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12x Zoom Lens System

high magnification and 12x zoom range

The **Zoom Lens System** with 12x magnification range consists of a main lens body and a variety of attachments to get application-specific working distances and fields of view.

Developed for measurement tasks the **Zoom Lens System** design has an advantage over conventional photographic lenses due to its universality in variations of working distances and magnifications.

Features

- high 12X magnification (0.58 - 7X) lens system
- zoom lens with wide field coverage
- increased resolution with 0.018 - 0.1 N.A.
- variable working distance from 37 to 341 mm
- field of view from 0.29 mm to 75.9 mm with attachments
- unmatched edge flatness and clarity
- works with any current format cameras

Flexible by Design

The 12X **Zoom Lens System** is designed on a modular basis, offering optical quality and mechanical flexibility. This interchangeable design, combined with a wide range of lens adapters and attachments, allows you to easily choose the magnification, field of view and working distance that suits your viewing needs best.

Unbeatable Accuracy

This 12X **Zoom Lens System** delivers unbeatable accuracy and repeatability for even the toughest applications. Superb optics deliver remarkably high contrast, high resolution video images. The 12:1 zoom ratio provides an incredible magnification range which allows both, high magnification for precision measurement and inspection, as well as low magnification for a wider field of view.

Applications

- Spray Analysis
- Strain & Stress Measurements
- Materials Testing
- Particle Sizing

The **Zoom Lens System's** modularity enables a huge amount of combinations of components so that the following tables give details about the most typical data only.
In case you require different magnifications and/or working distances please contact us.

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The standard set of this lens system consists of :
Zoom Lens 12x with 12 mm fine adjustment range
C-mount coupler for connecting a camera

2 types of adapters :	A 1x
	A 2x
Standard lens attachment:	L 2 x
Optional additional lens attachments:	L 0.25 x
	L 0.5 x

Combinations of the **Zoom Lens** with these components give this performance

Lens attach-ment	Working distance in mm	Camera format	A 1x Field of view Low - High	A 2x Field of view Low - High	Resolution in µm Low - High	Depth of field in mm Low - High
L 0,25 x	341	Mag. 1/2“ CCD 2/3“ CCD	0.15 - 1.75 55.2 - 4.6 mm 75.9 - 6.3 mm	0.29 - 3.5 27.6 - 2.3 mm 37.9 - 3.1 mm	33.3 - 6.7	20 - 0.8
L 0,5 x	165	Mag. 1/2“ CCD 2/3“ CCD	0.29 - 3.5 27.6 - 2.3 mm 37.9 - 3.1 mm	0.58 - 7.0 13.8 - 1.1 mm 19.0 - 1.6 mm	18.5 - 3.3	6.2 - 0.2
Without	86	Mag. 1/2“ CCD 2/3“ CCD	0.58 - 7.0 13.8 - 1.2 mm 19.0 - 1.6 mm	1.16 - 14 6.9 - 0.6 mm 9.5 - 0.8 mm	9.3 - 1.7	1.4 - 0.05
L 2 x	37	Mag. 1/2“ CCD 2/3“ CCD	1.16 - 14 6.9 - 0.6 mm 9.5 - 0.8 mm	2.3 - 28 3.5 - 0.3 mm 4.8 - 0.4 mm	4.5 - 0.8	0.3 - 0.01

How to read the table?

The **Zoom Lens** without any lens attachment and with the 1x tube adapter is connected to a compact SVGA camera.

Example

The actual magnification range is 0.58 times (in the low mag. position of the zoom lens) to 7 times (in high mag. setting). The camera ‚sees‘ an area of interest of 13.8 mm diagonally (in low mag. setting) to 1.2 mm (in high mag. setting). At high magnification the smallest resolvable detail is 1.7 µm and the depth of field is 0.05 mm. The working distance is fixed at 86 mm.

Ordering Information

Part number	Description
1108548	Zoom Lens System
1001895	additional lens attachment L 0.25 x
1001896	additional lens attachment L 0.5 x
1001897	standard lens attachment L 2 x

Apr-14

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