

# 12x Zoom Lens System

High magnification and  
12x zoom range



## 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
- ▶ image diameter app. 18 mm (for sensors up to 1.1" format)

## 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 2x

Optional additional lens attachments: L 0.25x

L 0.5x

L 1.5x

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

Lens attachment	Working distance/mm	Camera models	Sensor format	1x tube field of view (hor. x vert.) / mm <sup>2</sup>		2x tube field of view (hor. x vert.) / mm <sup>2</sup>		Resolution/ $\mu$ m (min - max)	Depth of field/mm (min - max)
				min.	max.	min.	max.		
Lens 0.25x optional 1001895	341		Magnification	1.75	0.145	3.5	0.29	33.3 - 6.7	20 - 0.8
		Imager CX/CS/CX2/CS2 - 5	1/2"	3.76 x 3.15	45.43 x 37.99	1.88 x 1.57	22.72 x 18.99		
		Imager M-lite 5M v2	2/3"	4.83 x 4.04	58.25 x 48.73	2.41 x 2.02	29.12 x 24.36		
		Imager CX/CS/CX2/CS2 -12	1/1.2"	6.29 x 4.60	75.97 x 55.56	3.15 x 2.30	37.99 x 27.78		
Lens 0.5x optional 1001896	165		Magnification	3.5	0.29	7	0.58	18.5 - 3.3	6.2 - 0.2
		Imager CX/CS/CX2/CS2 - 5	1/2"	1.88 x 1.57	22.72 x 18.99	0.94 x 0.79	11.36 x 9.50		
		Imager M-lite 5M v2	2/3"	2.41 x 2.02	29.12 x 24.36	1.21 x 1.01	14.56 x 12.18		
		Imager CX/CS/CX2/CS2 -12	1/1.2"	3.15 x 2.30	37.99 x 27.78	1.57 x 1.15	18.99 x 13.89		
No lens -	86		Magnification	7	0.58	14	1.16	9.3 - 1.7	1.4 - 0.05
		Imager CX/CS/CX2/CS2 - 5	1/2"	0.94 x 0.79	11.36 x 9.50	0.47 x 0.39	5.68 x 4.75		
		Imager M-lite 5M v2	2/3"	1.21 x 1.01	14.56 x 12.18	0.60 x 0.50	7.28 x 6.09		
		Imager CX/CS/CX2/CS2 -12	1/1.2"	1.57 x 1.15	18.99 x 13.89	0.79 x 0.58	9.50 x 6.95		

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Lens attachment	Working distance/ mm	Camera models	Sensor format	1x tube field of view (hor. x vert.)/ mm <sup>2</sup>		2x tube field of view (hor. x vert.)/ mm <sup>2</sup>		Resolution/ µm (min - max)	Depth of field/mm (min - max)
				min.	max.	min.	max.		
Lens 1.5x optional 1002211	62		Magnification	10.5	0.87	21	1.74	6.7 - 1.2	0.8 - 0.03
		Imager CX/CS/CX2/CS2 - 5	1/2"	0.63 x 0.52	7.57 x 6.33	0.31 x 0.26	3.79 x 3.17		
		Imager M-lite 5M v2	2/3"	0.80 x 0.67	9.71 x 8.12	0.40 x 0.34	4.85 x 4.06		
		Imager CX/CS/CX2/CS2 -12	1/1.2"	4.85 x 4.06	12.66 x 9.26	0.52 x 0.38	6.33 x 4.63		
Lens 2x included as standard	37		Magnification	14	1.16	28	2.32	4.5 - 0.8	0.3 - 0.01
		Imager CX/CS/CX2/CS2 - 5	1/2"	0.47 x 0.39	5.68 x 4.75	0.24 x 0.20	2.84 x 2.37		
		Imager M-lite 5M v2	2/3"	0.60 x 0.50	7.28 x 6.09	0.30 x 0.25	3.64 x 3.05		
		Imager CX/CS/CX2/CS2 -12	1/1.2"	0.79 x 0.58	9.50 x 6.95	0.39 x 0.29	4.75 x 3.47		

### Ordering Information

Part number	Description
1108548	Zoom lens system
1001895	Additional lens attachment L 0.25x
1001896	Additional lens attachment L 0.5x
1002211	Additional lens attachment L 1.5x
1001897	Standard lens attachment L 2x
1109925	Mount for zoom lens and camera, incl. 500 mm rail

Data provided by LaVision are believed to be true. However, no responsibility is assumed for possible inaccuracies or omissions. All data are subject to change without notice

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