

**Magnifiers / Microscopes / Glass rulers  
Stereo microscopes / Video microscopes / Endoscopes**



C13.0007-EN-dealer.20110825

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### Stand magnifier 5x

Standard, all-purpose magnifier.

- Dimensions:  $\varnothing 35 \times 55$  mm.



Item No.	Price
905.110	

### Stand magnifier 10x

Standard, all-purpose magnifier. Very suitable for inspection of tissues, structures and photographic negatives.

- Dimensions:  $\varnothing 34 \times 41$  mm.



Item No.	Price
905.112	

### Stand magnifier 10x

A simple, all-purpose magnifier.

- Dimensions:  $\varnothing 41 / \varnothing 45 \times 40$  mm.



Item No.	Price
905.316	

### Stand magnifier 15x

Bright images with high contrast due to a coated achromatic lens. With wide acrylic tube.

- Dimensions:  $\varnothing 27 / \varnothing 36 \times 33$  mm.



Item No.	Price
905.114	

### Stand magnifier 22x

Bright images with high contrast due to a coated achromatic lens. Suitable for inspection of high precision work.

- Dimensions:  $\varnothing 28 \times 30$  mm.



Item No.	Price
905.116	

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## Magnetic magnifier 5x

This magnifier has two small magnets which make sure that the magnifier can be put on a fixed position without moving. By placing this magnifier on hard to read scale divisions of, for example, graduated rulers, height gauges or micrometers, the possibility of reading errors substantially reduces.

- Field of view:  $\varnothing$  30 mm.
- Dimensions:  $\varnothing$  44 x 20 x 30 mm.
- Weight: 15 g.



Item No.	Description	Price
905.210	Magnetic magnifier 5x	

## Eye magnifiers 3.3x ... 20x

Eye magnifiers can be placed in front of the eye easily, which makes them ideal tools for working on small products like watches, clocks and jewelry.

- Made of aluminum (models beginning with the letter 'A') or vinyl (those with the letter 'V').
- Weight: aluminum: 10 - 16 g, vinyl: 6 - 6.5 g.
- A small hole in the tube prevents the lens from becoming blurred.

Item No.	Type	Magnification	Lenses	Price
905.390	A13D	3.3x	1	
905.391	A16D	4.0x	1	
905.392	A20D	5.0x	1	
905.393	A26D	6.7x	1	
905.394	A40D	10.0x	2	
905.299	A48D	12.0x	1	
905.300	A60D	15.0x	1	
905.301	A80D	20.0x	1	
905.395	V13D	3.3x	1	
905.396	V16D	4.0x	1	



905.390



905.394



905.301

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## Zoom magnifiers 8-16x and 10-20x

Unique stepless zoom lens with sufficient brightness in each stage of magnification and a minimum of optical aberration. With click-stop on magnifications 8/10/12/14/16x and 10/15/20x, respectively. Equipped with scale.

- Field of view:  $\varnothing$ 20 - 10 mm or  $\varnothing$ 13 - 7 mm.
- Graduation: 0.1 mm.



905.198

905.197

Item No.	Magnification	Field of view $\varnothing$ /mm	Adjustment range eye correction	Measuring range/mm	Dimensions mm	Price
905.197	8 - 16x	20 - 10	+2.5D to -5D	16	$\varnothing$ 45 x 65	
905.198	10 - 20x	13 - 7	+5D to -3.5D	12	$\varnothing$ 42 x 52	

## Telecentric magnifier 7x

A telecentric magnifier shows objects, which are at different distances, with the same magnification. In this way 3D objects, or e.g. a needle above a scale, can be shown and measured accurately without parallax error.

- Field of view:  $\varnothing$ 24 mm.
- Measuring range scale: 20 mm.
- Graduation: 0.1 mm.
- Adjustable diaphragm with apertures  $\varnothing$ 0.5, 1 and 3 mm.
- Dimensions:  $\varnothing$ 38 x 74 mm.



Item No.	Description	Price
905.136	Telecentric magnifier 7x including case and standard scale (for scales of $\varnothing$ 26 mm)	

## Stand magnifier 4x

This practical and convenient magnifier can be used for many purposes, like inspecting films. The magnifier is delivered with a clear and a black base, which allows you, depending on the amount of light, to choose the base which is most suitable for your application.

- Field of view:  $\varnothing$ 45 mm.
- Dimensions: 51 x 51 x 65 mm.
- Weight: 80 g.



