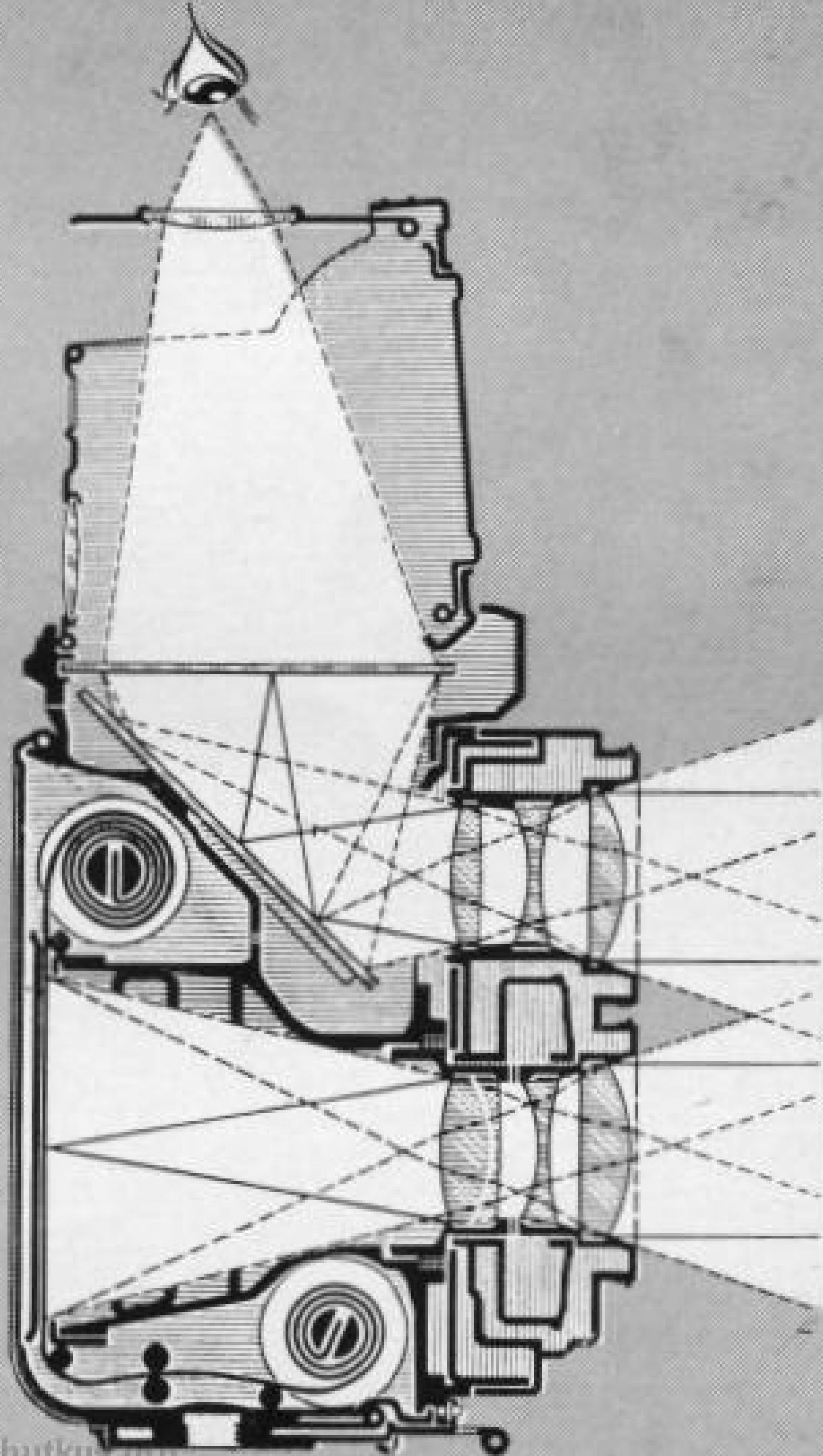
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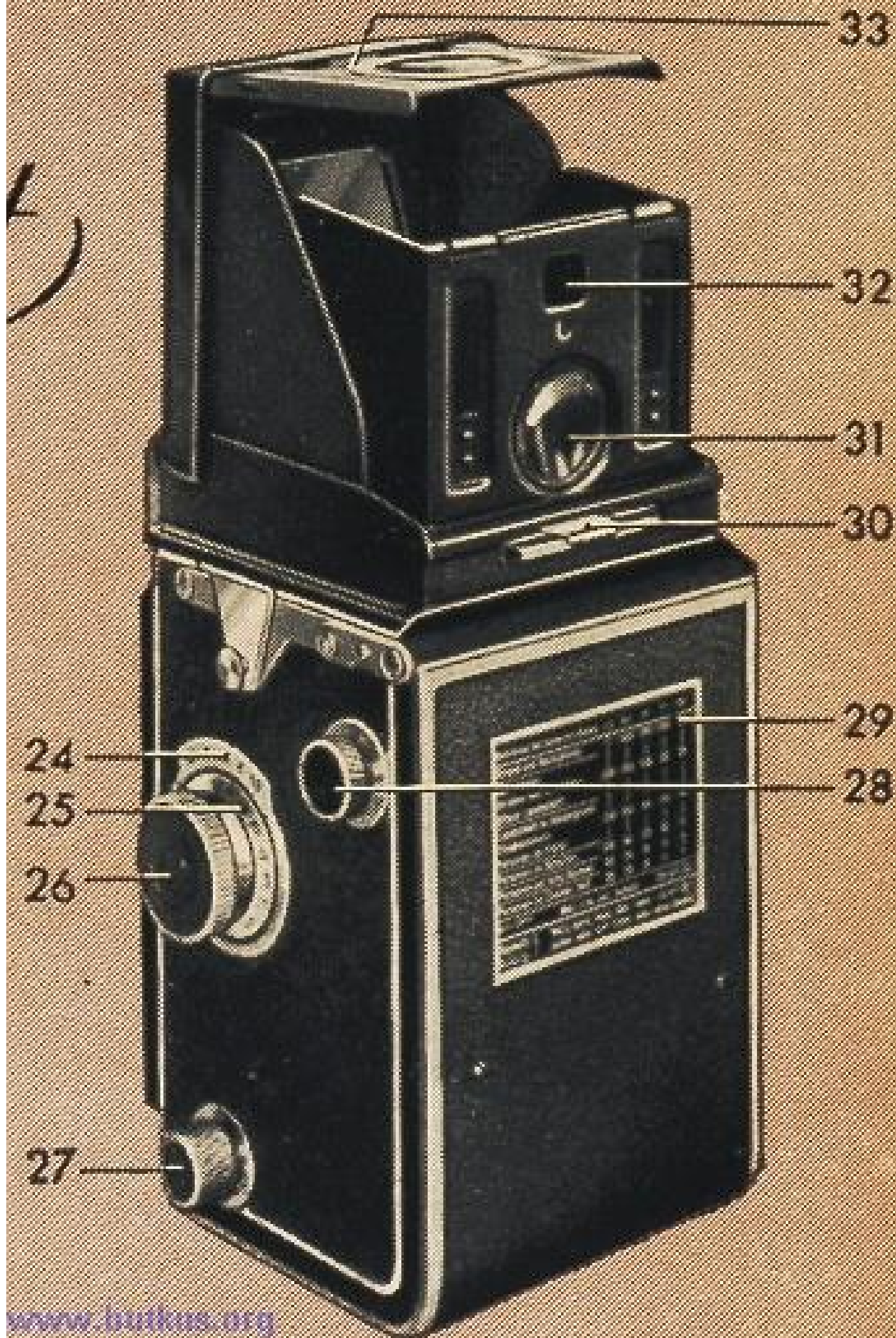
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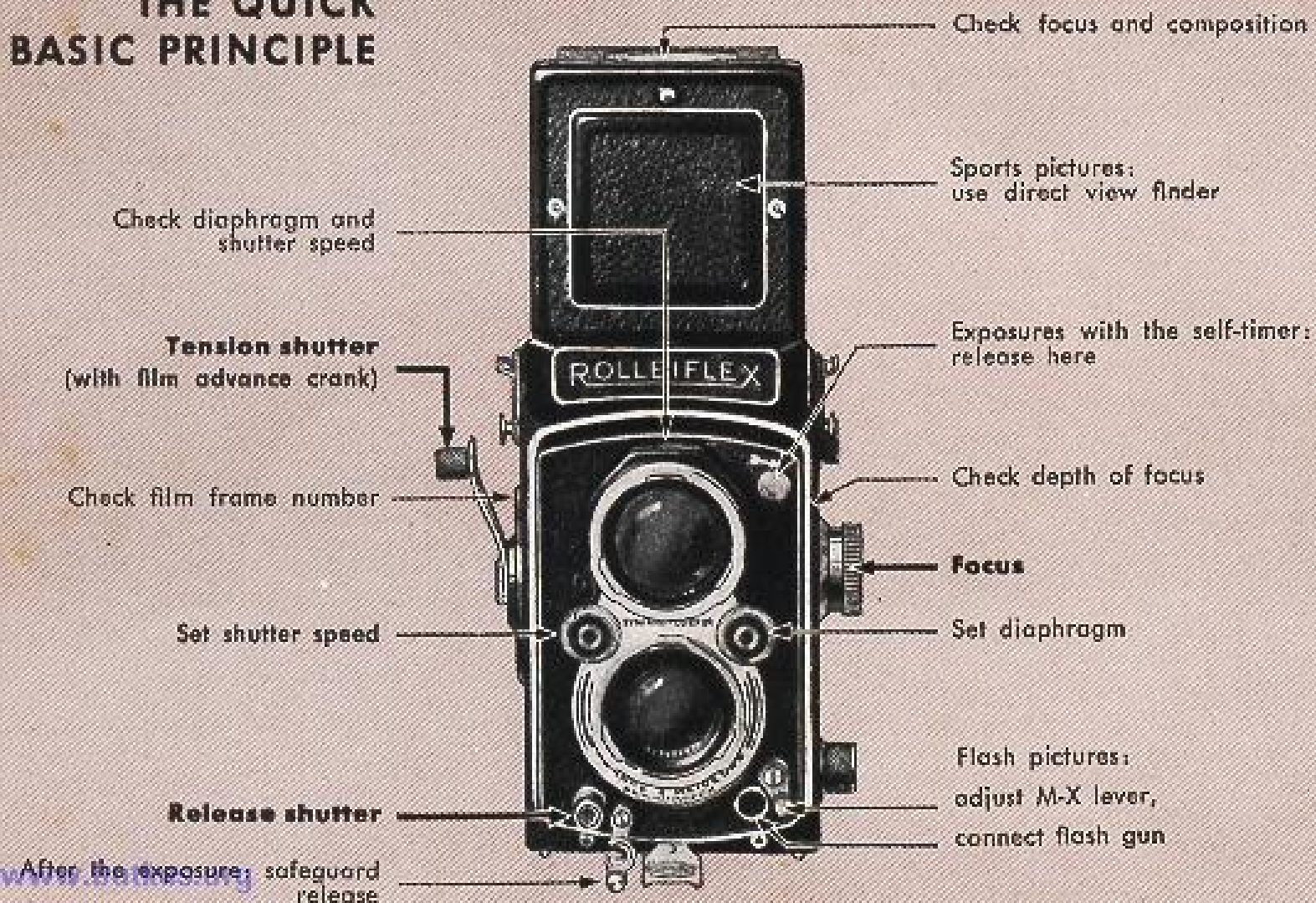


