You took the First Step

towards extending the scope of your camera when you bought the close-up lenses. A number of specially designed accessories bring still more subjects within the range of the RETINA. A very useful copying set-up, which uses the Kodak N II close-up lens, is the

RETINA Copying Stand

With this, copying of flat originals, such as documents, book pages, illustrations, etc. up to 6x8 inches or 8x12 inches becomes really simple. The outfit consists of a camera platform, four extendible legs, two pressure plates, and a lighting unit. When dismantled, the whole outfit will easily go into an ordinary brief case. If you want to photograph small objects, blossoms, insects, and the like, use the

RETINA Close-up Attachment

In conjunction with three close-up R-lenses this covers four close-up distances between 11¼ and 6 inches or 28.5 cm. and 15 cm. (With the RETINA II S and RETINA automatic II only three close-up distances are covered.)

The gauge rods determine the camera distance as well as the field covered, so that you obtain a sharp and accurately framed image of the subject without using the camera finder.
Your photo dealer will gladly give you full details of further accessories for your RETINA.

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INCHES

FOCUSING TABLES

for the

KODAK CLOSE-UP LENSES

NI, NII and NIIIa

for use with the

RETINA AND RETINETTE CAMERAS

KODAK AG · STUTTGART-WANGEN

Kodak close-up lenses

extend the scope of the RETINA and RETINETTE to the interesting field of close-up photography. You can use the N I and N II close-up lenses either singly or in combination. In the latter case you can work at object distances as near as about 11½ inches (29 cm).

The N III a close-up lens replacing the N I / N II close-up lens combination can only be used with 45 mm focal length cameras. The N I / N II lens combination may be used with 45 mm cameras, too; if however, you use a filter in addition, the extreme corners of the image may be cut off.

The columns of the tables are arranged according to the working method with the N-lens in use. Tables 1 to 3 apply to Kodak cameras with 50 mm standard lens focal length; tables 4 to 6 are applicable to Kodak cameras with 45 mm focal length.

Column I shows the field size covered. In other words, everything within the object area quoted is reproduced on the film. With the first three tables the left-hand column gives the field for the RETINA III C, while the right-hand column applies to the RETINA REFLEX S, RETINA III S, RETINA I B, and RETINETTE I A.

The object distance in **column II** is measured from the main part of the object to the film plane. The film plane corresponds approx. to the rear upper edge of the chromium plated camera top.

Column III indicates the required setting of the distance scale of the camera for the actual object distances in column II.

Column IV gives the zone of sharpness in front of, and behind, the main object plane at various apertures.

In column V you can read off the scale of reproduction (reduction).
Normally it is **best to work at f/8** or an even smaller aperture if possible. At f/5.6 you will still get perfectly sharp pictures, but the depth of field is very limited.

No increase in exposure is necessary with any of the close-up lenses.

Filters can also be used for close-ups. They are mounted in front of the close-up lens so that the sequence of attachments is: lens — close-up lens — filter.

A lens hood is advisable for all close-ups, and the close-up rangefinder or the RETINA sports finder is also very useful. The close-up rangefinder is not required with the RETINA REFLEX S.

If you are the owner of a RETINA I B or III C camera you should not forget to remove the close-up lens from the camera lens before closing the camera.

Owners of the RETINA III S or RETINA REFLEX S with 50 mm f:1.9 lens can use the same tables with the 60 mm dia. N close-up lenses.

KODAK AG · STUTTGART-WANGEN

NI KODAK CLOSE-UP LENS (Marked with 1 ring) for Kodak cameras with 50 mm focal length