Item No.	Description	Price
905.399	Stand magnifier 4x	

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### Stand magnifier 8x

Convenient and smartly designed magnifier with achromatic lens. A scale is engraved at the bottom of the transparent acrylic base. Photographic negatives can be inspected using the base with opal glass.

- Field of view: 24 x 36 mm.
- Dimensions without base: 46 x 49 x 39 mm.
- Weight: 52 g.



Item No.	Description	Price
905.290	Magnifier w/o base	
905.291	Base	

### Light magnifier 3.5x

Large square lens (52 x 52 mm) of plastic with illumination, e.g. for reading maps and indicators, and for inspection of production processes.

- Dimensions: 60 x 75 x 190 mm.
- Weight (without batteries): 120 g.
- Power supply: 2 batteries type C.

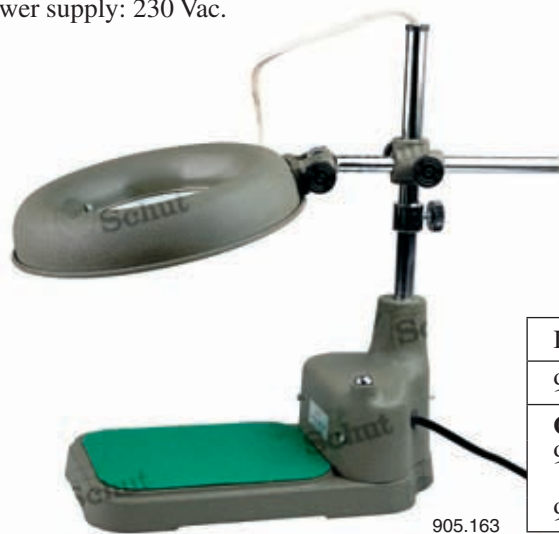


Item No.	Description	Price
905.212	Magnifier (w/o batteries)	
495.153	Battery (2 needed)	

### Illuminating magnifier 3x on stand

Large lens with a diameter of 130 mm and a large field of view, which can be put in various positions. A circular fluorescent lamp is installed around the magnifier. The magnifier stands on a solid base with plane 190 x 150 mm. Very suitable for production and assembly of precision instruments.

- Power supply: 230 Vac.



Item No.	Description	Price
905.163	Illuminating magnifier	
<b>Options:</b>		
905.166	Auxiliary lens M=3x (total M=5x)	
904.001	Replacement circular lamp	

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## Head magnifiers 2.2x ... 5.2x

Because of the velcro strip, the head magnifier can be used easily. The great advantage of a head magnifier is that the user has both hands free for e.g. production and assembly of precision instruments. The head magnifier is designed in such a way that people who wear glasses can use it as well. With the extra pair of lenses inside the head magnifier, the magnification can be enhanced from 2.2x to 3.3x.

- Clear, broad and 3-dimensional view.
- Weight 905.318: 100 g,  
905.317: 118 g.

905.318



905.317

Item No.	Magnification	Price
905.318	2.2x / 3.3x	
905.317	2.2x / 3.3x / 4.1x / 5.2x	

## Pen microscopes with EIM 25x ... 100x

These pen microscopes have a fixed scale and EIM system. With standard microscopes, the magnification is upside down, but because of the EIM system, this is not the case with these pen microscopes.

- Dimensions:  $\varnothing 20.7 \times 111$  mm.
- Weight: 25 - 28 g.



905.404

Item No.	Magnification	Field of view $\varnothing$ /mm	Measuring range/mm	Graduation mm	Price
905.404	25x	3.50	3.0	0.05	
905.405	50x	1.70	1.6	0.02	
905.406	75x	1.10	1.0	0.01	
905.407	100x	0.86	0.8	0.005	



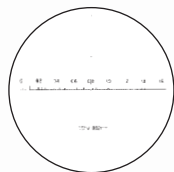
## Pen microscopes 25x ... 100x

- Dimensions:  
 $\varnothing 12.4 \times 127$  mm.
- Weight: 13 - 16 g.
- With a fixed scale  
(only 905.263/264).



905.267

Item No.	Magnification	Field of view $\varnothing$ /mm	Measuring range/mm	Graduation mm	Price
905.267	25x	3.30	-	-	
905.268	50x	2.00	-	-	
905.269	75x	1.09	-	-	
905.266	100x	0.84	-	-	
<b>With fixed scale:</b>					
905.263	25x	3.30	3.00	0.05	
905.264	50x	2.00	1.60	0.02	



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## Light magnifiers 10x and 15x

Magnifier with illumination.

