

ASAHI
PENTAX
K SERIES

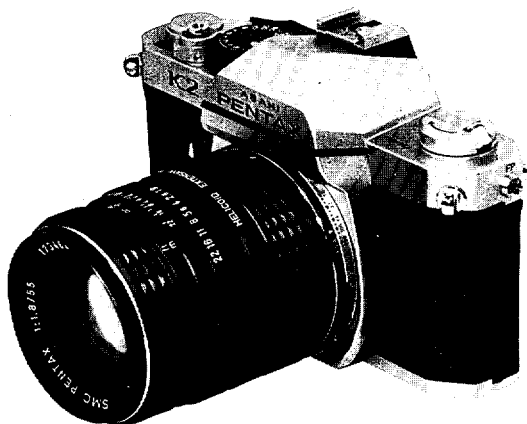
HELICOID
EXTENSION TUBE

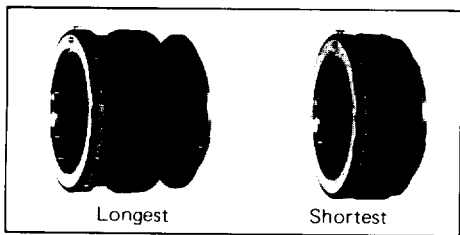
K

Helicoid Length and Magnification Ratios

The Pentax Helicoid Extension Tube K works like a close-up ring, but it can be elongated from a minimum length of 26.5mm to a maximum length of 46.5mm since it has a 20mm-long helicoidal thread for exactly this purpose. The length of the tube is approximately equivalent to a No. 3 or Nos. 2 + 3 of the Auto Extension Tube Set K or the Extension Tube Set K. However, it cannot be used to achieve the lower magnification ratio that you get with the No. 1 rings of the Auto or regular Extension Tube Sets.

See Table 1 for the wide range of magnification ratios possible with the Pentax Helicoid Extension Tube K.





Attaching the Tube

The Pentax Helicoid Extension Tube K is inserted between the camera body and the master lens, just as in the case of the Auto or regular Extension Tubes.

First remove the master lens from your Pentax body — K2, KX or KM. Attach the tube to the body mount and then attach your master lens to the tube. To detach the tube, rotate the lens counter-clockwise about 65° while pressing the lock release (1) of the tube. Detaching the tube from the body is done in the same way as detaching the master lens from the body.

Focusing and Exposure Control

After focusing with the lens aperture fully opened, set the aperture at the value desired for actual photographing. At this stopped-down position, you will know the correct exposure time by simply looking through the viewfinder since all Pentax K Series cameras are provided with Through-The-Lens exposure metering.

Exposure Factor Correction

As the TTL exposure meter built into your K Series camera automatically corrects for



the exposure factor caused by the use of the tube, you need not worry about exposure factor compensation. However, you should keep in mind that exposure time should be a little longer than it would be if you were not using the tube.

Combined with the Auto Extension Tube K or the Extension Tube K

When you want to use the tube in combination with either the Auto or the regular Extension Tube K, measure their combined length and use that length when referring to the Close-Up Tables for the Auto or regular Extension Tubes K.

Combined with the SMC Pentax Macro 50mm f/4 or 100mm f/4

These lenses are so designed as to couple completely with the automatic diaphragm control pin on the camera body, permitting exposure metering through a fully-opened aperture. When you use these lenses with the Helicoid Extension Tube K, however, these advantages (automatic diaphragm and open-aperture light metering) will be lost. Therefore, it is better to use these lenses in combination with the Auto Extension Tube K.

Note 1 In the case of the 35mm lens, it is recommended that you do not use a magnification ratio of more than 1x because it might cause image distortion.

Note 2 In the case of the 135mm lens, the upper box refers to the f/2.5 lens and the lower to the f/3.5 lens.