I Approx. field size (inches with) RETINA III C	REFLEX S, RETINA IIIS, IB RETINETTE I A	II Object* distance (inches)	III Camera setting (feet)	IV Sharp zone (inches)** in front of (f) and behind (b) the object plane at aperture f/5.6 f	f/5.6 b	f/8 f	f/8 b	f/11 f	f/11 b	f/16 f	f/16 b	f/22 f	f/22 b	V Reduction 1 :
17 1/2 × 26 3/8	15 3/4 × 23 3/8	38 1/4	INF	34 5/8	43	33 1/4	45 1/4	31 3/4	48 1/2	29 1/2	54 3/4	27 1/2	66 1/2	.055
16 5/8 × 24 3/4	15 1/8 × 22 3/4	35 3/4	50	33 1/8	40 7/8	31 3/4	42 1/2	30 3/8	45 1/2	28 5/8	51 1/4	26 1/4	60	.057
15 3/4 × 23 5/8	14 3/8 × 21 1/2	34 1/4	25	31 5/8	37 1/2	30 3/8	40 1/4	29 1/8	42 3/4	27 1/2	47 3/4	25 1/4	55 1/2	.063
14 5/8 × 22	13 3/8 × 20 1/8	32 3/8	15	29 3/4	35 1/8	28 3/4	37 1/4	27 1/2	39 3/8	26	43 1/4	24	50	.067
13 7/8 × 20 7/8	12 3/4 × 19	31 1/8	12	28 3/4	33 3/4	27 3/4	35 1/2	26 3/4	37 3/4	25 1/4	41	23 1/2	47 1/4	.072
13 1/4 × 19 7/8	12 1/8 × 18 1/4	30	10	27 5/8	32 3/8	26 3/4	33 7/8	25 3/4	35 7/8	24 1/2	38 3/4	22 3/4	44	.075
12 1/2 × 18 3/4	11 3/8 × 17 1/8	28 3/8	8	26 3/8	30 3/4	25 5/8	31 7/8	24 3/4	33 1/2	23 5/8	36 5/8	21 7/8	40 1/2	.079
11 3/4 × 17 3/4	10 3/4 × 16 1/8	27 5/8	7	25 3/8	29 1/4	24 5/8	30 3/8	23 3/4	31 1/2	22 5/8	34 1/8	21 1/4	38	.084
11 3/8 × 17 1/8	10 3/8 × 15 1/2	26 3/8	6	24 1/2	28 1/8	23 7/8	29	23	30 1/8	22	32 1/2	20 3/4	36 1/8	.087
10 5/8 × 16	9 3/4 × 14 1/2	24 3/4	5	23 1/4	26 3/8	22 5/8	27 1/4	21 7/8	28 1/8	20 7/8	30	19 3/4	33	.093
10 1/8 × 15 1/8	9 1/4 × 13 7/8	24	4,5	22 1/2	25 1/4	21 7/8	26	20 7/8	26 7/8	20 3/8	28 3/8	19 1/4	31 1/2	.097
9 1/2 × 14 3/8	8 3/4 × 13	22 7/8	4	21 5/8	24	20 7/8	24 3/4	20 3/8	25 5/8	19 1/2	26 3/4	18 1/2	29 1/2	.105
9 × 13 3/8	8 1/8 × 12	21 5/8	3,5	20 1/4	22 1/2	19 7/8	23 1/8	19 1/4	24	18 1/2	25	17 3/4	27 1/4	.110
8 1/8 × 12 1/4	7 3/8 × 11 1/4	19 3/4	3	18 7/8	20	18 1/2	21 3/8	18	22	17 1/4	22 1/2	16 1/2	24	.123
7 1/2 × 11 1/4	6 5/8 × 10	17 3/4	2,5	17	18 1/2	16 3/4	18 7/8	16 1/2	19 3/8	16	20 1/8	15 1/2	21 1/8	.135

* Measured from the object to the film plane, i.e. approximately the rear upper edge of the camera body.
** The depth of field is calculated for a circle of confusion of 1/500 inch (1/20 mm.).