- Field of view:  $\varnothing$ 25 mm.
- Dimensions and weight (without batteries):  
905.118: 175 x 35 x 41 mm, 81 g,  
905.119: 180 x 36 x 42 mm, 90 g.
- Power supply: 2 batteries type C, not included.



905.118

## Folding magnifiers 7x ... 20x

Steinheil magnifiers with an excellent chromatic correction and a large field of view.

- Dimensions: 39 x 24 x 22 mm.
- Weight: 18 - 22 g.



905.202



Item No.	Magnification	Price
905.118	10x	
905.119	15x	
495.153	Battery (2 needed)	

Item No.	Magnification	Field of view $\varnothing$ /mm	Price
905.200	7x	16	
905.202	10x	15.5	
905.204	14x	12	
905.206	20x	7	

## Folding magnifiers 3x ... 9x

Because of their small size, these folding magnifiers are easy to use. Available in several magnifications, with one or two lenses. The advantage of two lenses is that it gives a very sharp image, because the image error of the first lens is being corrected by the second one.

A mm scale is engraved at each of the four sides of the base. The scale length is equal to the width of the field of view (see table).



905.230



905.379

Item No.	Magnification	Field of view/mm	Number of lenses	Material/color	Price
905.230	9x	10 x 10	1	Al/clear	
905.375	7x	15 x 15	1	Al/clear	
905.376	6x	25 x 25	1	Al/clear	
905.377	9x	10 x 10	1	Al/black	
905.378	7x	15 x 15	1	Al/black	
905.379	6x	25 x 25	1	Al/black	
905.383	4x	30 x 30	2	Al/black	
905.384	3x	50 x 50	2	Al/black	
905.380	9x	10 x 10	2	Zn/black	
905.381	8x	15 x 15	2	Zn/black	
905.382	6x	25 x 25	2	Zn/black	

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## Scale magnifier 7x

All-purpose scale magnifier. Aberrations are avoided by the excellent achromatic lenses.

- Field of view:  $\varnothing$  26 mm.
- Measuring range standard scale: 20 mm.
- Graduation: 0.1 mm.
- Dimensions:  $\varnothing$  36 x 62 mm.
- Weight: 56 g.



### Scale magnifier with illumination 905.138

- Field of view:  $\varnothing$  22 mm.
- Dimensions:  $\varnothing$  36 x 58 x 175 mm.
- Weight (without batteries): 118 g.
- Power supply: 2 batteries type C.

Item No.	Description	Price
905.140	Magnifier with standard scale in a case	
905.155	Set of magnifier 905.140 and five scales in a case	
905.138	Magnifier 905.140 with illumination (without batteries)	
495.153	Battery (2 needed)	



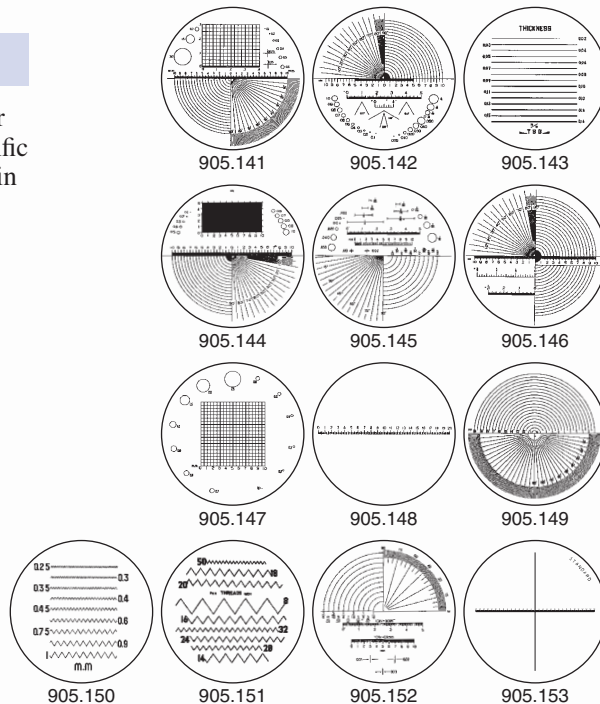
### Set 905.155

Scale magnifier 905.140 in a set with the five most frequently used scales (2, 3, 7, 8 and 10).