Table 1

SMC Pentax Lens	Magnification	Tube length	distance scale on lens	Picture area	Film-to-subject distance	Exposure factor	
35mm f/3.5	0.76	Shortest	∞	31.7 × 47.5mm	152mm	×2.5	
	0.89		0.35m	27.0 × 40.5mm	149mm	×2.8	
	1.33	Longest	∞	18.1 × 27.1mm	152mm	×4.0	
	1.46		0.35m	16.4 × 24.7mm	154mm	×4.4	
50mm f/1.4	0.52	Shortest	∞	46.0 × 69.0mm	219mm	×1.9	
	0.67		0.45m	35.9 × 53.9mm	205mm	×2.2	
	0.91	Longest	∞	26.3 × 39.4mm	197mm	×2.8	
	1.06		0.45m	22.6 × 34.0mm	197mm	×3.1	
55mm f/1.8	0.47	Shortest	∞	51.4 × 77.2mm	258mm	×2.1	
	0.64		0.45m	37.5 × 56.3mm	235mm	×2.6	
	0.82	Longest	∞	27.8 × 41.8mm	224mm	×3.2	
	0.99		0.45m	24.2 × 36.3mm	223mm	×3.9	
85mm f/1.8	0.31	Shortest	∞	77.2 × 115.8mm	450mm	×1.9	
	0.44		0.85m	55.0 × 82.5mm	382mm	×2.3	
	0.55	Longest	∞	44.0 × 66.0mm	352mm	×2.7	
	0.67		0.85m	35.4 × 53.7mm	334mm	×3.2	
105mm f/2.8	0.25	Shortest	∞	95.0 × 142.5mm	663mm	×1.9	
	0.36		1.2m	66.5 × 99.7mm	549mm	×2.4	
	0.44	Longest	∞	54.2 × 81.3mm	504mm	×2.8	
	0.55		1.2m	43.5 × 65.3mm	469mm	×3.3	
120mm f/2.8	0.22	Shortest	∞	108.7 × 163.0mm	822mm	×1.9	
	0.35		1.2m	68.7 × 103.0mm	638mm	×2.5	
	0.39	Longest	∞	62.0 × 93.0mm	608mm	×2.7	
	0.52		1.2m	46.5 × 69.8mm	547mm	×3.4	
135mm f/2.5 and f/3.5	0.2	Shortest	∞	121.7 × 182.5mm (122.3 × 183.4mm)	996mm 991mm	×1.8 ×1.7	
	0.31		1.5m	77.5 × 116.3mm (77.9 × 116.8mm)	764mm 757mm	×2.4 ×2.2	
	0.34	Longest	∞	69.4 × 104.1mm (69.7 × 104.6mm)	723mm 716mm	×2.5 ×2.4	
	0.46		1.5m	52.4 × 78.5mm (52.6 × 78.9mm)	643mm 635mm	×3.2 ×3.0	
	150mm f/4	0.18	Shortest	∞	135.8 × 203.8mm	1229mm	×1.9
		0.28		1.8m	85.3 × 128.0mm	928mm	×2.5
0.31		Longest	∞	77.5 × 116.2mm	884mm	×2.7	
0.41			1.8m	57.9 × 86.9mm	777mm	×3.4	
200mm f/4	0.13	Shortest	∞	181.0 × 271.5mm	2007mm	×1.7	
	0.27		2m	90.4 × 135.6mm	1277mm	×2.5	
	0.23	Longest	∞	103.3 × 154.9mm	1378mm	×2.3	
	0.37		2m	65.7 × 98.5mm	1091mm	×3.3	



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Combined with the Reverse Adaptor K – 52mm

First, attach the Helicoid Extension Tube K to your Pentax K2, KX or KM body and attach the Reverse Adaptor K – 52mm to the tube. The reverse adaptor is now ready to accept one of your master lenses (as shown

in the table below) in reversed position. It is also possible to insert the reverse adaptor between one of the lenses and the close-up tube before attaching the combined unit to the camera body.

Table 2

SMC Pentax Lens	Magnification	Tube length	Picture area	Film-to-subject distance	Exposure factor
28mm f/3.5	2.83	Shortest	8.5 × 12.7 mm	176 mm	× 11.9
	3.53	Longest	6.8 × 10.2 mm	194 mm	× 17.3
35mm f/3.5	2.16	Shortest	11.1 × 16.7 mm	171 mm	× 8.5
	2.73	Longest	8.8 × 13.2 mm	187 mm	× 12.2
50mm f/1.4	1.29	Shortest	18.7 × 28.0 mm	200 mm	× 4.1
	1.68	Longest	14.3 × 21.4 mm	211 mm	× 5.8
55mm f/1.8	0.85	Shortest	28.3 × 42.5 mm	225 mm	× 3.3
	1.20	Longest	20.0 × 30.0 mm	225 mm	× 4.7
Macro 50mm f/4	1.33	Shortest	18.1 × 27.1 mm	212 mm	× 5.8
	1.72	Longest	14.0 × 21.0 mm	223 mm	× 7.8