NII KODAK CLOSE-UP LENS (Marked with 2 rings) for Kodak cameras with 50 mm focal length

I Approx. field size (inches) with RETINA III C	I Approx. field size (inches) with REFLEX S RETINA IIIS, IB RETINETTE I A	II Object* distance (inches)	III Camera setting (feet)	IV Sharp zone (inches)** in front of (f) and behind (b) the object plane at aperture f/5.6 f	f/5.6 b	f/8 f	f/8 b	f/11 f	f/11 b	f/16 f	f/16 b	f/22 f	f/22 b	V Reduction 1 :
8 1/2 × 12 3/4	7 1/2 × 11 3/8	20	INF	19 1/4	21	18 3/4	21 5/8	18 3/8	22 1/8	17 3/4	23 1/8	17	25	.118
8 1/4 × 12 3/8	7 3/8 × 11	19 1/2	50	18 5/8	20 1/2	18 3/8	21	18	21 1/2	17 3/8	22 1/2	16 5/8	23 7/8	.122
8 × 12	7 1/8 × 10 3/4	19	25	18 1/4	20	17 7/8	20 3/8	17 1/2	20 7/8	17	21 7/8	16 3/8	23 1/8	.126
7 5/8 × 11 1/2	6 7/8 × 10 1/4	18 3/8	15	17 5/8	19 1/4	17 3/8	19 5/8	17	20 1/8	16 1/2	21	16	22 1/8	.130
7 1/2 × 11 1/4	6 5/8 × 10	18	12	17 3/8	19	17 1/8	19 3/8	16 3/4	19 7/8	16 1/4	20 5/8	15 3/4	21 3/4	.135
7 1/4 × 11	6 1/2 × 9 3/4	17 5/8	10	17	18 1/2	16 3/4	18 7/8	16 1/2	19 3/8	16	20 1/8	15 1/2	21 1/8	.138
7 1/8 × 10 5/8	6 1/4 × 9 1/2	17 1/4	8	16 5/8	18	16 3/8	18 3/8	16	18 3/4	15 1/2	19 1/2	15 1/8	20 1/2	.140
6 7/8 × 10 1/4	6 1/8 × 9 1/8	16 7/8	7	16 1/4	17 1/2	16	18	15 3/4	18 3/8	15 3/8	19	14 3/4	20	.145
6 3/4 × 10	6 × 9	16 1/2	6	16	17 1/4	15 3/4	17 1/2	15 1/2	17 7/8	15 1/8	18 5/8	14 1/2	19 1/2	.149
6 3/8 × 9 1/2	5 5/8 × 8 1/2	16 1/8	5	15 1/2	16 5/8	15 1/4	17	15	17 1/4	14 5/8	18	14 3/8	18 7/8	.158
6 1/8 × 9 1/4	5 1/2 × 8 1/4	15 3/4	4,5	15 1/8	16 1/4	15	16 5/8	14 3/4	16 7/8	14 3/8	17 1/2	13 7/8	18 3/8	.165
5 7/8 × 8 7/8	5 1/4 × 7 7/8	15 3/8	4	14 3/4	16	14 1/2	16 1/8	14 3/8	16 5/8	14	17	13 5/8	17 7/8	.172
5 5/8 × 8 1/2	5 × 7 1/2	14 7/8	3,5	14 1/4	15 1/4	14	15 1/2	13 7/8	15 3/4	13 1/2	16 1/4	13 1/4	17 1/8	.180
5 1/4 × 7 7/8	4 5/8 × 7	14 1/8	3	13 3/4	14 1/2	13 1/2	14 7/8	13 3/8	15	13	15 1/2	13	16 3/8	.190
4 7/8 × 7 1/4	4 3/8 × 6 1/2	13 3/8	2,5	13 1/4	13 3/4	13	14 1/4	12 7/8	14 1/4	12 1/2	14 3/4	12 3/4	15 6/8	.205

* Measured from the object to the film plane, i.e. approximately the rear upper edge of the camera body.
** The depth of field is calculated for a circle of confusion of 1/500 inch (1/20 mm.).

