

ASAHI
PENTAX
K Series

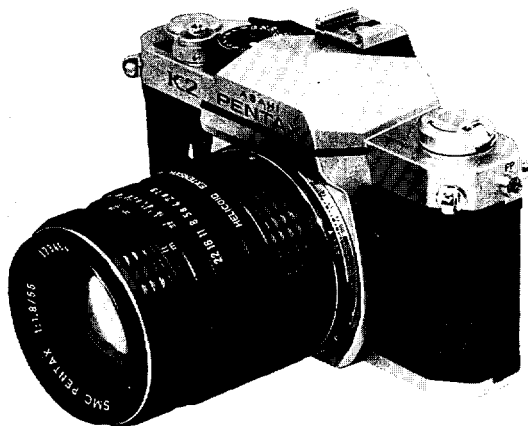
HELICOID EXTENSION TUBE

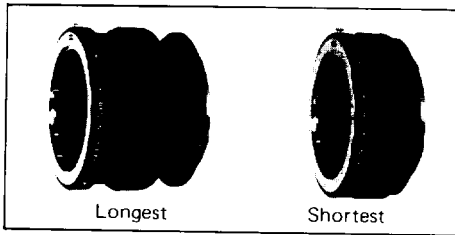
K

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		0.35 m	27.0 × 40.5mm	149mm	×2.8
	1.33 1.46	Longest	∞ 0.35 m	18.1 × 27.1mm 16.4 × 24.7mm	152mm 154mm	×4.0 ×4.4
50mm f/1.4	0.52	Shortest	∞	46.0 × 69.0mm	219mm	×1.9
	0.67		0.45 m	35.9 × 53.9mm	205mm	×2.2
	0.91 1.06	Longest	∞ 0.45 m	26.3 × 39.4mm 22.6 × 34.0mm	197mm 197mm	×2.8 ×3.1
55mm f/1.8	0.47	Shortest	∞	51.4 × 77.2mm	258mm	×2.1
	0.64		0.45 m	37.5 × 56.3mm	235mm	×2.6
	0.82 0.99	Longest	∞ 0.45 m	27.8 × 41.8mm 24.2 × 36.3mm	224mm 223mm	×3.2 ×3.9
85mm f/1.8	0.31	Shortest	∞	77.2 × 115.8mm	450mm	×1.9
	0.44		0.85 m	55.0 × 82.5mm	382mm	×2.3
	0.55 0.67	Longest	∞ 0.85 m	44.0 × 66.0mm 35.4 × 53.7mm	352mm 334mm	×2.7 ×3.2
105mm f/2.8	0.25	Shortest	∞	95.0 × 142.5mm	663mm	×1.9
	0.36		1.2 m	66.5 × 99.7mm	549mm	×2.4
	0.44 0.55	Longest	∞ 1.2 m	54.2 × 81.3mm 43.5 × 65.3mm	504mm 469mm	×2.8 ×3.3
120mm f/2.8	0.22	Shortest	∞	108.7 × 163.0mm	822mm	×1.9
	0.35		1.2 m	68.7 × 103.0mm	638mm	×2.5
	0.39 0.52	Longest	∞ 1.2 m	62.0 × 93.0mm 46.5 × 69.8mm	608mm 547mm	×2.7 ×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		1.5 m	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
150mm f/4	0.18	Shortest	∞	135.8 × 203.8mm	1229mm	×1.9
	0.28		1.8 m	85.3 × 128.0mm	928mm	×2.5
	0.31 0.41	Longest	∞ 1.8 m	77.5 × 116.2mm 57.9 × 86.9mm	884mm 777mm	×2.7 ×3.4
200mm f/4	0.13	Shortest	∞	181.0 × 271.5mm	2007mm	×1.7
	0.27		2 m	90.4 × 135.6mm	1277mm	×2.5
	0.23 0.37	Longest	∞ 2 m	103.3 × 154.9mm 65.7 × 98.5mm	1378mm 1091mm	×2.3 ×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 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