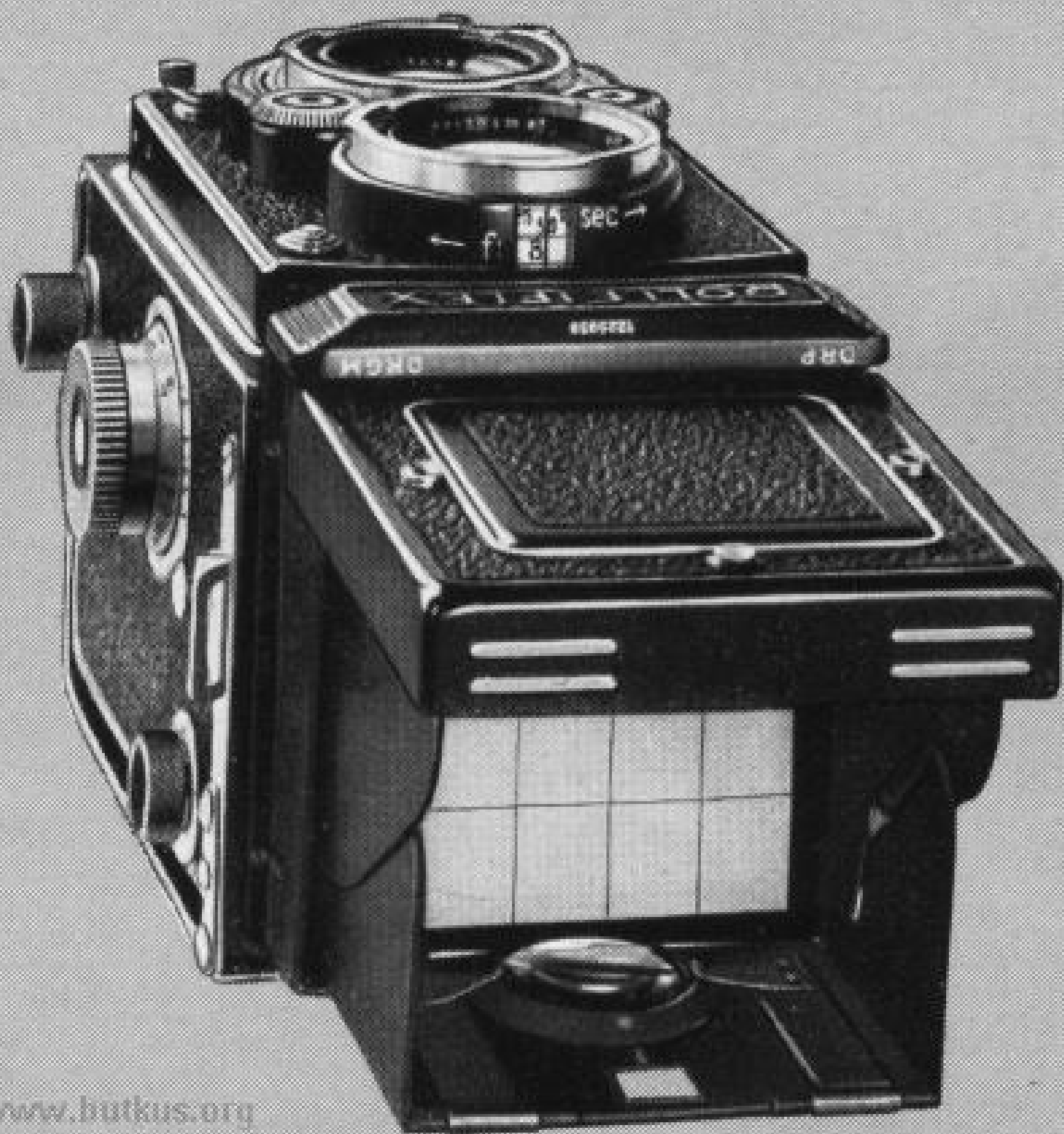




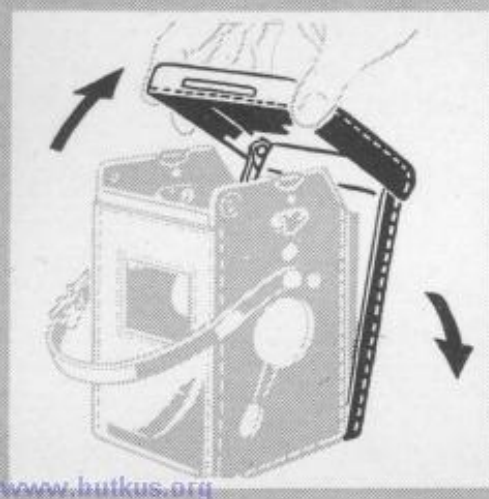


THE QUICK BASIC PRINCIPLE



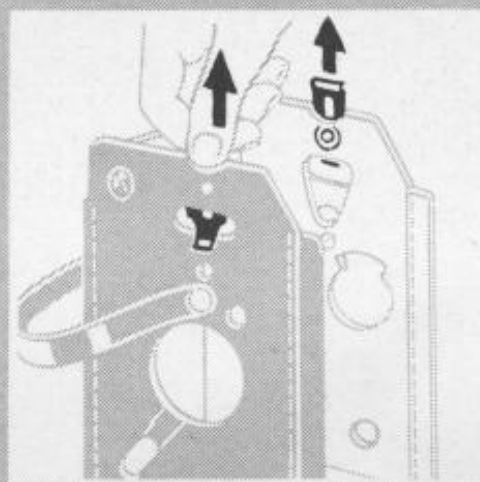




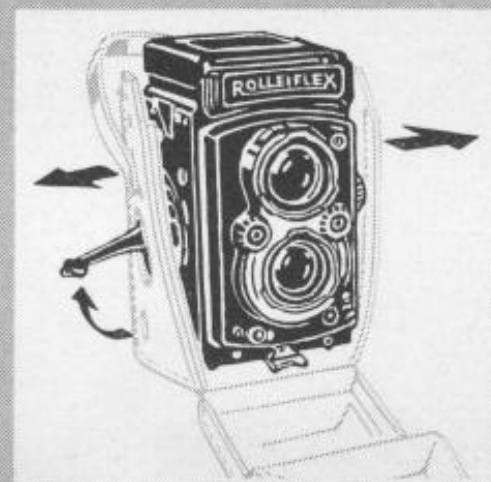


www.butkus.org

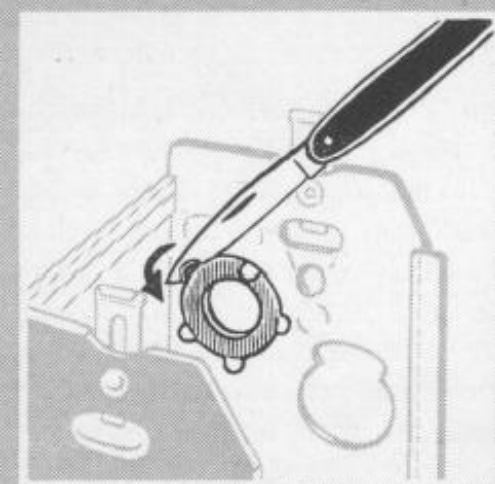
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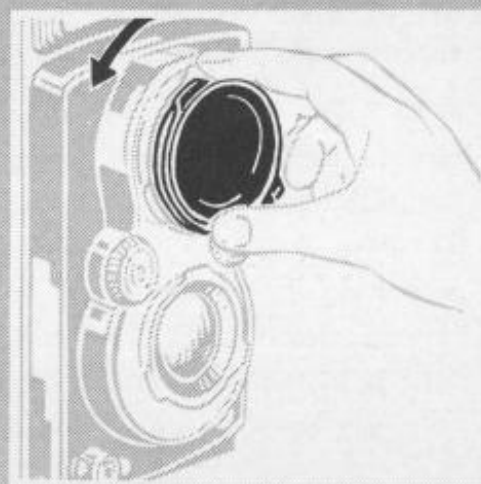


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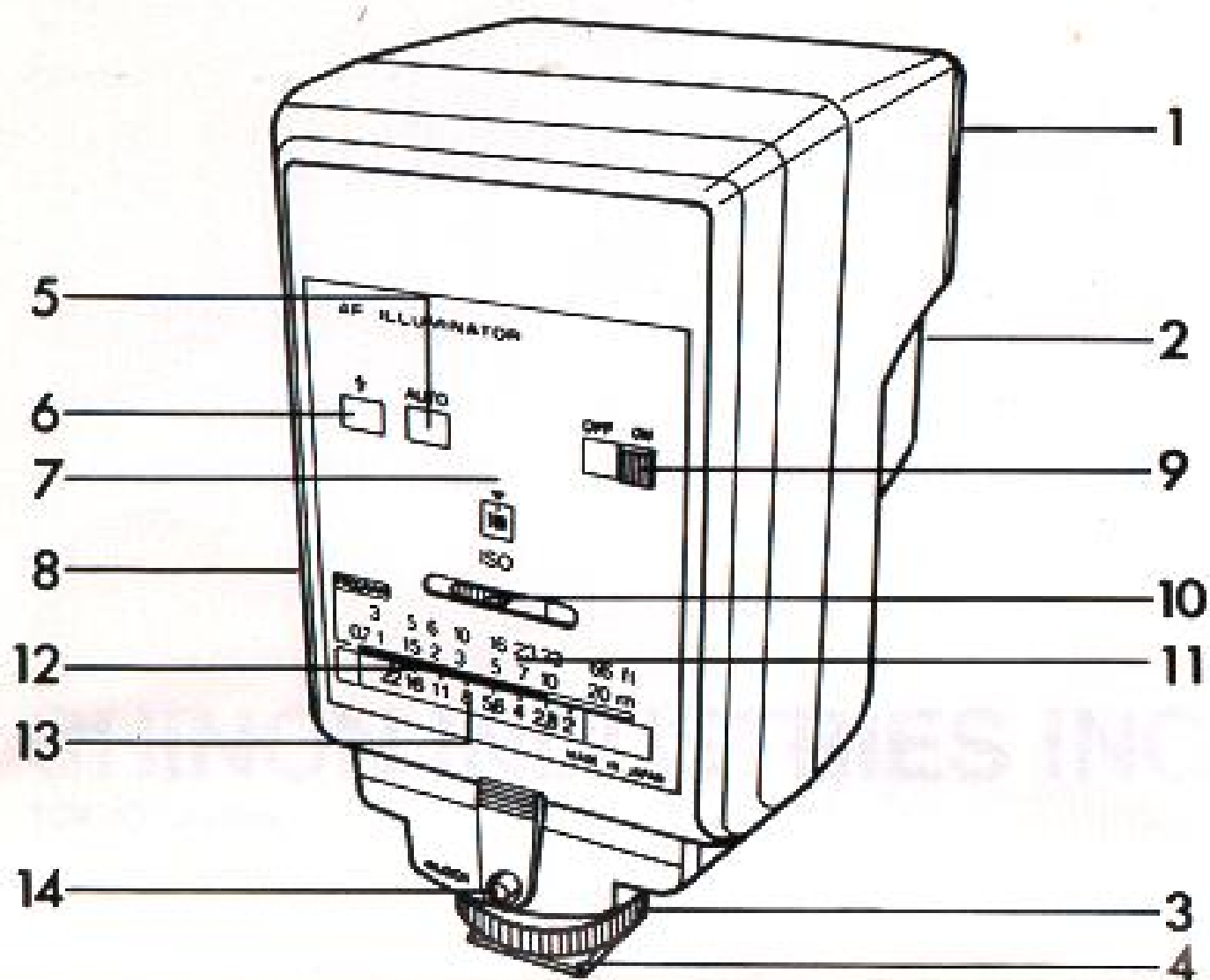
4