NI+NII KODAK CLOSE-UP LENSES (screwed together) for Kodak cameras with 50 mm focal length

I Approx. field size (inches) with RETINA III C	I REFLEX S RETINA IIIS, IB RETINETTE IA	II Object* distance (inches)	III Camera setting (feet)	IV Sharp zone (inches)** in front of (f) and behind (b) the object plane at aperture f/5.6 f	f/5.6 b	f/8 f	f/8 b	f/11 f	f/11 b	f/16 f	f/16 b	f/22 f	f/22 b	V Reduction 1 :
5 3/4 × 8 5/8	5 3/8 × 8	14 7/8	INF	14 3/8	15 1/2	14 1/4	15 3/4	14	16	13 5/8	16 1/2	13 1/4	17 1/4	.173
5 5/8 × 8 3/8	5 1/4 × 7 3/4	14 5/8	50	14 1/4	15 1/4	14	15 1/2	13 3/4	15 3/4	13 1/2	16 1/8	13 1/8	16 5/8	.176
5 1/2 × 8 1/4	5 1/8 × 7 5/8	14 3/8	25	14	14 7/8	13 3/4	15 1/8	13 1/2	15 3/8	13 1/4	15 3/4	12 7/8	16 1/4	.179
5 3/8 × 8	5 × 7 3/8	14 1/8	15	13 3/4	14 5/8	13 5/8	14 3/4	13 3/8	15	13 1/8	15 1/2	12 3/4	16	.183
5 1/4 × 7 7/8	4 7/8 × 7 1/4	14	12	13 5/8	14 3/8	13 1/2	14 1/2	13 1/4	14 3/4	13	15 1/4	12 5/8	15 3/4	.186
5 1/8 × 7 3/4	4 3/4 × 7 1/8	13 3/4	10	13 3/8	14 1/8	13 1/4	14 1/4	13	14 1/2	12 5/8	15	12 1/2	15 3/8	.189
5 × 7 1/2	4 5/8 × 7	13 1/2	8	13 1/4	13 7/8	13	14	12 3/4	14 1/4	12 1/2	14 3/4	12 1/4	15	.197
5 × 7 3/8	4 5/8 × 6 7/8	13 3/8	7	13 1/8	13 5/8	12 3/4	13 3/4	12 5/8	14	12 3/8	14 1/2	12 1/8	14 3/4	.200
4 7/8 × 7 1/4	4 1/2 × 6 3/4	13 1/8	6	12 7/8	13 1/2	12 1/2	13 5/8	12 3/8	13 3/4	12 1/4	14 1/4	12	14 1/2	.205
4 3/4 × 7	4 3/8 × 6 1/2	12 7/8	5	12 5/8	13 1/4	12 3/8	13 3/8	12 1/4	13 1/2	12 1/8	13 7/8	11 3/4	14 1/4	.210
4 3/8 × 6 7/8	4 1/4 × 6 3/8	12 3/4	4,5	12 1/2	13 1/8	12 1/4	13 1/4	12	13 3/8	11 7/8	13 1/2	11 5/8	13 3/4	.220
4 1/2 × 6 3/4	4 1/8 × 6 1/4	12 1/2	4	12 3/8	12 3/4	12 1/8	13	11 7/8	13 1/4	11 3/4	13 3/8	11 1/2	13 1/2	.225
4 1/4 × 6 1/2	4 × 6	12 1/4	3,5	12 1/8	12 1/2	12	12 3/4	11 3/4	13	11 5/8	13 1/4	11 1/4	13 3/8	.230
4 1/8 × 6 1/8	3 3/4 × 5 3/4	12	3	11 7/8	12 1/4	11 3/4	12 1/2	11 5/8	12 3/4	11 3/8	13	11	13 1/4	.240
3 7/8 × 5 3/4	3 1/2 × 5 3/8	11 5/8	2,5	11 1/2	12 1/8	11 1/2	12 1/4	11 3/8	12 1/2	11	12 3/4	10 3/4	13	.250

* Measured from the object to the film plane, i.e. approximately the rear upper edge of the camera body.
** The depth of field is calculated for a circle of confusion of 1/500 inch (1/20 mm.).