PENTAX[®]

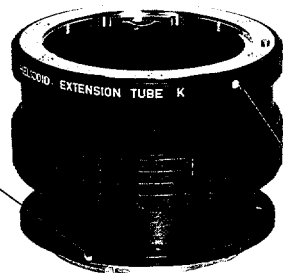
ヘリコイド接写リングKの使い方

HELI COID EXTENSION TUBE K

使用説明書
OPERATING MANUAL

各部の名称/Name of Parts

マウント指標(カメラ側)
Mount index(camera side)



ロックボタン
Lock button

マウント指標(レンズ側)
Mount index(lens side)

特長

ヘリコイド接写リングKは、直進するヘリコイド(多条ネジ)を持ち、厚みが26.5mmから46.5mmまで伸縮できます。この厚みはおおよそオート接写リングKの3号から、2+3号に相当します。従ってオート接写リングKの1号を使うような、撮影倍率が比較的低い用途には使用できません。逆に、レンズのピントリングと組み合わせて使用することで、撮影倍率の範囲が広いのが特長です。

注意

SMCペンタックスFやAレンズを使うときは、A(オート)ロックの位置では使用できません。A以外の各絞り値表示側でご使用ください。K_{AF}マウントカメラはオートフォーカスでつかえません。また、フォーカス表示が使えない被写体や拡大接写は、ファインダー内マット面でピントを合わせます。(フォーカス表示で撮影できるのは、開放F値がF2.8より明るいレンズで約1倍まで、F4では約1/2倍です。)

仕様

適合カメラ——ペンタックスK・K_A・K_{AF}マウントカメラ

適合レンズ——SMCペンタックスF、A、MレンズおよびSMCペンタックスレンズ

厚み——26.5mm(最少)
—46.5mm(最大)

Features

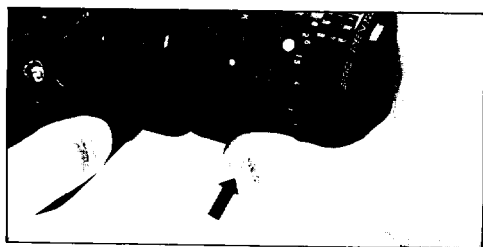
The Pentax Helicoid Extension Tube K works like a close-up ring, and can be elongated from 26.5 mm to 46.5 mm since it has a 20 mm long helicoidal thread exactly for this purpose. The length of the tube is approximately equivalent to a No. 3 or Nos. 2 + 3 of the Auto Extension Tube Set K or Extension Tube Set K. However, it cannot be used to achieve the lower magnification ratio you get with the No. 1 rings of the Auto or regular Extension Tube Sets. However, if it is used in combination with the lens's focus ring, the wide range of magnification ratio becomes possible.

Caution

When using the SMC Pentax A or F lens with the Helicoid Extension Tube, set the aperture to the proper f-stop other than A. If it is set to A, proper exposure will not be obtained. When the K_{AF}-mount camera is combined, its auto-focus does not work. When shooting a subject or taking macrophotos, for which the Focus indication cannot be used, focus through the matte area in the viewfinder. (The Focus indication can be used only when the maximum aperture of the lens in use is f/2.8 or faster and the magnification you can obtain is up to about 1X, or f/4 and the magnification up to about 1/2X.)

