



INSTRUCTIONS  
FOR  
THE CLOSE-UP  
ATTACHMENT LENSES S

**POINTERS ON THE USE OF THE CLOSE-UP ATTACHMENT LENSES S**

The zone of apparent sharpness, or the depth of field, grows progressively shallower as the focusing distance is shortened and the degree of magnification is increased.

Thus, it is very important, in this case, to focus very accurately on the subject plane and to close down the lens diaphragm, as much as possible, in order to increase the depth of field. (The depth of field preview lever should be used to check the depth of field effect on the focusing screen, in this case.)

On the other hand, since a very slow shutter speed setting will be the rule, in the above case, the camera should be used on top of a sturdy tripod, as much as possible, in order to eliminate camera shake, with a cable release also used. Furthermore, when shooting close to the subject, it should be remembered that there are dangers of the photographer and/or equipment casting shadows on the subject (which may make a longer focal length lens preferable).

Zenzanon-S 105 mm F3.5	Focusing Scale Setting	Camera-to- Subject Distance	Magnification	Area Covered
C.U.L.-1 (f = 67)	∞	82.7	0.16X	35.7 x 35.7
	0.85 m	51.1	0.33X	16.8 x 16.8
C.U.L.-2 (f = 33)	∞	48.7	0.31X	17.8 x 17.8
	0.85 m	39.5	0.50X	11.1 x 11.1
C.U.L.-1 + C.U.L.-2 (f = 22)	∞	38.2	0.46X	12.0 x 12.0
	0.85 m	34.3	0.66X	8.4 x 8.4

Zenzanon-S 150 mm F3.5	Focusing Scale Setting	Camera-to- Subject Distance	Magnification	Area Covered
C.U.L.-1 (f = 67)	∞	82.8	0.22X	25.3 x 25.3
	1.5 m	62.1	0.37X	15.1 x 15.1
C.U.L.-2 (f = 33)	∞	48.8	0.44X	12.6 x 12.6
	1.5 m	43.9	0.62X	9.0 x 9.0
C.U.L.-1 + C.U.L.-2 (f = 22)	∞	38.3	0.65X	8.5 x 8.5
	1.5 m	36.9	0.85X	6.5 x 6.5

Although the table indicates that the C.U.L.-1 and C.U.L.-2 can be used together, it should be noted that aberrations increase around the peripheries of the field, in this case. Therefore, the use of the Automatic Extension Tube S (either S-18 or S-36, which are available optionally) is recommended when such close-up focusing is required.

Furthermore, although the filter can also be used, in this case, it should be used in front of the Close-up Attachment Lens, as otherwise the values indicated in the table will change.

Close-up Lens S



Filter

The Close-Up Attachment Lens S is a very important and valuable accessory in the SQ System of Photography and is available in two types, or C.U.L.-1 (f = 67 cm) and C.U.L.-2 (f = 33 cm), for use on the front of the Zenzanon-S 80 mm F2.8 standard lens.

Simply screwing these auxiliary lenses into the front filter mount makes possible closer subject-to-camera distances than possible with the unassisted lens, without troublesome exposure calculations and with no changes in operations.

The use of these auxiliary lenses will make it possible to continuously cover the distances from the 80 cm minimum focusing distance of the 80 mm standard lens to 48.7 cm (covering an area of 21.4 x 21.4 cm), with the C.U.L.-1, and to 37.7 cm (14.3 x 14.3 cm area), with the C.U.L.-2, as measured from the film plane.

Lenses on which these auxiliary lenses can be used, in addition to the 80 mm F2.8 standard lens, are the 50 mm F3.5, 105 mm F3.5, 150 mm F3.5, 200 mm F4.5 and 250 mm F5.6 Zenzanon-S lenses for the Zenza Bronica SQ 6 x 6 cm format single lens reflex camera.

(The camera-to-subject distance is the distance from film plane to the subject.)

**CLOSE-UP ATTACHMENT LENS TABLE**

(Unit: cm)

Zenzanon-S 80 mm F2.8	Focusing Scale Setting	Camera-to- Subject Distance	Magnification	Area Covered
C.U.L.-1 (f = 67)	∞	81.9	0.12X	44.8 x 44.8
	0.8 m	48.7	0.26X	21.4 x 21.4
C.U.L.-2 (f = 33)	∞	47.9	0.25X	22.3 x 22.3
	0.8 m	37.7	0.39X	14.3 x 14.3
C.U.L.-1 + C.U.L.-2 (f = 22)	∞	37.4	0.37X	15.0 x 15.0
	0.8 m	32.7	0.51X	10.9 x 10.9

Zenzanon-S 50 mm F3.5	Focusing Scale Setting	Camera-to- Subject Distance	Magnification	Area Covered
C.U.L.-1 (f = 67)	∞	82.9	0.08X	73.7 x 73.7
	0.5 m	38.9	0.21X	25.9 x 25.9
C.U.L.-2 (f = 33)	∞	48.9	0.15X	36.7 x 36.7
	0.5 m	33.1	0.29X	19.3 x 19.3
C.U.L.-1 + C.U.L.-2 (f = 22)	∞	38.4	0.22X	24.7 x 24.7
	0.5 m	30.1	0.36X	15.6 x 15.6

Zenzanon-S 200 mm F4.5	Focusing Scale Setting	Camera-to- Subject Distance	Magnification	Area Covered
C.U.L.-1 (f = 67)	∞	86.5	0.29X	19.0 x 19.0
	2.5 m	73.2	0.42X	13.2 x 13.2
C.U.L.-2 (f = 33)	∞	52.5	0.59X	9.4 x 9.4
	2.5 m	50.2	0.75X	7.4 x 7.4
C.U.L.-1 + C.U.L.-2 (f = 22)	∞	42.0	0.87X	6.4 x 6.4
	2.5 m	41.9	1.07X	5.2 x 5.2

Zenzanon-S 250 mm F5.6	Focusing Scale Setting	Camera-to- Subject Distance	Magnification	Area Covered
C.U.L.-1 (f = 67)	∞	89.6	0.36X	15.3 x 15.3
	3 m	78.9	0.51X	10.8 x 10.8
C.U.L.-2 (f = 33)	∞	55.6	0.73X	7.6 x 7.6
	3 m	54.5	0.93X	6.0 x 6.0
C.U.L.-1 + C.U.L.-2 (f = 22)	∞	45.1	1.09X	5.1 x 5.1
	3 m	45.8	1.33X	4.2 x 4.2

**BRONICA CO., LTD.**

2-11 Shin-Ogawamachi Shinjuku-ku, Tokyo 162, Japan

Telephone: Tokyo (03)267-0211

Cable Address: "BRONICA TOKYO"

Telex Call No. 0232-2096 BRONC J

[www.ianbfoto.com](http://www.ianbfoto.com)