NI KODAK CLOSE-UP LENS (Marked with 1 ring) for Kodak cameras with 45 mm focal length

I	II	III	IV										V
			Sharp zone (inches)** in front of (f) and behind (b) the object plane at aperture										
			f/5.6		f/8		f/11		f/16		f/22		
Field size (inches)	Object* distance (inches)	Camera setting (feet)	f	b	f	b	f	b	f	b	f	b	Reduction 1 :
16 3/4 × 20	37 3/8	INF	34 3/4	42 1/2	33 3/8	45 1/8	31 1/2	48 5/8	29 3/4	54 3/4	27 5/8	65 3/8	.058
15 × 22 3/4	33 3/4	25	31 1/8	37 7/8	30 3/8	40 5/8	29 7/8	43 1/2	28 3/8	49 1/2	27 1/8	58 1/4	.062
14 3/8 × 21 3/4	32 1/2	15	30 1/2	35 5/8	29 1/2	37	28 1/8	39 1/8	27 1/2	44 3/8	26 3/8	53 3/8	.066
13 5/8 × 20 1/2	30 1/4	10	28 3/8	33 1/2	27 1/3	35 1/4	26 3/8	37 3/8	25 1/4	41 1/8	24 1/4	48	.070
13 × 19 3/8	29 1/4	8	27 1/2	32	26 1/2	33 1/2	25 1/2	35	24 3/8	38 1/8	22 1/2	43	.073
12 1/2 × 18 1/2	28 3/8	7	26	30 1/4	25 1/4	31	24 1/4	32 3/4	23 1/8	35 1/2	21 5/8	39 3/4	.076
12 × 17 7/8	27 1/8	6	25 1/8	28 1/2	24 3/8	29 3/8	23 1/4	31	22 3/8	33 5/8	21	37 1/4	.078
11 1/2 × 17 1/4	26	5	24 1/8	27 3/4	23 1/2	28 5/8	22 3/4	29 7/8	21 5/8	32	20 3/8	35 1/4	.082
11 1/4 × 16 7/8	25	4,5	23 1/4	26 3/8	22 5/8	27 1/4	21 5/8	28 1/8	20 7/8	30	19 3/4	33 3/8	.084
10 3/4 × 16 1/8	23 3/4	4	22 1/4	25	21 5/8	25 3/4	21	26 5/8	20	28 1/4	18 5/8	30 1/4	.089
9 7/8 × 14 7/8	23	3,5	21 3/8	23 5/8	20 3/8	24	20 1/8	26 1/8	19 3/4	27 5/8	18	28 3/4	.096

* Measured from the object to the film plane, i.e. approximately the rear upper edge of the camera body.
** The depth of field is calculated for a circle of confusion of 1/500 inch (1/20 mm.).

NII KODAK CLOSE-UP LENS (Marked with 2 rings) for Kodak cameras with 45 mm focal length

I	II	III	IV										V
Field size	Object* distance	Camera setting	Sharp zone (inches)** in front of (f) and behind (b) the object plane at aperture										Reduction
			f/5.6		f/8		f/11		f/16		f/22		
(inches)	(inches)	(feet)	f	b	f	b	f	b	f	b	f	b	1 :
8 1/2 × 12 1/2	19 5/8	INF	19	20 3/4	18 3/8	21	18 1/4	21 3/4	18 1/8	22 3/8	17 3/8	24 1/4	.112
7 7/8 × 11 3/4	18 5/8	25	18 1/4	20	17 7/8	20 3/8	17 1/2	20 7/8	17	21 7/8	16 3/8	23 1/8	.119
7 3/4 × 11 1/2	18 1/4	15	17 5/8	19 1/4	17 3/8	19 5/8	17 1/8	20 1/8	16 1/2	21	16	22 1/8	.123
7 5/8 × 11 1/8	17 5/8	10	17	18 1/8	16 3/4	18 7/8	16 1/2	19 3/8	16 1/8	20 1/8	15 1/2	21 1/8	.127
7 1/4 × 10 7/8	17 1/4	8	16 5/8	18	16 3/8	18 3/8	16	18 3/4	15 1/2	19 1/2	15 1/8	20 1/2	.131
6 7/8 × 10 1/2	17 1/8	7	16 3/8	17 5/8	15 7/8	18 1/8	15 3/4	18 1/2	15 3/8	19 1/4	15	20 1/4	.136
6 3/4 × 10 3/8	16 3/4	6	16 1/4	17 1/2	15 5/8	18	15 1/2	18 3/8	15 1/4	19	14 3/4	20	.139
6 5/8 × 10	16 3/8	5	16	17 1/4	15 1/2	17 1/2	15 3/8	18	15 1/8	18 5/8	14 1/2	19 1/2	.144
6 1/2 × 9 3/4	16	4,5	15 1/2	16 5/8	15 1/4	17	15	17 1/4	14 5/8	18	14 3/8	18 7/8	.147
6 3/8 × 9 1/2	15 5/8	4	14 3/4	16	14 5/8	16 1/8	14 3/8	16 5/8	14	17 1/8	13 5/8	17 7/8	.150
6 1/8 × 9 1/8	15 1/4	3,5	14 3/8	15 1/2	14 1/4	15 3/4	13 7/8	16 3/8	13 1/2	16 3/4	13 1/4	17 1/8	.155