## Scales $\varnothing$ 26 mm

Aside from the standard scale, various other scales are available, each one with its own specific application. These scales are interchangeable in scale magnifiers like the one above.

Item No.	Scale	Price
905.141	no. 1	
905.142	no. 2	
905.143	no. 3	
905.144	no. 4	
905.145	no. 5	
905.146	no. 6	
905.147	no. 7	
905.148	no. 8	
905.149	no. 9	
905.150	no. 10	
905.151	no. 11	
905.152	no. 12	
905.153	standard	



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## Scale magnifier 10x

All-purpose scale magnifier. Aberrations are avoided by the excellent achromatic lenses. High resolution and large field of view.

- Field of view:  $\varnothing$  35 mm.
- Measuring range standard scale: 30 mm.
- Graduation: 0.1 mm.
- Dimensions:  $\varnothing$  46 x 44 mm.
- Weight: 74 g.



### Scale magnifier with illumination 905.178

- Field of view:  $\varnothing$  32 mm.
- Dimensions:  $\varnothing$  47 x 45 x 185 mm.
- Weight (without batteries): 134 g.
- Power supply: 2 batteries type C.

Item No.	Description	Price
905.180	Magnifier with standard scale in a case	
905.195	Set of magnifier 905.180 and five scales in a case	
905.178	Magnifier 905.180 with illumination (without batteries)	
495.153	Battery (2 needed)	



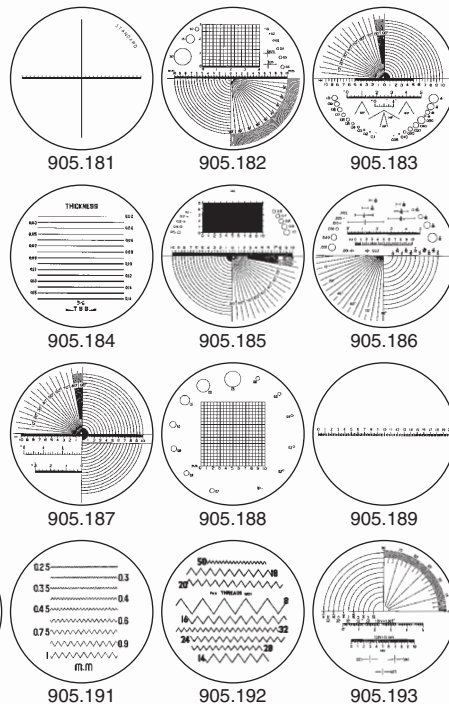
### Set 905.195

Scale magnifier 905.180 in a set with the five most frequently used scales (2, 3, 7, 8 and 10).

## Scales $\varnothing$ 35 mm

Aside from the standard scale, various other scales are available, each one with its own specific application. These scales are interchangeable in scale magnifiers like the one above.

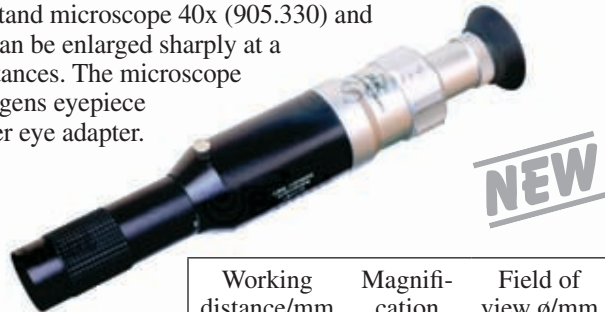
Item No.	Scale	Price
905.181	standard	
905.182	no. 1	
905.183	no. 2	
905.184	no. 3	
905.185	no. 4	
905.186	no. 5	
905.187	no. 6	
905.188	no. 7	
905.189	no. 8	
905.190	no. 9	
905.191	no. 10	
905.192	no. 11	
905.193	no. 12	



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## Long-distance microscope

The long-distance microscope consists of a stand microscope 40x (905.330) and an objective unit. The objects being inspected can be enlarged sharply at a short distance of 200 mm as well as at long distances. The microscope has a large field of view, and comes with a Huygens eyepiece (magnification 10x) and a detachable soft rubber eye adapter.



- Focusing with helicoid ring.
- Dimensions at working distance  
200 mm:  $\varnothing 46 \times 316$  mm,  
infinite:  $\varnothing 46 \times 262$  mm.
- Weight: 414 g.
- Delivery in a case incl. standard scale.

