

DG-C Auto Extension Tube Set

This is used by attaching between camera body and lens of the 35mm single-lens reflex camera. It comes as a set of 3 tubes of different lengths which singly or in combination makes it usable in 7 different lengths. It couples perfectly with the camera's automatic diaphragm. With cameras of TTL, AE (Through-the-Lens, Automatic Exposure) type it gives perfect coupling except when combined with electronic flash AE unit.

Product Specification :

Tube diameter:	ab. 62mm
Tube lengths:	(1) 12mm. (2) 20mm. (3) 36mm.
Weight:	(1) ab. 60grams, (2) ab. 85grams, (3) ab. 125grams.
(Diameter and weight slightly vary according to type).	

Before the shooting

How to attach to camera.

Attach to camera or detach in the same way as attaching or detaching the camera's master lens.

Procedure for attaching to camera.

With Canon type of tube, be sure to attach master lens only after tube has been properly attached to camera body. Take care not to mistake this order lest it fails to couple with the TTL meter or the AE mechanism. This, however, does not apply to other types of tube.

Order of combining the tubes.

When using 2 or 3 tubes in combination they can be combined freely.

Compatibility of lens.

It can be compatible with standard lens to half telephoto lens, the performance shows excellent as macro lens. It can also be used on wide angle or zoom lens. All that depend on how to combine the lens with extension tube, make the distance between the front lens and camera body more close.

On exposure

When using TTL AE camera.

After correct connect, The extension tube can not only connect with the Auto Aperture, but also support TTL and AE (EE) function. Exposure index will auto rectify according to your camera shooting angle.

When using Non-TTL camera.

As correction of exposure factor becomes necessary adjust the lens aperture or shutter speed accordingly before the shooting.

When using an independent flash unit.

Calculate the F-value from the Guide Number, make correction for exposure factor and after using this for making test shots obtain your correct exposure.

Other precautions

- (1) In close-up shooting, as the subject's depth of field becomes shallow, never forget to stop down the lens.
- (2) Take care that when image magnification ratio increases camera shake is also liable to increase. (The use of tripod and cable release is advisable).
- (3) In the case of a TTL camera, the backflow of light from the viewfinder will have a stronger effect on light metering when Auto Extension Tube is attached than when shooting with the master lens alone. So when there is a backflow of light from the viewfinder follow the camera's instruction book to cut it out.
- (4) Focus is adjusted by changing the distance between subject and camera or by operating the helical device of the master lens. If focusing is done by the split-image matching method it causes increase in exposure factor and may darken either the top or bottom half of the image. In such a case obtain focus on the matt surface around it.
- (5) The Nikon type of tube is for exclusive AI system lenses (unusable for other conventional lenses).

Image magnification ratios and exposure factors (50mm Standard Lens)

Auto Extension tube	Distance Reading of Master Lens	Image Magnification Ratio	Field Coverage (cm)	Distance from Lens Front to Subject (cm)	Exposure Factor
12mm	inf.	0.24	10×15	ab. 21	1.5
	0.5m	0.35	6.9×10.3	ab. 16	1.8
20mm	inf.	0.4	6×9	ab. 13	2
	0.5m	0.51	4.7×7	ab. 14	2.3
36mm	inf.	0.72	3.3×5	ab. 7.7	3.0
	0.5m	0.83	2.9×4.4	ab. 7	3.4
12+20mm	inf.	0.64	3.8×5.6	ab. 8.5	2.7
	0.5m	0.75	3.2×4.8	ab. 7.5	3.1
12+36mm	inf.	0.96	2.5×3.7	ab. 6	3.9
	0.5m	1.07	2.3×3.4	ab. 5.5	4.3
20+36mm	inf.	1.12	2.2×3.3	ab. 5.3	4.5
	0.5m	1.23	2×3	ab. 4.9	5
12+20+36mm	inf.	1.34	1.8×2.7	ab. 4.5	5.6
	0.5m	1.47	1.6×2.4	ab. 4.2	6.1

- o The above table shows general values for 50mm standard lenses. Even with standard lenses individual lenses may have actual values slightly different from these.
- o Image Magnification Ratio is the ratio in size (lengths) between the subject and the image formed on the film surface. For example, Image Magnification Ratio 0.24x means that a 1cm subject becomes 1×0.24=0.24 or makes a picture of 0.24cm size on the film surface.
- o When using an extension tube of same length, the image magnification ratio becomes smaller as the focal length of master lens becomes longer and the larger as the focal length becomes shorter. Also, the distance to the subject becomes further away as the focal length of master lens becomes longer and closer when it becomes shorter.