* Measured from the object to the film plane, i.e. approximately the rear upper edge of the camera body.
** The depth of field is calculated for a circle of confusion of 1/500 inch (1/20 mm.).

N I + N II or N III a KODAK CLOSE-UP LENSES (screwed together) for Kodak cameras with 45 mm focal length

I	II	III	IV										V
			Sharp zone (inches)** in front of (f) and behind (b) the object plane at aperture										
			f/5.6		f/8		f/11		f/16		f/22		
Field size (inches)	Object* distance (inches)	Camera setting (feet)	f	b	f	b	f	b	f	b	f	b	Reduction 1 :
5 3/4 × 8 1/2	14 5/8	INF	14	14 7/8	13 3/4	15 1/8	13 1/2	15 1/4	13 1/4	15 5/8	13	16 1/4	.163
5 3/8 × 8 1/4	14 1/8	25	13 3/4	14 5/8	13 5/8	14 3/4	13 3/8	15	13 1/8	15 1/2	12 3/4	16	.175
5 1/4 × 8 1/8	13 3/4	15	13 3/8	14 1/8	13 1/4	14 1/4	13	14 1/2	12 5/8	15	12 1/2	15 3/8	.178
5 1/8 × 7 7/8	13 1/2	10	13 1/4	14	13	14 1/8	12 3/4	14 1/4	12 1/2	14 3/4	12 1/4	15 1/8	.182
5 1/8 × 7 3/4	13 3/8	8	13 1/8	13 3/4	12 7/8	13 7/8	12 5/8	14 1/8	12 3/8	14 5/8	12 1/8	15	.185
5 1/8 × 7 5/8	13 1/4	7	13	13 1/2	12 3/4	13 3/4	12 1/2	14	12 3/8	14 3/8	12	14 3/4	.187
5 × 7 1/2	13 1/8	6	12 3/4	13 3/8	12 5/8	13 1/2	12 3/8	13 3/4	12 1/4	14 1/8	11 7/8	14 1/2	.189
4 7/8 × 7 1/4	12 3/4	5	12 5/8	13 1/4	12 3/8	13 3/8	12 1/4	13 1/2	12 1/8	13 7/8	11 3/4	14 1/4	.195
4 7/8 × 7 1/8	12 5/8	4,5	12 1/2	13	12 1/4	13 1/8	12	13 3/8	11 7/8	13 5/8	11 5/8	14	.199
4 3/4 × 6 7/8	12 1/2	4	12 3/8	12 3/4	12 1/8	13	11 7/8	13 1/4	11 3/8	13 1/2	11 1/2	13 3/4	.204
4 1/2 × 6 3/4	12 1/4	3,5	12 1/8	12 3/8	12	12 5/8	11 3/4	13 1/8	11 1/4	13	11	13 1/2	.211

* Measured from the object to the film plane, i.e. approximately the rear upper edge of the camera body.
** The depth of field is calculated for a circle of confusion of 1/500 inch (1/20 mm.).