Specifications

Compatible cameras : Pentax K_{AF}⁻, K_A⁻ and K-mount cameras
Compatible lenses : SMC Pentax, SMC Pentax-M, SMC Pentax-A, and SMC Pentax-F
Elongated length : 26.5 (minimum) - 46.5 mm (maximum)



組み立て方

カメラからレンズを外し、ヘリコイド接写リングKをレンズと同じ要領で取り付けます。つぎに、ヘリコイド接写リングKの上に使用するレンズを同様に取り付けます。

レンズを外すときは、写真のようにヘリコイド接写リングKのロックボタンを矢印方向に押しながら、レンズを左方向に回します。ヘリコイド接写リングKをカメラから外すときは通常のレンズの着脱と同様です。

●K_{AF}マウントカメラを使用しても、AFアダプター1.7×とヘリコイド接写リングKを組み合わせて使用できません。

ピント合わせと露出

レンズの絞りを開放絞りにしてピントを合わせながら、希望の絞りにセットします。

露出は撮影する絞りにセットしてからカメラの内蔵露出計で測ります。絞り優先自動露出にしておけば、そのまま自動露出で撮影できます。

露出倍数

露出倍数はカメラのTTL露出計が自動的に補正しますから、撮影時には忘れても構いませんが、同じ絞りでも露出時間が長くなることは覚えておいてください。

接写の注意

- 被写界深度は、接写撮影では非常に浅くなります。通常の撮影に比べて絞りを絞ったの撮影を心がけてください。(一般的にはF8からF16位)
- 等倍(1×)以上の拡大撮影のときは、レンズをリバースにした方がピント性能は良くなります。リバースアダプター(別売)の利用をお勧めします。
- 一般的に、レンズはF値が明るいほど、また焦点距離の短い広角レンズや逆に焦点距離の長い望遠レンズほど接写倍率が高くなるに当たってピント性能が低下します。50mmF1.2や50mmF1.4の場合は、垂直平面(文書など)の複写には適しません。立体的で画面の四す

Attaching the Tube

The Pentax Helicoid Extension Tube K is inserted between the camera body and the master lens, just as in the case of the Auto or regular Extension Tubes.

First, remove the master lens from your Pentax camera body.

Attach the tube to the body mount and then attach your master lens to the tube. To detach the tube, rotate the lens counter-clockwise while pressing the lock button of the tube in the direction of the arrow as shown in the photo. The tube can be detached from the body in the same way as the master lens is detached from the body.

●AF Adapter 1.7x cannot be used in combination with the Pentax camera having the K_{AF} mount, and the helicoid Extension Tube K.

Focusing and Exposure Control

After focusing with the lens aperture fully opened, set the aperture at the desired value. Determine the exposure with the exposure meter built into the camera after the desired aperture is set. If the Aperture-priority AE mode is set on the camera, correct exposure can be automatically obtained.

Exposure factor Compensation

As the TTL exposure meter built into your camera automatically compensates for the exposure factor caused by the use of the tube, you need not worry about exposure factor compensation.

Notes on Close-up Works

- In close-up works, the shorter the lens-to-subject distance is, the shallower the depth-of-field becomes. Remember that close-up work requires longer exposures than would be required for shooting at normal distances. Set the aperture to a small opening (normally F8 to F16).
- For magnifications greater than 1X, reversing the lens improves the picture quality. The use of the optional reverse adapter is recommended.
- The smaller the F-number, or the shorter the focal length of the wide-angle lens, or the longer the focal length of the telephoto lens, the more the lens performance deteriorates as the magnification of a close-up work becomes higher. Since the 50 mm f/1.2 and f/1.4 lenses are not suitable for copying a flat document placed in parallel with the film plane, they should be used for copying

みには被写体が来ないような場合にご使用ください。

- 接写に適さないレンズ（ズームレンズなど）は接写表に記載してありません。

only a three-dimensional subject, the main part of which is off the corners of the picture.

- The close-up tables list only the lenses suitable for close-up works.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT ANY OBLIGATION ON THE PART OF THE MANUFACTURER.