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1



2

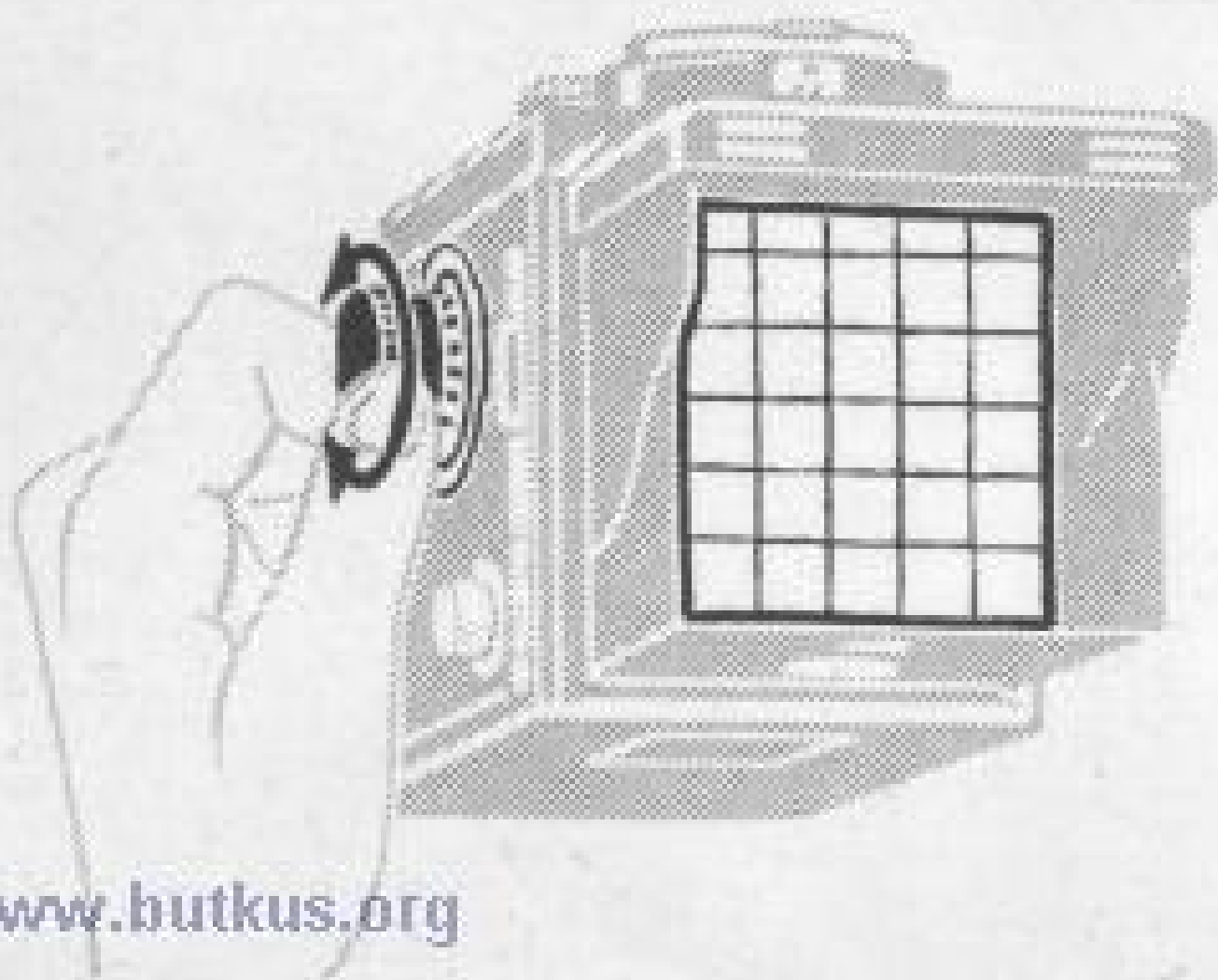


3



4





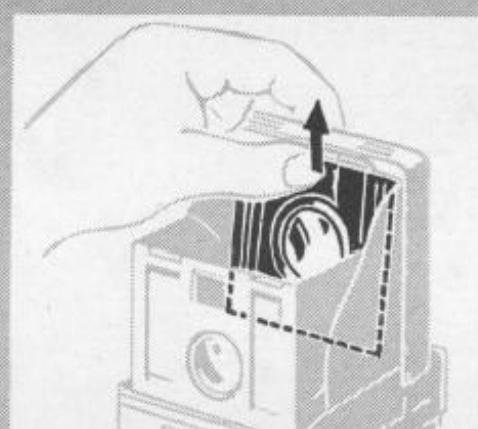
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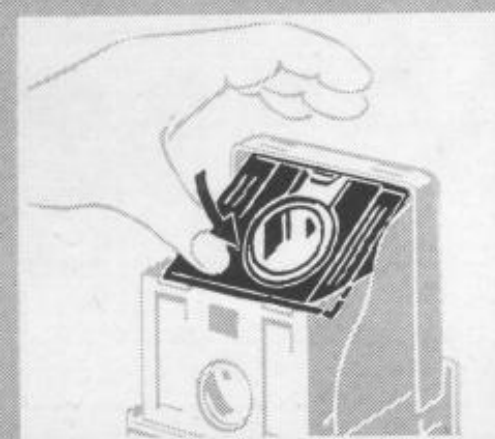
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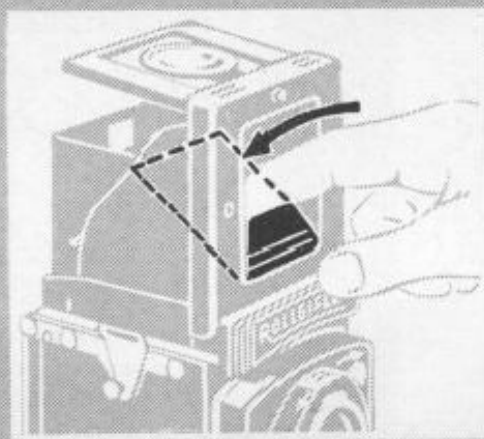


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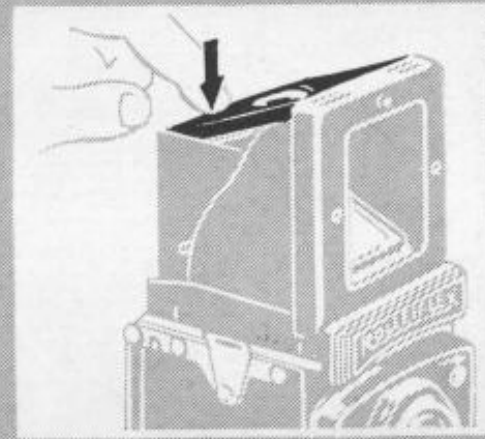


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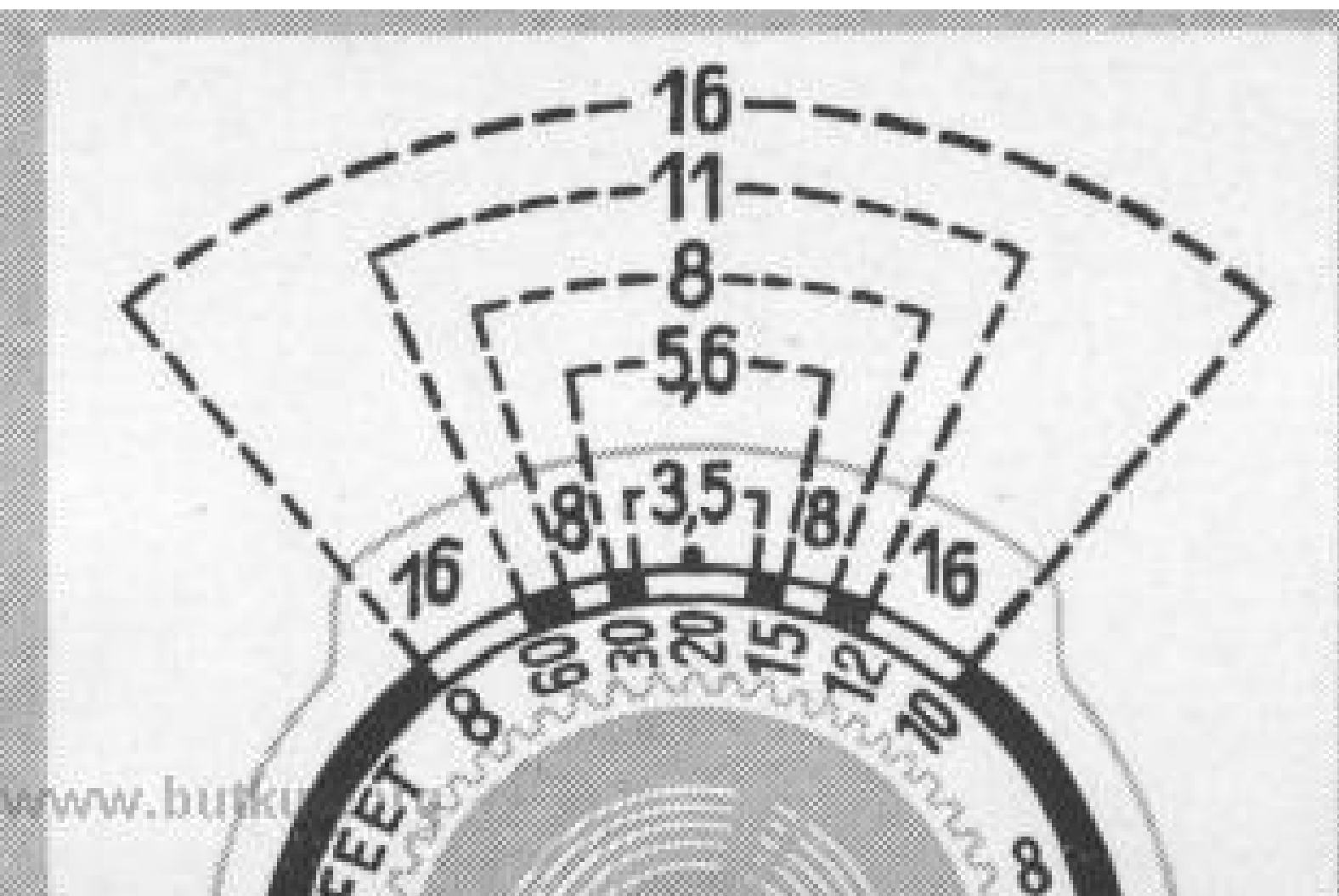
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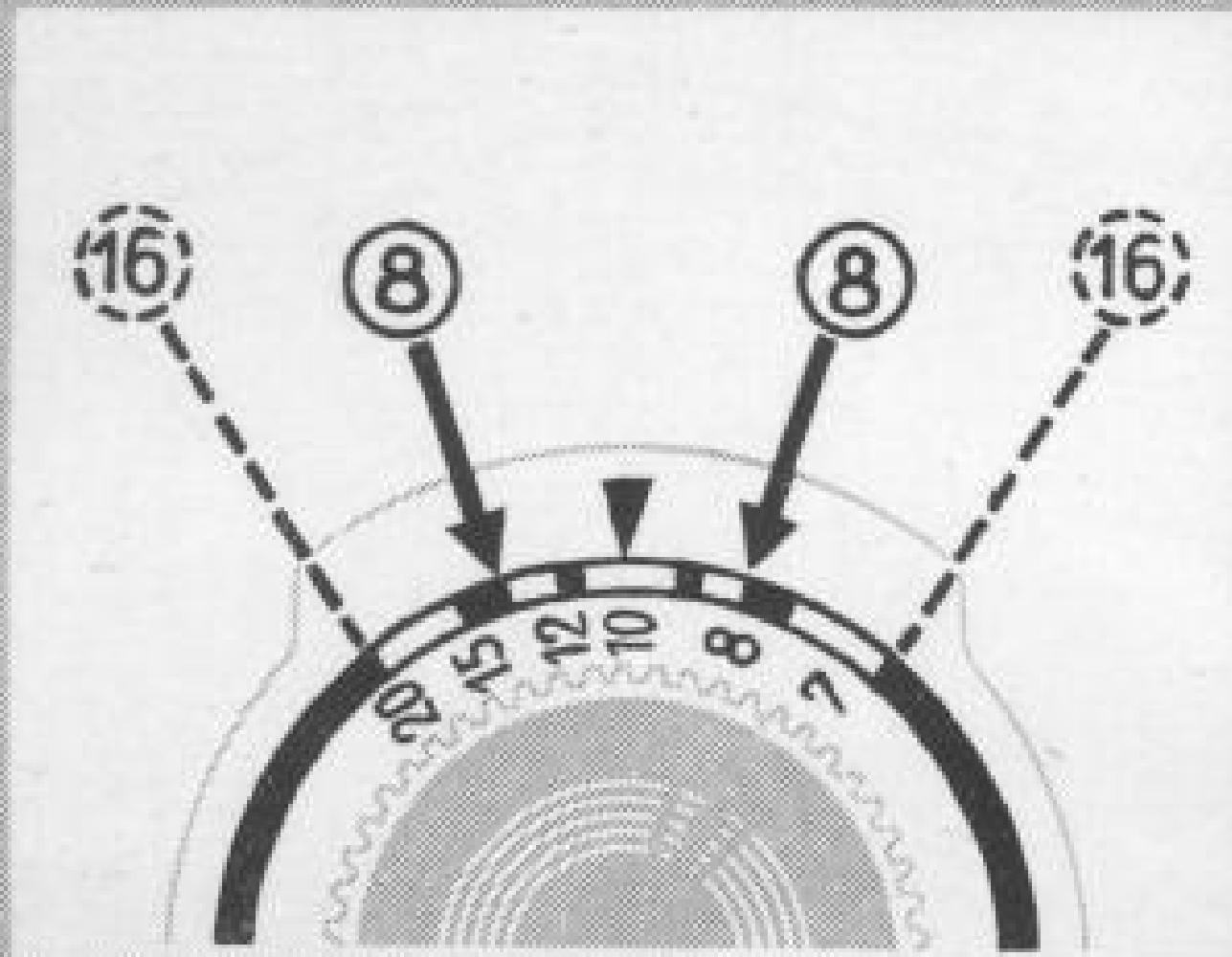