DG-C 自動近攝接圈

DG-C近攝接圈安裝在相機機身與35mm單反鏡頭之間使用。一套近攝接圈由長、短不同的3個接環組成,可單獨使用,也可相互組合使用,以得到7種不同的倍率,能與相機的自動變焦完美結合。這些接圈可以兼容機身的TTL測光和AE模式,但不能與電子閃光燈的AE裝置相組合。

產品規格：

直 徑：約 62mm
長 度：(1) 12mm、(2) 20mm、(3) 36mm
重 量：(1) 約60g (2) 約85g (3) 約125g
(不同的型號有不同的直徑和重量)

拍攝前

● 如何連接相機

拆裝近攝接圈的方法跟拆裝相機鏡頭是一樣的。

● 連接相機之前的步驟

使用佳能類型近攝接圈,需確定是在近攝接圈與機身正確連接之後才可以連接主鏡頭。保護好不要弄錯這個順序以免引起TTL測光或者AE機製失敗。

● 近攝接圈組合順序

當連接2到3個近攝接圈時可以自由組合。

● 鏡頭兼容性

從標準鏡頭到半長焦鏡頭都可以兼容,效果與微距鏡頭一樣出色。也可以使用廣角或變焦鏡頭,但是取決於如何將鏡頭與近攝接圈結合起來,讓鏡頭前端與主體之間的距離能變得極其緊密。

關於曝光

● 當使用TTL自動曝光相機時。

近攝接圈正確連接後,它不僅與自動光圈相連,而且還支持TTL和AE(EE)功能。

曝光系數將會根據您相機的拍攝角度自動糾正。

● 當使用非TTL相機時。

校正曝光系數拍攝前也需要調整鏡頭的光圈或快門速度。

● 當使用一個獨立的閃光燈組時。

從閃光指數計算F值,曝光系數校正後試拍幾張,獲得正確的曝光參數。

其他注意事項

- (1) 在拍攝特寫鏡頭時,如果景深變淺,務必下調鏡頭。
- (2) 注意當景像比例放大的時候,相機畫面抖動頻率也會相應增加(建議使用三腳架和快門線)。
- (3) 對於TTL相機,近攝接圈與主鏡頭連接進行抓拍,取景器的逆光會對光的測量有較強的影響,所以當取景器出現逆光的時候請按照相機說明操作將其去掉。
- (4) 可以通過改變物體與相機的距離或者操作主鏡頭的變焦裝置來調整焦距,如果是通過分裂像配合法進行對焦,則會導致曝光因數增加,使景像上下部分過暗,在這樣的情況下就可以進行亞光環繞進行對焦。
- (5) 尼康的鏡頭接圈只適用於專門的AI系統鏡頭。(不能用于其他的普通鏡頭)

景像放大比例與曝光因數(50mm 標準鏡頭)

近攝接圈	主 鏡 頭 明視距離	景像放大比例	覆蓋範圍	鏡頭與物體 的距離	曝光因數
12mm	inf.	0.24	10×15	ab. 21	1.5
	0.5m	0.35	6.9×10.3	ab. 16	1.8
20mm	inf.	0.4	6×9	ab. 13	2
	0.5m	0.51	4.7×7	ab. 14	2.3
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- 上面的表格顯示了50mm標準鏡頭常規值。但有個別標準鏡頭數值稍有不同。
- 圖像的放大率是實際指物體和在膠片上形成的圖像的大小(長度)的比率。例如,圖像放大倍率0.24倍意味著,一個1cm物體將放大0.24倍或以0.24cm大小呈現出來。
- 當使用相同的長度的微距管,圖像放大倍率變小時,主透鏡焦距變長,反之變短。離拍攝物體遠時,主透鏡焦距變長,近時焦距變短。