接写表

Close-up Table

レンズの種類 Lens	倍率 Magnification	ヘリコイド 接写リング Kの厚み Tube length	レンズの 距離目盛 Distance scale on lens	写る範囲 Picture area	フィルム面 から被写体 までの距離 Film to subject distance	露出倍数 Exposure factor
35mmF2 35mmF2.8	0.76×	最短	∞	31.8×47.7mm	160mm	×2.3
	0.92×	Shortest	0.30m	26.0×38.9mm	157mm	×2.7
	1.33×	最長	∞	18.1×27.2mm	160mm	×3.6
	1.50×	Longest	0.30m	16.1×24.1mm	163mm	×4.1
50mmF1.2 50mmF1.4 50mmF1.7 50mmF2	0.51×	最短	∞	47.2×70.7mm	225mm	×1.9
	0.66×	Shortest	0.45m	36.4×54.6mm	209mm	×2.3
	0.89×	最長	∞	26.9×40.3mm	201mm	×2.9
	1.04×	Longest	0.45m	23.0×34.5mm	200mm	×3.3
85mmF1.4	0.31×	最短	∞	77.0×115.5mm	446mm	×1.9
	0.43×	Shortest	0.85m	56.0×83.9mm	390mm	×2.4
	0.55×	最長	∞	43.9×65.8mm	348mm	×2.8
	0.66×	Longest	0.85m	36.5×54.8mm	339mm	×3.4
100mmF2.8	0.27×	最短	∞	90.4×135.7mm	601mm	×1.9
	0.39×	Shortest	1.00m	61.2×92.0mm	492mm	×2.5
	0.47×	最長	∞	51.5×77.3mm	459mm	×2.8
	0.59×	Longest	1.00m	40.5×60.8mm	426mm	×3.4
135mmF1.8	0.20×	最短	∞	120.4×180.7mm	929mm	×1.6
	0.34×	Shortest	1.20m	71.1×106.6mm	968mm	×2.2
	0.35×	最長	∞	68.8×103.0mm	662mm	×2.1
	0.48×	Longest	1.20m	49.9×74.6mm	595mm	×2.8
135mmF2.8	0.20×	最短	∞	117.8×176.6mm	922mm	×1.8
	0.34×	Shortest	1.20m	69.7×104.6mm	679mm	×2.4
	0.36×	最長	∞	68.8×100.7mm	667mm	×2.5
	0.50×	Longest	1.20m	48.2×72.3mm	583mm	×3.3
135mmF2.5 135mmF3.5	0.20×	最短	∞	122.0×183.0mm	1041mm	×1.9
	0.31×	Shortest	1.50m	76.0×115.0mm	801mm	×2.6
	0.34×	最長	∞	69.0×104.0mm	765mm	×2.8
	0.46×	Longest	1.50m	52.0×78.0mm	682mm	×3.6
200mmF2.8ED	0.14×	最短	∞	175.8×263.7mm	1852mm	×1.6
	0.28×	Shortest	1.80m	86.2×129.3mm	1152mm	×2.3
	0.24×	最長	∞	100.2×150.3mm	1260mm	×2.1
	0.38×	Longest	1.80m	62.9×94.4mm	987mm	×3.0
200mmF4	0.14×	最短	∞	174.4×261.6mm	1892mm	×1.7
	0.28×	Shortest	2.00m	87.3×131.0mm	1224mm	×2.6
	0.24×	最長	∞	99.4×149.1mm	1314mm	×2.4
	0.38×	Longest	2.00m	63.4×95.1mm	1052mm	×3.4

リバースアダプターK

等倍を超える拡大撮影では、リバースアダプターK(別売)を利用してレンズをリバースすることをお勧めします。

カメラにヘリコイド接写リングKを取り付け、その上にリバースアダプターK・49mmまたは52mmを使用してレンズを逆向きに取り付けます。

●Fマクロ50mm、Aマクロ50mmレンズは、レンズの距離リングを最短側に繰り出してご使用ください。

Combined with the 49 mm or 52 mm Reverse Adapter K

For magnifications greater than 1X, it is recommended to use the lens in reversed position using the optional reverse adapter K. First attach the Helicoid Extension Tube K to your Pentax camera body and attach the 49 mm or the 52 mm Reverse Adapter K to the tube. Mount your master lens in reversed position onto the reverse adapter.

●When shooting with A- or F-Macro 50 mm lens, set the distance scale to its minimum side.