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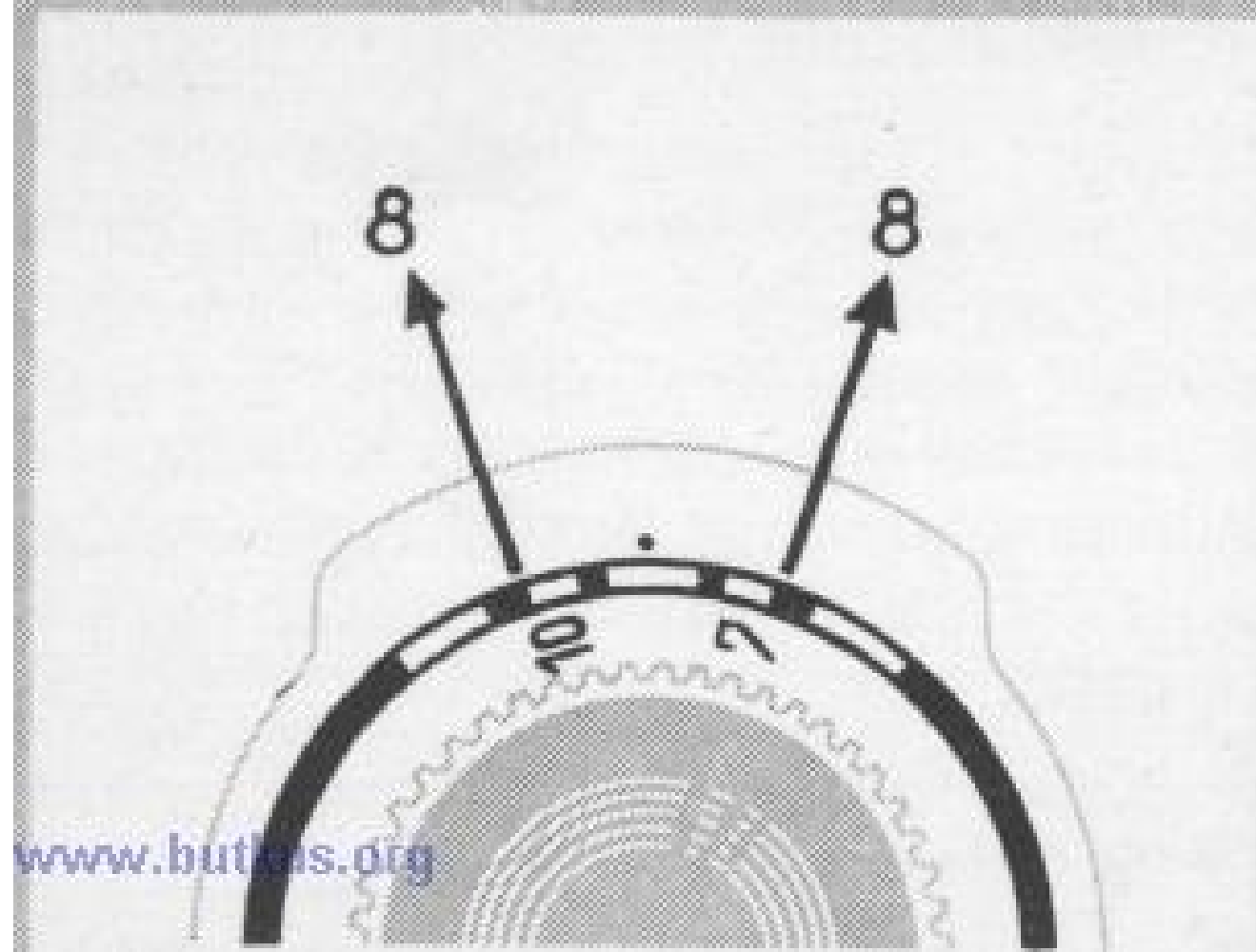


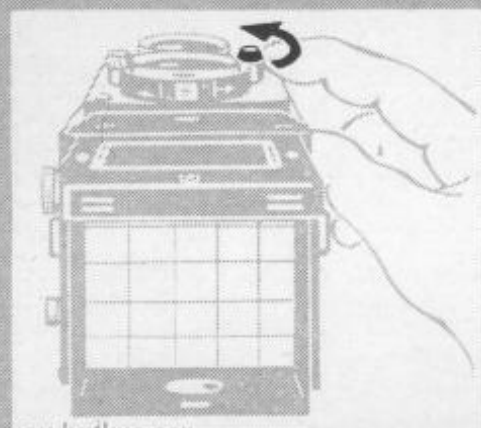
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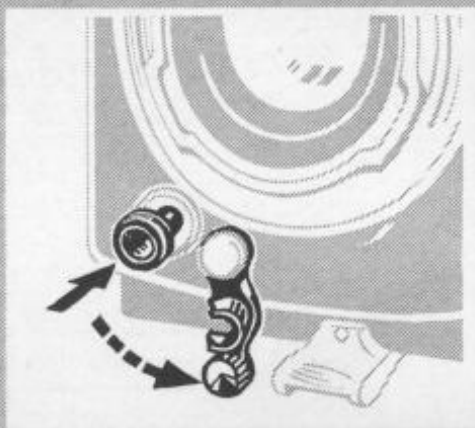
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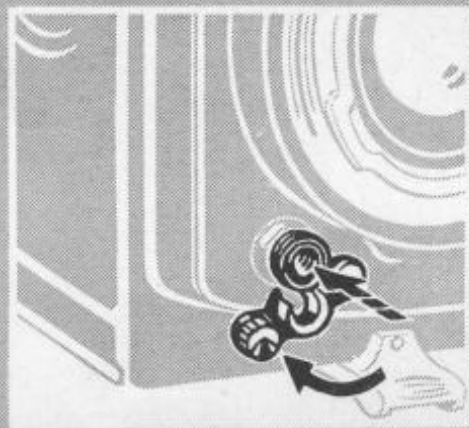


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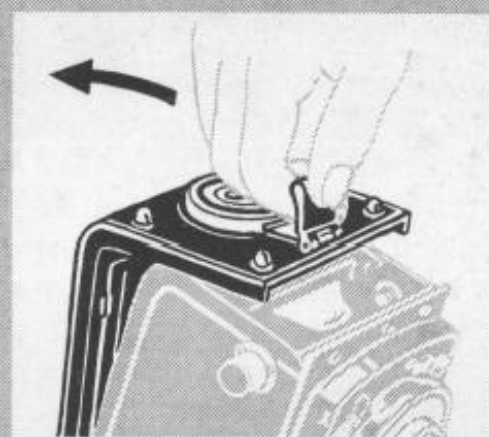
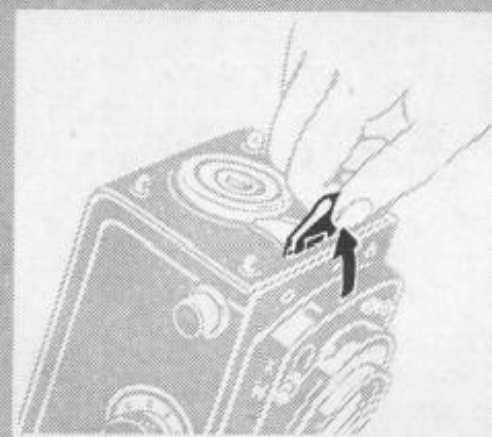
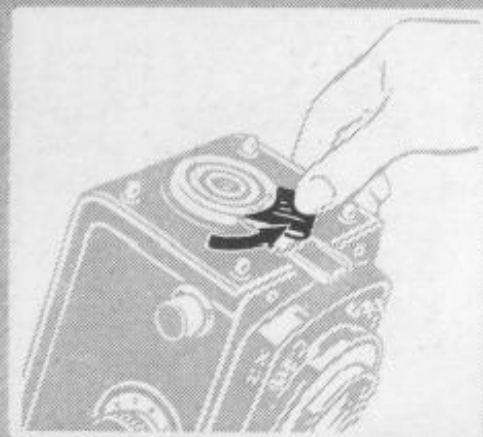
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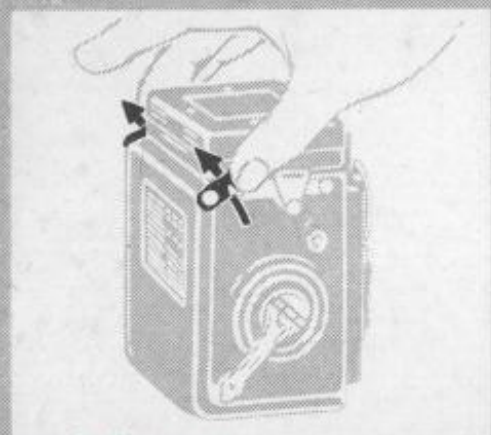


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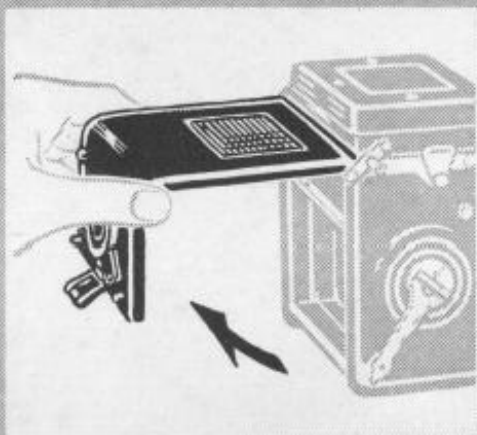
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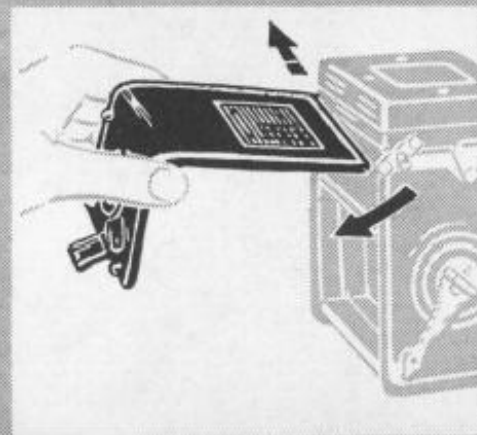