接写表 (リバース)

Close-up Table (Reversed)

レンズの種類 Lens	倍率 Magnification	ヘリコイド接写 リングKの厚み Tube length	写る範囲 Picture area	フィルム面から 被写体までの距離 Film to subject distance	露出倍数 Exposure factor
28mmF2	2.76×	最短 Shortest	8.7×13.0mm	171mm	× 10.2
	3.46×	最長 Longest	6.9×10.4mm	189mm	× 15.2
28mmF2.8	2.67×	最短 Shortest	9.0×13.5mm	167mm	× 10.0
	3.36×	最長 Longest	7.1×10.7mm	184mm	× 14.9
35mmF2	2.10×	最短 Shortest	11.4×17.2mm	177mm	× 7.1
	2.67×	最長 Longest	9.0×13.5mm	194mm	× 10.4
35mmF2.8	1.96×	最短 Shortest	12.2×18.3mm	174mm	× 7.0
	2.53×	最長 Longest	9.5×14.2mm	190mm	× 10.3
50mmF1.2	1.38×	最短 Shortest	17.4×26.1mm	204mm	× 3.8
	1.76×	最長 Longest	13.6×20.4mm	216mm	× 5.5
50mmF1.4	1.16×	最短 Shortest	20.8×31.2mm	201mm	× 3.7
	1.54×	最長 Longest	15.6×23.4mm	210mm	× 5.4
50mmF1.7	0.97×	最短 Shortest	24.9×37.3mm	204mm	× 3.6
50mmF2	1.35×	最長 Longest	17.8×26.7mm	209mm	× 5.2
A-Macro	1.26×	最短 Shortest	19.0×28.6mm	211mm	× 4.6
50mmF2.8	1.65×	最長 Longest	14.6×21.9mm	220mm	× 6.4
F-Macro	1.53×	最短 Shortest	15.7×23.6mm	203mm	× 4.8
50mmF2.8	1.95×	最長 Longest	12.3×18.5mm	216mm	× 6.7



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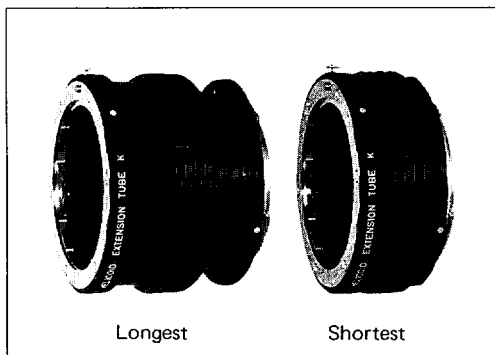
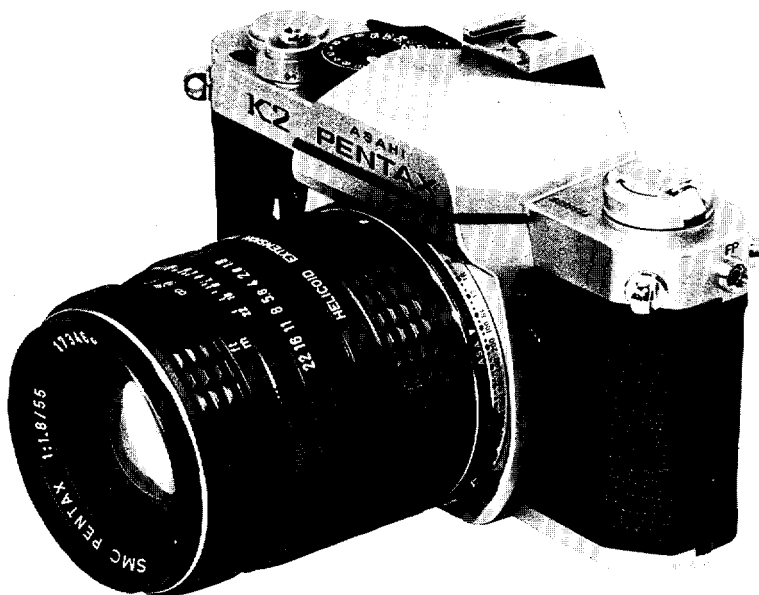
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☆仕様および外観の一部を予告なく変更することがあります。

**ASAHI
PENTAX**

**HELICOID
EXTENSION TUBE K**



Helicoid Length and Magnification Ratios

The Pentax Helicoid Extension Tube K works like a close-up ring, but it can be elongated from a minimum length of 26.5mm to a maximum length of 46.5mm since it has a 20mm-long helicoidal thread for exactly this purpose. The length of the tube is approximately equivalent to a No. 3 or Nos. 2 + 3 of the Auto Extension Tube Set K or the Extension Tube Set K. However, it cannot be used to achieve the lower magnification ratio that you get with the No. 1 rings of the Auto or regular Extension Tube Sets.