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4



5

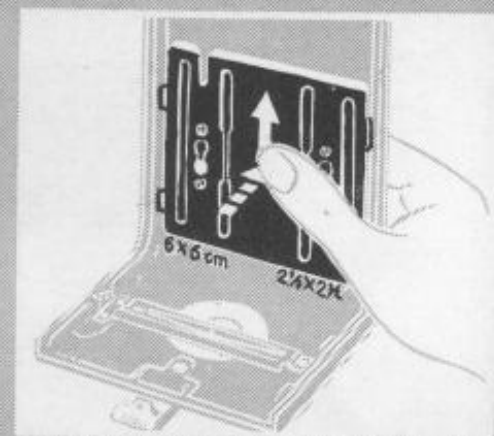


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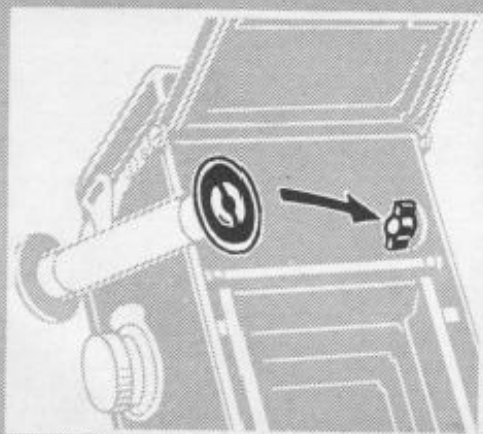
Speed of Moving Subjects and Shutter Speeds

		Miles per hour approximately															
		3 mph		6 mph		12 mph		30 mph		60 mph		120 mph					
Example:		Pedestrians		Runners Moving air		Bicycles Windy		Light Athletics Stormy Surf		Automobiles Railway Trains Racing		Motor Racing					
Distance (ydrds)	40		1/25	1/50	1/25	1/50	1/100	1/50	1/100	1/250	1/100	1/250	1/500	1/250	1/500	1/500	50
	15	1/25	1/50	1/100	1/50	1/100	1/250	1/100	1/250	1/500	1/250	1/500		1/500			25
	8	1/50	1/100	1/250	1/100	1/250	1/500	1/250	1/500		1/500						12
	4	1/100	1/250	1/500	1/250	1/500		1/500									6

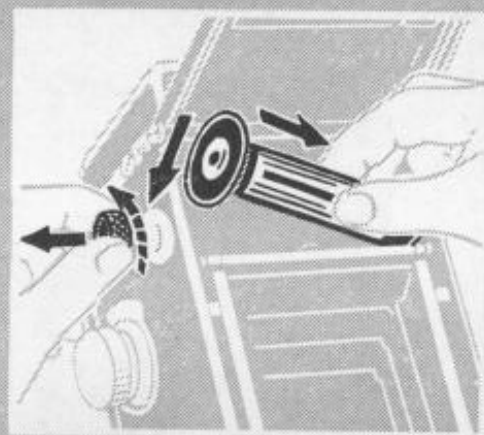
www.burkust.org



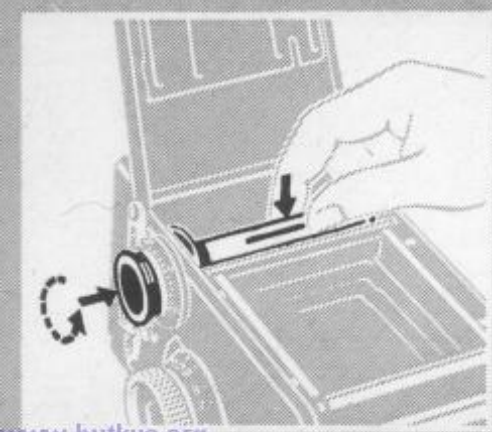
www.butkus.org



2

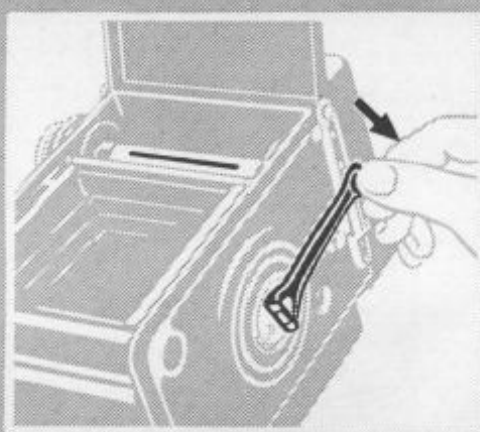


3

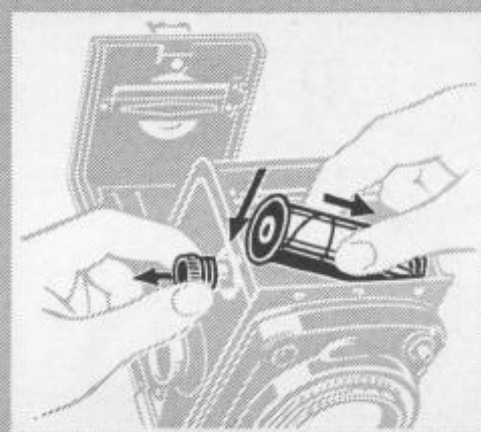


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4



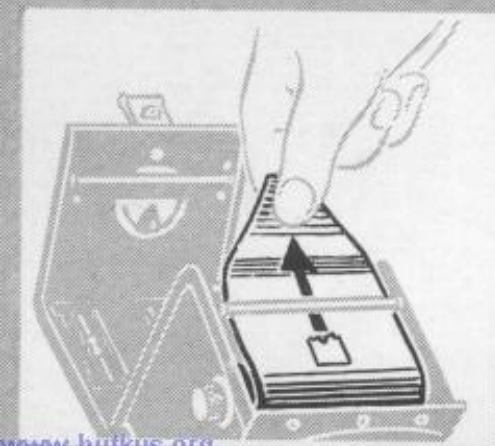
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6

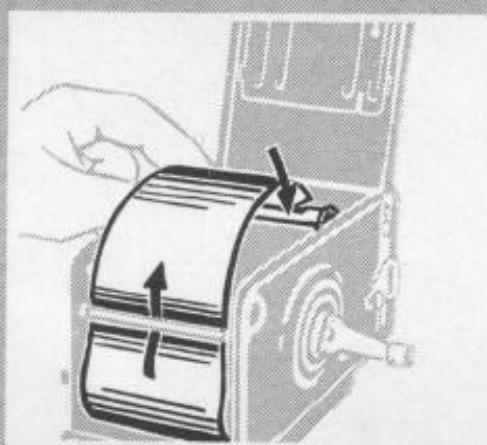
Depth of Field Table (distances in feet)

Diaphragm		4	5.6	8	11	16	22	
Taking distance (in feet)	∞	141' $\frac{7}{8}$ " - ∞	86' $1\frac{1}{2}$ " - ∞	58' $6\frac{3}{4}$ " - ∞	43' $1\frac{1}{2}$ " - ∞	31' 4 " - ∞	21' $5\frac{7}{8}$ " - ∞	15' $7\frac{7}{8}$ " - ∞
	60'	41' $11\frac{13}{16}$ " - 100' 6 "	35' $5\frac{1}{4}$ " - 198' 2 "	29' $6\frac{3}{4}$ " - ∞	24' $11\frac{1}{4}$ " - ∞	20' 8 " - ∞	15' 9 " - ∞	12' $5\frac{1}{4}$ " - ∞
	30'	24' $8\frac{7}{8}$ " - 38' $1\frac{7}{8}$ "	22' $3\frac{3}{4}$ " - 45' $11\frac{1}{8}$ "	19' $8\frac{1}{4}$ " - 60' $4\frac{3}{8}$ "	17' $8\frac{1}{4}$ " - 99' $4\frac{3}{8}$ "	15' 5 " - ∞	12' $5\frac{3}{8}$ " - ∞	10' 2 " - ∞
	20'	17' $6\frac{5}{8}$ " - 23' $4\frac{5}{16}$ "	16' $7\frac{7}{8}$ " - 25' 11 "	14' $9\frac{1}{8}$ " - 30' $10\frac{1}{8}$ "	13' $9\frac{3}{8}$ " - 37' $4\frac{13}{16}$ "	12' $1\frac{5}{8}$ " - 55' $5\frac{3}{8}$ "	10' 6 " - 287' $7\frac{7}{8}$ "	8' $10\frac{1}{4}$ " - ∞
	15'	13' 7 " - 16' $9\frac{15}{16}$ "	12' $9\frac{1}{2}$ " - 18' $1\frac{1}{2}$ "	11' $9\frac{3}{4}$ " - 20' $1\frac{1}{8}$ "	11' $1\frac{7}{8}$ " - 22' $11\frac{3}{8}$ "	10' 2 " - 28' $10\frac{1}{2}$ "	8' $10\frac{1}{4}$ " - 46' $6\frac{1}{2}$ "	7' $6\frac{1}{2}$ " - ∞
	12'	11' $11\frac{11}{16}$ " - 13' $1\frac{1}{16}$ "	10' 6 " - 14' $1\frac{1}{4}$ "	9' $10\frac{1}{4}$ " - 15' $1\frac{1}{8}$ "	9' $6\frac{1}{4}$ " - 16' $8\frac{3}{4}$ "	8' $6\frac{3}{8}$ " - 18' $8\frac{3}{8}$ "	7' $6\frac{1}{2}$ " - 27' $2\frac{3}{4}$ "	6' $10\frac{5}{8}$ " - 51' $6\frac{1}{8}$ "
	10'	9' $4\frac{3}{8}$ " - 10' $9\frac{1}{2}$ "	8' $10\frac{1}{4}$ " - 11' $5\frac{3}{4}$ "	8' $6\frac{3}{8}$ " - 12' $1\frac{1}{8}$ "	8' $2\frac{3}{8}$ " - 13' $1\frac{1}{2}$ "	7' $6\frac{1}{2}$ " - 14' $9\frac{1}{8}$ "	6' $10\frac{5}{8}$ " - 18' $8\frac{3}{8}$ "	6' $1\frac{1}{4}$ " - 27' $6\frac{3}{4}$ "
	8'	7' $6\frac{15}{16}$ " - 8' $5\frac{15}{16}$ "	7' $2\frac{5}{8}$ " - 8' $10\frac{1}{4}$ "	7' $2\frac{1}{4}$ " - 9' $2\frac{1}{4}$ "	6' $9\frac{1}{8}$ " - 9' $10\frac{1}{8}$ "	6' $4\frac{3}{8}$ " - 10' $9\frac{7}{8}$ "	5' $10\frac{1}{2}$ " - 12' $9\frac{1}{2}$ "	5' $3\frac{3}{8}$ " - 16' $4\frac{7}{8}$ "
	7'	6' $8\frac{3}{16}$ " - 7' $4\frac{3}{16}$ "	6' $5\frac{9}{16}$ " - 7' $6\frac{1}{16}$ "	6' $3\frac{3}{16}$ " - 7' $10\frac{1}{16}$ "	6' $2\frac{7}{16}$ " - 8' $2\frac{7}{16}$ "	5' $8\frac{1}{2}$ " - 8' $10\frac{3}{16}$ "	5' $3\frac{3}{8}$ " - 10' 6 "	4' $9\frac{7}{8}$ " - 12' $5\frac{1}{8}$ "
	6'	5' $8\frac{7}{8}$ " - 6' $3\frac{3}{8}$ "	5' $7\frac{5}{16}$ " - 6' $5\frac{9}{16}$ "	5' $5\frac{3}{8}$ " - 6' $8\frac{3}{16}$ "	5' $3\frac{3}{8}$ " - 6' $11\frac{7}{16}$ "	5' $1\frac{1}{4}$ " - 7' 5 "	4' $8\frac{5}{16}$ " - 8' 4 "	4' 4 " - 9' $8\frac{1}{2}$ "
	5'	4' $9\frac{7}{8}$ " - 5' $2\frac{3}{8}$ "	4' $8\frac{11}{16}$ " - 5' $3\frac{13}{16}$ "	4' $7\frac{1}{8}$ " - 5' $5\frac{3}{4}$ "	4' $5\frac{13}{16}$ " - 5' $7\frac{3}{4}$ "	4' $3\frac{9}{16}$ " - 5' $11\frac{1}{4}$ "	4' $13\frac{1}{16}$ " - 6' 6 "	3' $9\frac{5}{16}$ " - 7' $4\frac{3}{16}$ "
	4'	3' $10\frac{5}{16}$ " - 4' $1\frac{3}{8}$ "	3' $9\frac{11}{16}$ " - 4' $2\frac{3}{8}$ "	3' $8\frac{7}{8}$ " - 4' $3\frac{9}{16}$ "	3' $7\frac{11}{16}$ " - 4' $4\frac{3}{4}$ "	3' $6\frac{1}{2}$ " - 4' $7\frac{1}{8}$ "	3' $4\frac{5}{16}$ " - 4' $11\frac{1}{16}$ "	3' $2\frac{5}{16}$ " - 5' $4\frac{9}{16}$ "
	3.5'	3' $4\frac{15}{16}$ " - 3' $7\frac{1}{8}$ "	3' $4\frac{3}{16}$ " - 3' $7\frac{11}{16}$ "	3' $3\frac{3}{4}$ " - 3' $8\frac{1}{2}$ "	3' 3 " - 3' $9\frac{11}{16}$ "	3' $1\frac{13}{16}$ " - 3' $11\frac{1}{4}$ "	3' $1\frac{1}{4}$ " - 4' 2 "	2' $10\frac{1}{4}$ " - 4' $6\frac{5}{16}$ "
	3'	2' $11\frac{1}{4}$ " - 3' $2\frac{1}{4}$ "	2' $10\frac{5}{8}$ " - 3' $1\frac{3}{8}$ "	2' $10\frac{1}{4}$ " - 3' $1\frac{3}{4}$ "	2' $9\frac{7}{16}$ " - 3' $2\frac{3}{16}$ "	2' $8\frac{11}{16}$ " - 3' $3\frac{3}{4}$ "	2' $7\frac{1}{2}$ " - 3' $5\frac{1}{16}$ "	2' $6\frac{5}{16}$ " - 3' $8\frac{1}{16}$ "
	2 $\frac{3}{4}$ '	2' $7\frac{5}{16}$ " - 2' $8\frac{1}{2}$ "	2' $7\frac{1}{8}$ " - 2' $9\frac{1}{8}$ "	2' $6\frac{11}{16}$ " - 2' $9\frac{7}{16}$ "	2' $5\frac{15}{16}$ " - 2' $9\frac{7}{8}$ "	2' $5\frac{1}{2}$ " - 2' $11\frac{1}{16}$ "	2' $4\frac{5}{8}$ " - 3' $2\frac{3}{8}$ "	2' $2\frac{3}{16}$ " - 3' $2\frac{3}{16}$ "
Diaphragm	3.5	5.6	8	11	16	22		