See Table 1 for the wide range of magnification ratios possible with the Pentax Helicoid Extension Tube K.

ASSEMBLY & HANDLING



Attaching the Tube

The Pentax Helicoid Extension Tube K is inserted between the camera body and the master lens, just as in the case of the Auto or regular Extension Tubes.

First remove the master lens from your Pentax K Series camera body. Attach the tube to the body mount and then attach your master lens to the tube. To detach the tube, rotate the lens counter-clockwise about 65° while pressing the lock release (1) of the tube. Detaching the tube from the body is done in the same way as detaching the master lens from the body.

Close-up Table 1

SMC Pentax Lens	Magnification	Tube length	Distance scale on lens (m)	Picture area (mm)	Film-to-subject distance (mm)	Exposure factor (X)
35mm f/2.8	0.76	Shortest	∞	31.6x47.4	159	2.3
	0.93		0.30	25.9x38.8	157	2.7
	1.33	Longest	∞	18.0x27.0	159	3.6
1.50	0.30		16.0x24.0	162	4.1	
35mm f/3.5	0.76	Shortest	∞	31.7x47.5	152	2.5
	0.89		0.35	27.0x40.5	149	2.8
	1.33	Longest	∞	18.1x27.1	152	4.0
1.46	0.35		16.4x24.7	154	4.4	
40mm f/2.8	0.64	Shortest	∞	37.6x56.4	177	2.3
	0.83		0.60	28.9x43.4	170	2.8
	1.12	Longest	∞	21.4x32.1	169	3.6
1.31	0.60		18.3x27.4	171	4.2	
50mm f/1.4	0.52	Shortest	∞	46.0x69.0	219	1.9
	0.67		0.45	35.9x53.9	205	2.2
	0.91	Longest	∞	26.3x39.4	197	2.8
1.06	0.45		22.6x34.0	197	3.1	
50mm f/1.7	0.51	Shortest	∞	47.0x70.5	229	2.2
	0.66		0.45	26.2x54.3	213	2.6
	0.89	Longest	∞	26.8x40.2	205	3.4
1.05	0.45		22.9x34.4	204	3.9	
55mm f/1.8	0.47	Shortest	∞	51.4x77.2	258	2.1
	0.64		0.45	37.5x56.3	235	2.6
	0.82	Longest	∞	27.8x41.8	224	3.2
0.99	0.45		24.2x36.3	223	3.9	
85mm f/1.8	0.31	Shortest	∞	77.2x115.8	450	1.9
	0.44		0.85	55.0x82.5	382	2.3
	0.55	Longest	∞	44.0x66.0	352	2.7
0.67	0.85		35.4x53.7	334	3.2	
100mm f/2.8	0.27	Shortest	∞	90.0x135.0	601	1.9
	0.39		1.00	61.0x92.0	492	2.4
	0.47	Longest	∞	51.5x77.3	459	2.8
0.59	1.00		40.5x60.8	426	3.4	

Focusing and Exposure Control

After focusing with the lens aperture fully opened, set the aperture at the value desired for actual photographing. At this stopped-down position, you will know the correct exposure time by simply looking through the viewfinder since all Pentax K Series cameras are provided with Through-The-Lens exposure metering.

Exposure Factor Correction

As the TTL exposure meter built into your K Series camera automatically corrects for the exposure factor caused by the use of the tube, you need not worry about exposure factor compensation. However, you should keep in mind that exposure time should be a little longer than it would be if you were not using the tube.

Combined with the Auto Extension Tube K or the Extension Tube K

When you want to use the tube in combination with either the Auto or the regular Extension Tube K, measure their combined length and use that length when referring to the Close-Up Tables for the Auto or regular Extension Tubes K.

Combined with the SMC Pentax Macro 50mm f/4 or 100mm f/4

These lenses are so designed as to couple completely with the automatic diaphragm control pin on the camera body, permitting exposure metering through a fully-opened aperture. When you use these lenses with the Helicoid Extension Tube K, however, these advantages (automatic diaphragm and open-aperture light metering) will be lost. Therefore, it is better to use these lenses in combination with the Auto Extension Tube K.