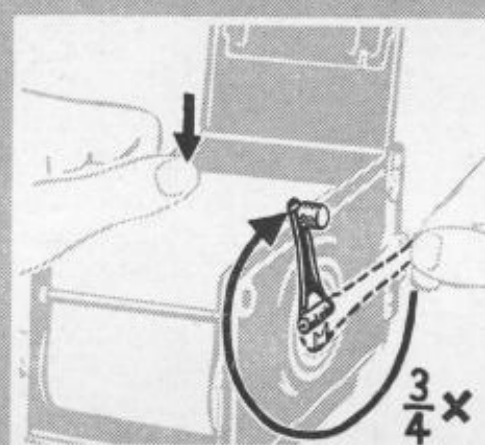


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1

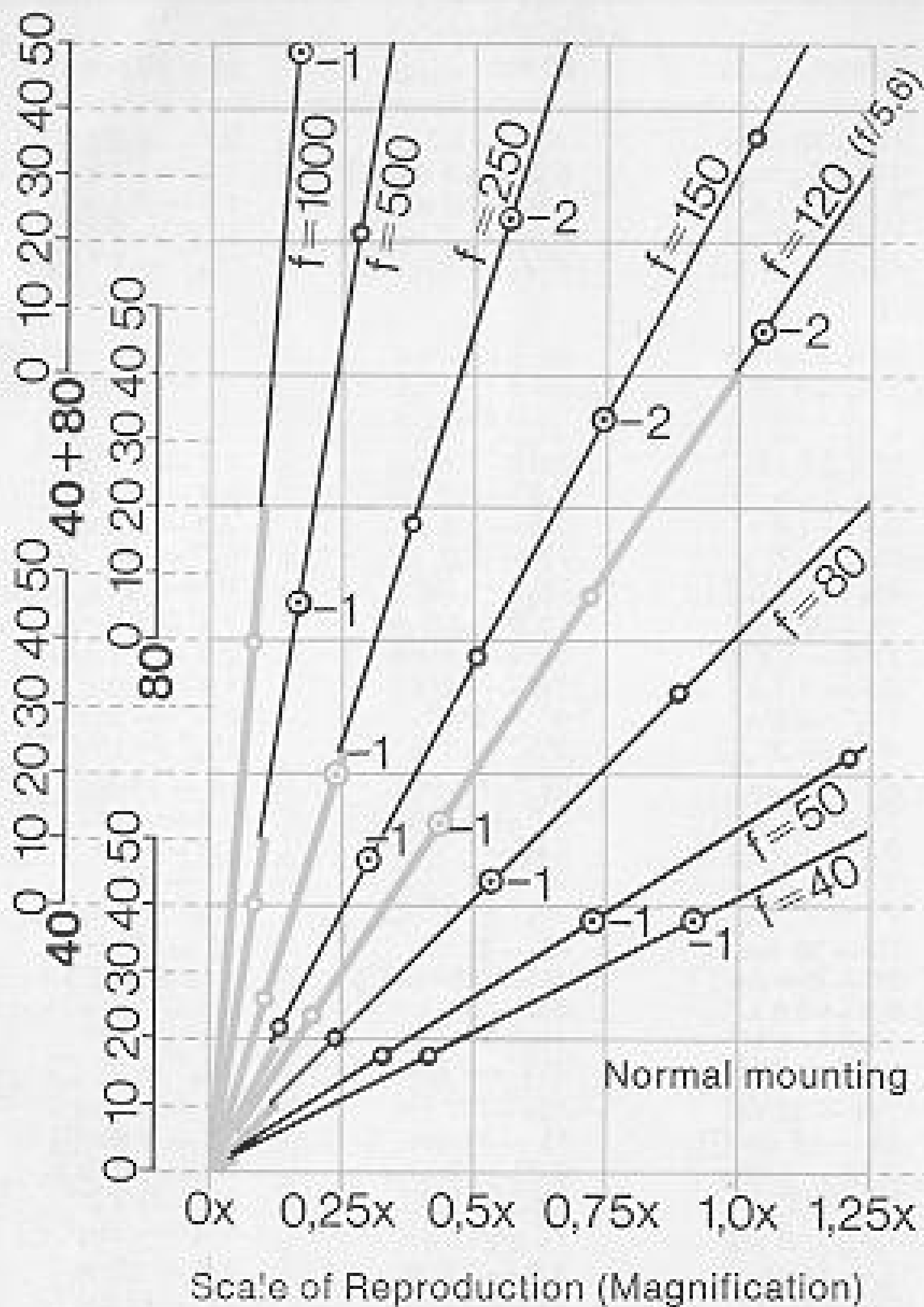


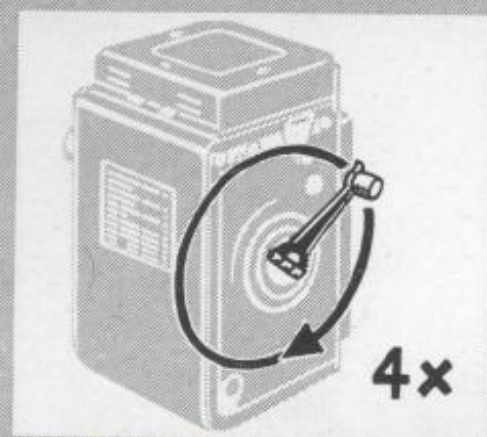
2



3

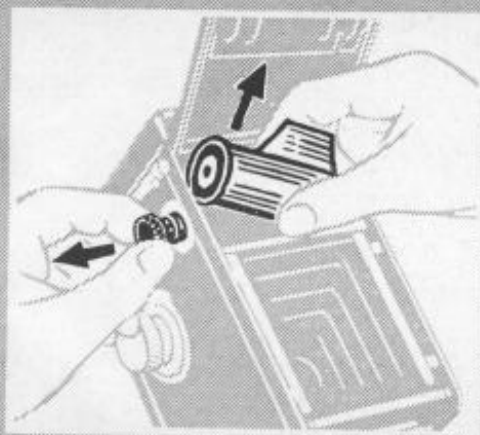
Extension Scale (without and with Extension Tubes)