SMC Pentax Lens	Magnification	Tube length	Distance scale on lens (m)	Picture area (mm)	Film-to-subject distance (mm)	Exposure factor (X)
105mm f/2.8	0.25	Shortest	∞	95.0x142.5	663	1.9
	0.36		1.20m	66.5x99.7	549	2.4
	0.44	Longest	∞	54.2x81.3	504	2.8
	0.55		1.20	43.5x65.3	469	3.3
120mm f/2.8	0.22	Shortest	∞	108.7x163.0	822	1.9
	0.35		1.20	68.7x103.0	638	2.5
	0.39	Longest	∞	62.0x93.0	608	2.7
	0.52		1.20	46.5x69.8	547	3.4
135mm f/2.5 and f/3.5	0.20	Shortest	∞	121.7x182.5 (122.3x183.4)	996 (991)	1.8 (1.7)
	0.31		1.50	77.5x116.3 (77.9x116.8)	764 (757)	2.4 (2.2)
	0.34	Longest	∞	69.4x104.1 (69.7x104.6)	723 (716)	2.5 (2.4)
	0.46		1.50	52.4x78.5 (52.6x78.9)	643 (635)	3.2 (3.0)
M135mm f/3.5	0.20	Shortest	∞	122.0x183.0	1041	1.9
	0.31		1.50	76.0x115.0	801	2.6
	0.34	Longest	∞	69.0x104.0	765	2.8
	0.46		1.50	52.0x78.0	682	3.7
150mm f/4	0.18	Shortest	∞	135.8x203.8	1229	1.9
	0.28		1.80	85.3x128.0	928	2.5
	0.31	Longest	∞	77.5x116.2	844	2.7
	0.41		1.80	57.9x86.9	777	3.4
200mm f/4	0.13	Shortest	∞	181.0x271.5	2007	1.7
	0.27		2.00	90.4x135.6	1277	2.5
	0.23	Longest	∞	103.3x154.9	1378	2.3
	0.37		2.00	65.7x98.5	1091	3.3

Note 1: In the case of the 35mm or the 40mm lens, it is recommended that you do not use a magnification ratio of more than 1x because it might cause image distortion.
 Note 2: In the case of the 135mm lens, the upper box refers to the f/2.5 lens and the lower to the f/3.5.



Combined with the 49mm or 52mm Reverse Adaptor K

First attach the Helicoid Extension Tube K to your Pentax K Series camera body and attach the 49mm or the 52mm Reverse Adaptor to the tube. The reverse adaptor is now ready to accept one of your master lenses (as shown in the table below) in reversed position. It is also possible to insert the reverse adaptor between one of the lenses and the close-up tube before attaching the combined unit to the camera body.



Close-up Table 2

SMC Pentax Lens	Magnification	Tube length	Picture area (mm)	Film-to-subject distance (mm)	Exposure factor (X)
28mm f/2	3.04	Shortest	7.9x11.8	198	12.2
	3.74	Longest	6.4x9.6	216	17.5
28mm f/2.8	2.71	Shortest	8.8x13.2	160	10.8
	3.42	Longest	7.0x10.5	178	16.0
28mm f/3.5	2.83	Shortest	8.5x12.7	176	11.9
	3.53	Longest	6.8x10.2	194	17.3
30mm f/2.8	2.71	Shortest	8.8x13.2	169	10.7
	3.37	Longest	7.1x10.6	187	15.4
35mm f/2.8	1.94	Shortest	12.4x18.6	172	6.9
	2.51	Longest	9.5x14.3	188	10.2
35mm f/3.5	2.16	Shortest	11.1x16.7	171	8.5
	2.73	Longest	8.8x13.2	187	12.2
40mm f/2.8	1.24	Shortest	19.3x29.0	170	4.2
	1.72	Longest	13.9x20.9mm	181	6.4
50mm f/1.4	1.29	Shortest	18.7x28.0	200	4.1
	1.68	Longest	14.3x21.4	211	5.8
55mm f/1.8	0.85	Shortest	28.3x42.5	225	3.3
	1.20	Longest	20.0x30.0	225	4.7
Macro 50mm f/4	1.33	Shortest	18.1x27.1	212	5.8
	1.72	Longest	14.0x21.0	223	7.8