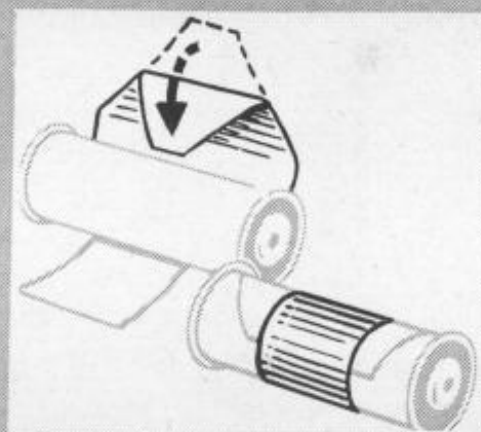


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1



2



3



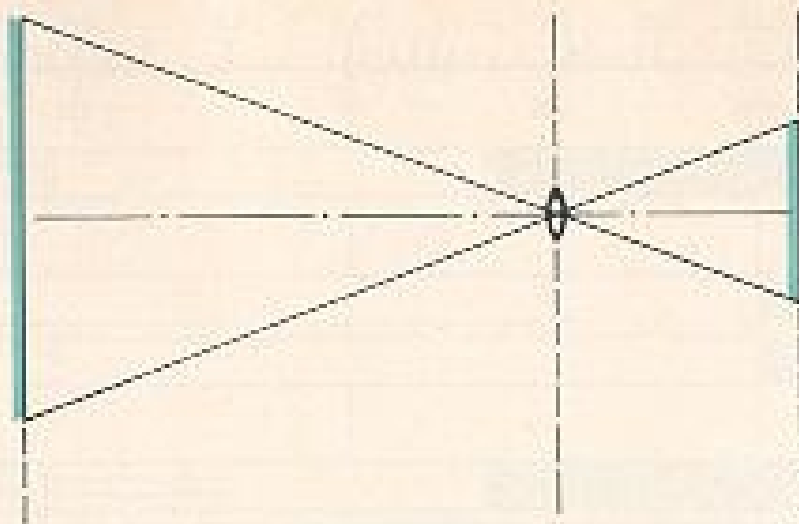
Lens	Maximum aperture	Focal length mm	Aperture range f/	Diaphragm system†	Angle of view		No. of elements	No. of components	Overall length		Weight	
									mm	in.	g	oz.
F-Distagon HFT	f/3.5	30	3.5—22	A	180°	110°	8	7	115	4 1/2	1130	40
Distagon HFT	f/4	40	4 —32	A	88°	69°	10	9	125	4 15/16	1218	42 1/2
Distagon HFT	f/4	50	4 —32	A	75°	57°	7	7	93	3 11/16	555	19 1/2
Distagon HFT°	f/4	80	4 —32	A	52°	38°	5	5	85	3 3/16	638	22 1/2
Planar HFT	f/2.8	80	2.8—22	A	52°	38°	7	5	63	2 1/2	300	10 1/2
Planar HFT	f/2	120	2 —16	A	36°	26°	7	5	86	3 3/8	810	28 1/2
S-Planar HFT	f/5.6	120	5.6—45	A	36°	26°	6	4	90	3 9/16	435	15 1/4
Sonnar HFT	f/4	150	4 —32	A	29°	21°	5	3	94	3 11/16	545	19 1/4
Sonnar HFT°	f/4	150	4 —32	A	29°	21°	5	3	94	3 11/16	705	25
Sonnar HFT Superachromat	f/5.6	250	5.6—45	A	18°	13°	6	6	152	6	680	24
Sonnar HFT	f/5.6	250	5.6—45	A	18°	13°	4	3	143	5 5/8	665	23 1/2
Tele-Tessar	f/5.6	500	5.6—45	V	9°	6°	6	5	308	12 5/16	1640	57 1/2
Tele-Tessar	f/8	1000	8 —64	V	4 1/2°	3°	4	4	770	30 3/16	8750	310
Mirotar	f/5.6	1000	5.6	—	4 1/2°	3°	Mirror lens		407	16	16500	580
Luminar*	f/2.5	16	2.5—10	E	—	—	5	4	41	1 5/8	120	4 1/4
Luminar*	f/3.5	25	3.5—14	E	—	—	4	3	36	1 7/16	105	3 3/4
Luminar*	f/4.5	40	4.5—25	E	—	—	3	3	22	7/8	75	2 1/2
Luminar*	f/4.5	63	4.5—36	E	—	—	3	3	32	1 1/4	135	4 3/4
Luminar*	f/6.3	100	6.3—50	E	—	—	3	3	35	1 3/8	140	5

Lenses marked with *made by Rollei* are manufactured by Rollei under licence from Carl Zeiss, Oberkochen, West Germany.

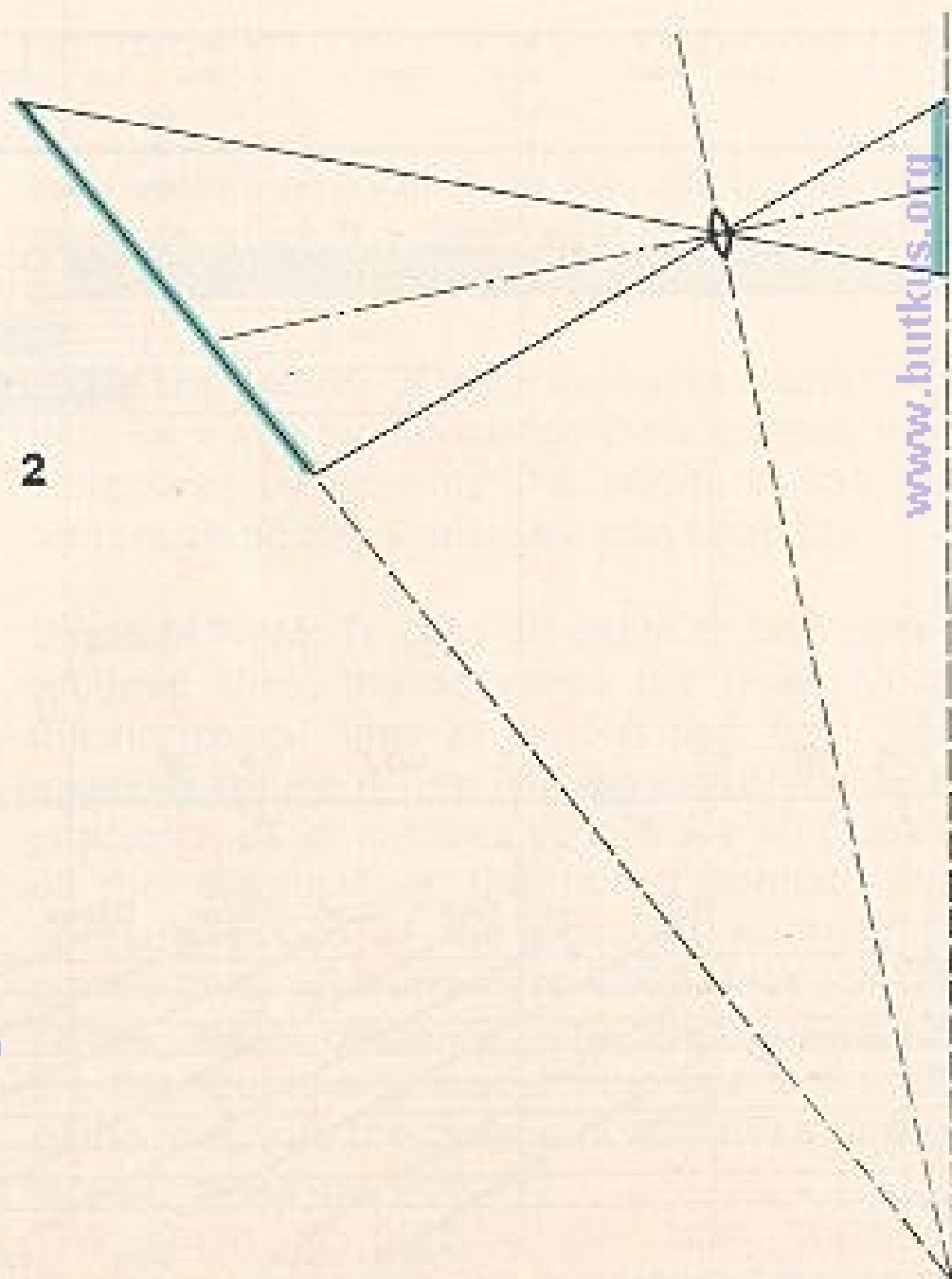
Interchangeable Lenses

Scales of Reproduction,

1



2



Magnification

Scale of reproduction

80 mm Planar HFT f/2.8 and

80 mm Distagon HFT f/4

40 mm Distagon HFT f/4

50 mm Distagon HFT f/4

150 mm Sonnar HFT f/4

250 mm Sonnar HFT f/5.6^o

500 mm Tele-Tessar HFT f/5.6

1000 mm Tele-Tessar HFT f/8 and

1000 mm Mirotar f/5.6

Subject size

Exposure value correction, approx.

Exposure factor, approx.

120 mm S-Planar HFT f/5.6

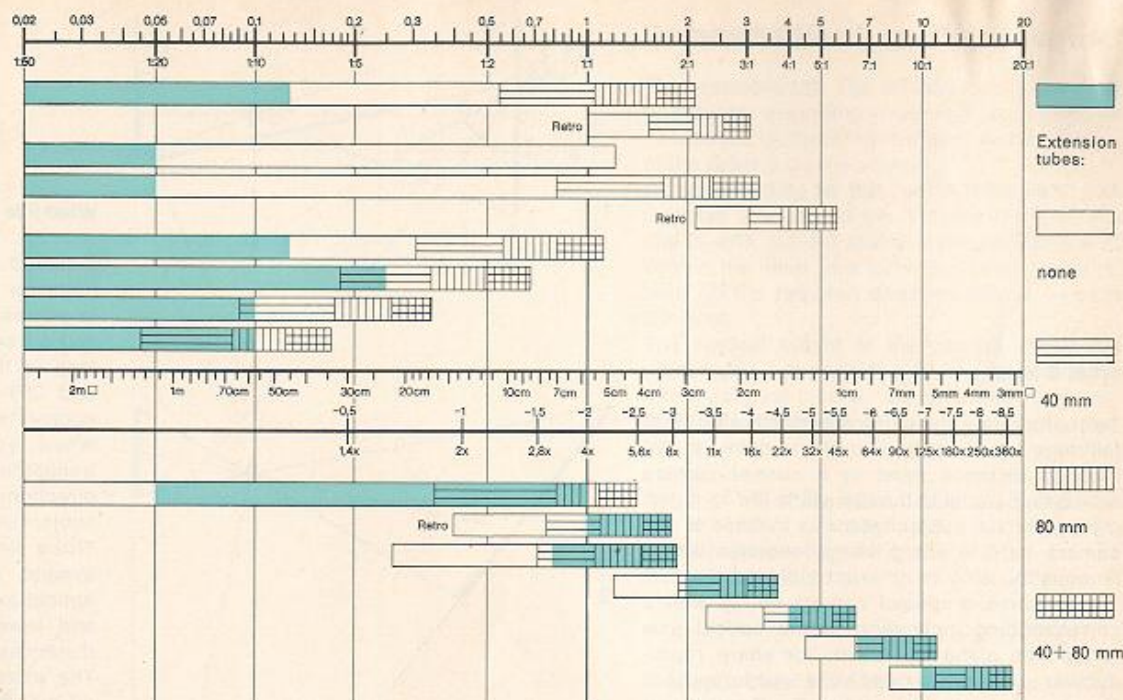
100 mm Luminar f/6.3

63 mm Luminar f/4.5

40 mm Luminar f/4.5

25 mm Luminar f/3.5

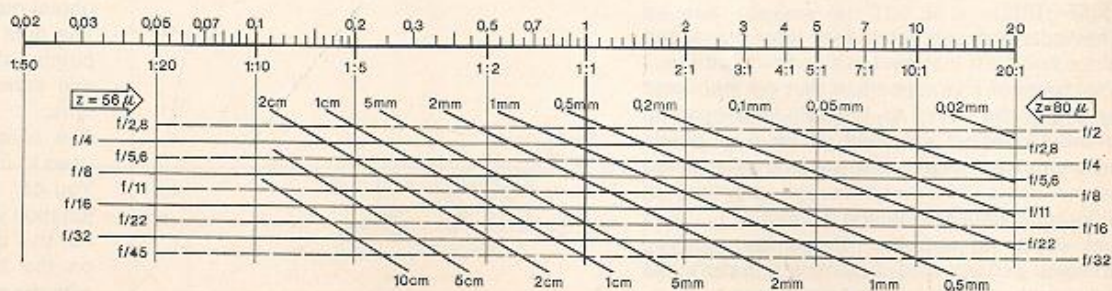
16 mm Luminar f/2.5



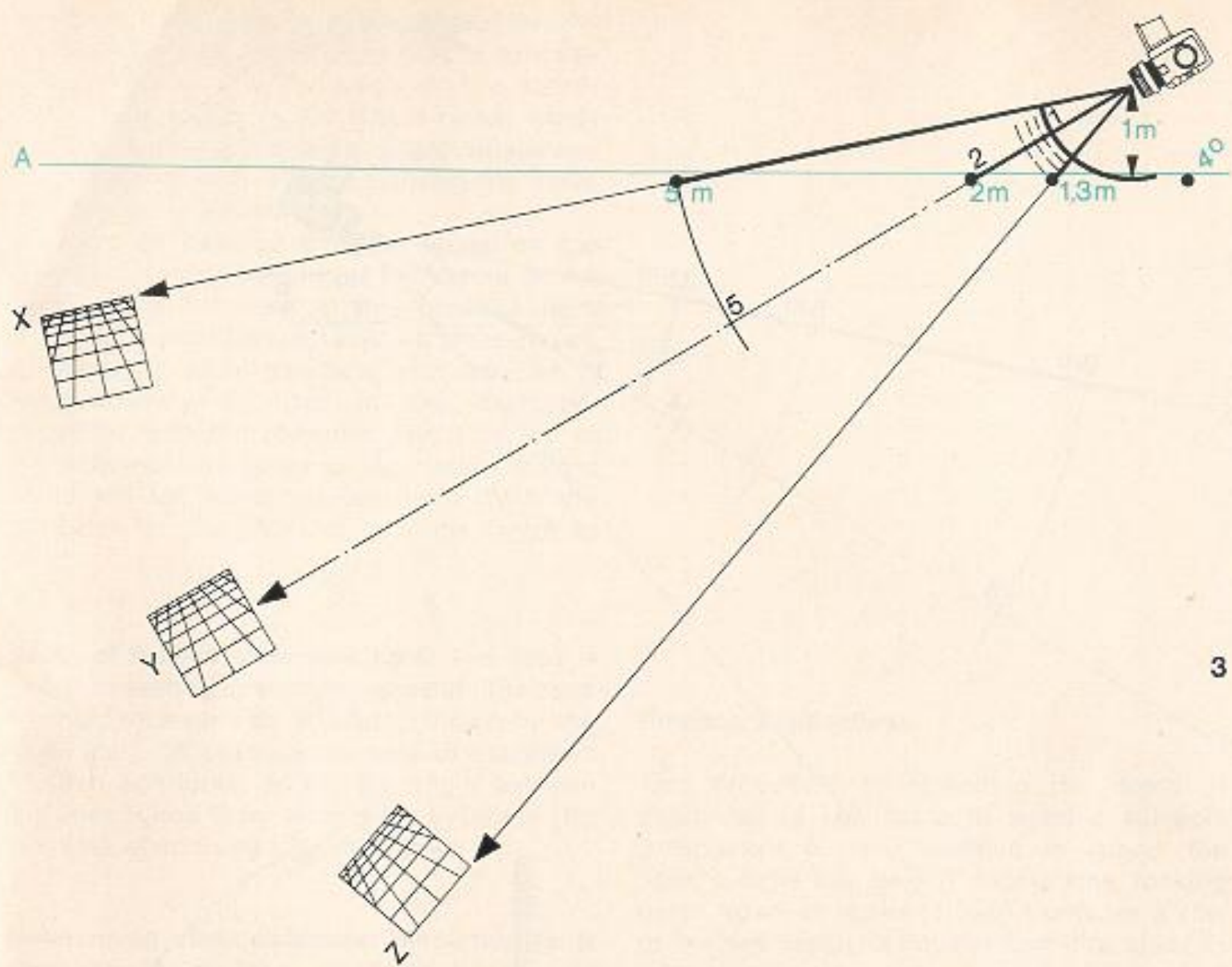
Magnification

Scale of Reproduction

Depth of Field



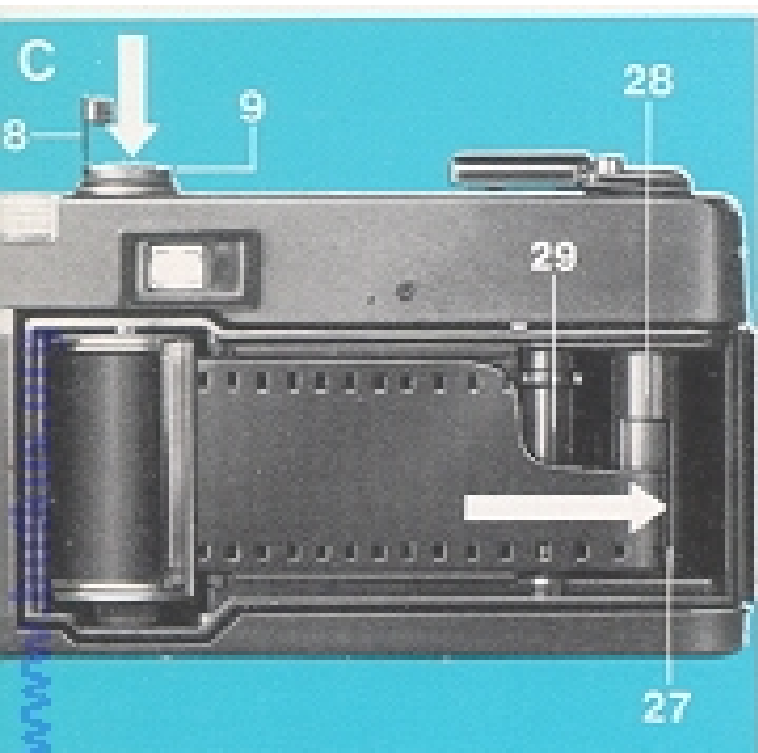
^o applies also to
250 mm Sonnar HFT Superachromat



3



4





Lens	A, O, V*	Extension Tubes:			
		None	40 mm	80 mm	40 + 80 mm
80 mm f/2.8 Planar HFT retro	A	16 — 12 cm	12.5 — 10.8 cm	11 — 10 cm	10.2 — 9.5 cm
	O	6.1 — 3.7 cm □	4 — 2.8 cm □	2.9 — 2.2 cm □	2.3 — 1.9 cm □
	V	0.9 — 1.5 x	1.4 — 2.0 x	1.9 — 2.5 x	2.4 — 3.0 x
	A	6 ¹ / ₈ " — 4 ³ / ₄ "	4 ⁷ / ₈ " — 4 ¹ / ₄ "	4 ³ / ₈ " — 3 ¹ / ₂ "	4" — 3 ³ / ₄ "
	O	2 ¹ / ₄ " — 1 ¹ / ₂ " □	1 ¹ / ₂ " — 1 ¹ / ₈ " □	1 ¹ / ₈ " — ⁷ / ₈ " □	⁷ / ₈ " — ³ / ₄ " □
50 mm f/4 Distagon HFT retro	A	9.4 — 8.6 cm	8.7 — 8.3 cm	8.4 — 8.1 cm	8.1 — 7.9
	O	2.7 — 1.8 cm □	2 — 1.5 cm □	1.5 — 1.2 cm □	1.3 — 1 cm □
	V	2.0 — 3.0 x	2.8 — 3.8 x	3.6 — 4.6 x	4.4 — 5.4 x
	A	3 ³ / ₄ " — 3 ¹ / ₈ "	3 ¹ / ₂ " — 3 ¹ / ₄ "	3 ¹ / ₂ " — 3 ¹ / ₈ "	3 ¹ / ₂ " — 3 ¹ / ₈ "
	O	1 ¹ / ₈ " — ³ / ₄ " □	³ / ₄ " — ⁵ / ₈ " □	⁵ / ₈ " — ¹ / ₂ " □	¹ / ₂ " — ³ / ₈ " □
80 mm f/4 Distagon HFT retro	A	17.3 — 14.3 cm	14.7 — 13.1 cm	13.3 — 12.3 cm	12.5 — 11.8 cm
	O	5.6 — 3.5 cm □	3.8 — 2.7 cm	2.8 — 2.2 cm □	2.3 — 1.8 cm □
	V	1.0 — 1.6 x	1.5 — 2.1 x	2.0 — 2.6 x	2.5 — 3.1 x
	A	6 ³ / ₄ " — 5 ⁵ / ₈ "	5 ³ / ₄ " — 5 ¹ / ₈ "	5 ¹ / ₄ " — 4 ⁷ / ₈ "	5" — 4 ³ / ₈ "
	O	2 ¹ / ₄ " — 1 ³ / ₈ " □	1 ¹ / ₂ " — 1" □	1 ¹ / ₄ " — ³ / ₈ " □	¹ / ₃ " — ³ / ₄ "
120 mm f/5.6 S-Planar HFT retro	A	43 — 25 cm	27 — 20 cm	21 — 17.5 cm	18 — 16 cm
	O	16 — 7.2 cm □	8.1 — 5.1 cm □	5.5 — 3.9 cm □	4.1 — 3.2 cm □
	V	0.4 — 0.8 x	0.7 — 1.1 x	1.0 — 1.4 x	1.4 — 1.8 x
	A	1'5" — 10"	10" — 8"	8" — 7"	7" — 6"
	O	6 ³ / ₈ " — 2 ⁷ / ₈ " □	3 ¹ / ₄ " — 2" □	2 ¹ / ₈ " — 1 ¹ / ₂ " □	1 ⁵ / ₈ " — 1 ¹ / ₄ " □
63 mm f/4.5 Luminar	A	10.4 — 8.2 cm	8.5 — 7.4 cm	7.6 — 7.0 cm	7.0 — 6.6 cm
	O	4.7 — 2.8 cm □	3.1 — 2.2 cm □	2.2 — 1.7 cm □	1.8 — 1.4 cm □
	V	1.2 — 2.0 x	1.8 — 2.6 x	2.5 — 3.2 x	3.1 — 3.9 x
	A	4 ¹ / ₈ " — 3 ¹ / ₄ "	3 ³ / ₈ " — 3"	3" — 2 ³ / ₄ "	2 ³ / ₄ " — 2 ⁵ / ₈ "
	O	1 ⁷ / ₈ " — 1 ¹ / ₈ " □	1 ¹ / ₄ " — ¹ / ₈ " □	⁷ / ₈ " — ¹¹ / ₁₆ " □	³ / ₄ " — ⁹ / ₁₆ " □
40 mm f/4.5 Luminar	A	4.7 — 4.1 cm	4.2 — 3.9 cm	3.9 — 3.7 cm	3.8 — 3.6 cm
	O	24 — 16 mm □	17 — 12 mm □	13 — 10 mm □	11 — 9 mm □
	V	2.3 — 3.5 x	3.3 — 4.5 x	4.3 — 5.6 x	5.3 — 6.5 x
	A	1 ⁷ / ₈ " — 1 ⁵ / ₈ "	1 ⁵ / ₈ " — 1 ⁹ / ₁₆ "	1 ⁹ / ₁₆ " — 1 ¹ / ₂ "	1 ¹ / ₂ " — 1 ⁷ / ₁₆ "
	O	1" — ⁵ / ₈ " □	⁵ / ₈ " — ¹ / ₂ " □	¹ / ₂ " — ³ / ₈ " □	¹ / ₁₆ " — ⁵ / ₁₆ " □
25 mm f/3.5 Luminar	A	1.9 — 1.7 cm	1.8 — 1.7 cm	1.7 — 1.6 cm	1.6 cm
	O	12 — 9 mm □	9 — 7 mm □	7 — 6 mm □	6 — 5 mm □
	V	4.5 — 6.5 x	6.1 — 8.0 x	7.7 — 9.7 x	9.3 — 11.2 x
	A	³ / ₄ " — ¹¹ / ₁₆ "	¹¹ / ₁₆ " — ⁵ / ₈ "	⁵ / ₈ " — ¹ / ₄ "	⁵ / ₈ " — ³ / ₁₆ "
	O	¹ / ₂ " — ³ / ₁₆ " □	³ / ₈ " — ¹ / ₄ " □	³ / ₁₆ " — ¹ / ₄ " □	¹ / ₄ " — ³ / ₁₆ " □
16 mm f/2.5 Luminar	A	1 cm	1 cm	1 cm	1 cm
	O	7 — 5 mm □	5 — 4 mm □	4.5 — 3.5 mm □	3.5 — 3 mm □
	V	8 — 11 x	11 — 14 x	13 — 16 x	16 — 19 x
	A	³ / ₈ "	³ / ₈ "	³ / ₈ "	³ / ₈ "
	O	⁵ / ₃₂ " — ³ / ₁₆ " □	⁷ / ₃₂ " — ⁵ / ₃₂ " □	³ / ₁₆ " — ⁵ / ₃₂ " □	³ / ₃₂ " — ¹ / ₈ " □