Working distance/mm	Magnification	Field of view $\varnothing$ /mm
200	27x	5.5
300	15x	10
400	10x	15
500	8x	19

Item No.	Description	Price
905.435	Long-distance microscope	

## Scale magnifier 10x TRI-Work

The base of this "TRI-Work" magnifier is the scale magnifier 10x (905.180).

- Intensify contrast by using colored filters.
- Shielding of the measuring face by an iris diaphragm.
- Field of view:  $\varnothing 32$  mm.
- Measuring range standard scale: 30 mm.
- Graduation standard scale: 0.1 mm.
- Standard filter: light blue.
- Opening diaphragm: 3 to 17.8 mm.
- Dimensions:  $\varnothing 46 \times 41$  mm.
- Weight: 100 g.



For scales (item no. 905.181 to 905.193), see scale magnifier 10x (item no. 905.180).

Item No.	Description	Price
905.327	Magnifier with standard scale, light blue filter and diaphragm	

## Scale magnifier 3x

Scale magnifier with a lens system separated from the scale by a stand, hereby creating a larger working distance, field of view and luminous intensity. The scale is placed in a rotatable ring in the base of the stand.

- Field of view:  $\varnothing 58$  mm.
- Measuring range scale: 54 mm.
- Graduation: 0.1 mm.
- Dimensions: 76 x 105 x 96 mm.
- Weight: 378 g.



Item No.	Description	Price
905.328	Magnifier with scale and stand	

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## Scale magnifier 30x

- Field of view:  $\varnothing$  7 mm.
- Measuring range standard scale: 5 mm.
- Graduation: 0.05 mm.
- Dimensions:  $\varnothing$  30 x 19 mm.
- Weight: 16 g.



## Scale magnifier with illumination 905.287

- Dimensions:  $\varnothing$  43 x 65 x 184 mm.
- Weight (without batteries): 48 g.
- Power supply: 2 batteries type AA.



Item No.	Description	Price
905.285	Scale magnifier in case	
905.287	Magnifier 905.285 with illumination (without batteries)	
495.111	Battery (2 needed)	
905.286	Separate standard scale	

## Anastigmatic scale magnifiers 4x and 7x

Magnifier with anastigmatic lens. This is a combined objective which reflects a large, undistorted image with sharp features, very suitable for inspection of (photographic) films.

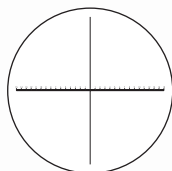
- Large field of view, 905.216:  $\varnothing$  58 mm, 905.400:  $\varnothing$  41 mm.
- Removable scale with mm graduation.
- Measuring range scale 905.217: 54 mm, 905.401: 36 mm.
- Graduation scale: 0.1 mm.
- Dimensions and weight:  
905.216:  $\varnothing$  73 x 77 mm, 272 g,  
905.400:  $\varnothing$  55 x 53 mm, 103 g.



905.216



905.400

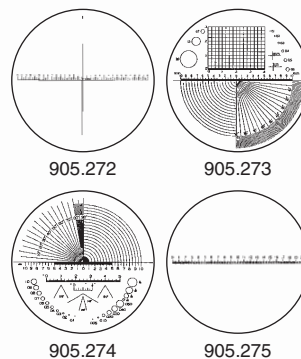


Item No.	Description	Price
905.216	Scale magnifier 4x	
905.400	Scale magnifier 7x	
905.217	Standard scale for magnifier 905.216	
905.401	Standard scale for magnifier 905.400	

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## Scale magnifier 15x

- Field of view:  $\varnothing 20$  mm.
- Measuring range standard scale: 14 mm.
- Graduation: 0.1 mm.
- Dimensions:  $\varnothing 35 \times 33$  mm.
- Weight: 40 g.



Item No.	Description	Price
905.270	Magnifier with standard scale in a case	
905.278	Magnifier 905.270 with illumination (without batteries)	
495.111	Battery (2 needed)	
905.272	Separate standard scale	
905.273	Scale no. 1	
905.274	Scale no. 2	
905.275	Scale no. 8	

### Scale magnifier with illumination 905.278

- Dimensions:  $\varnothing 43 \times 65 \times 184$  mm.
- Weight (without batteries): 72 g.
- Power supply: 2 batteries type AA.



## Stand magnifier 30x

This *microscopic* magnifier has a very high magnification despite its small size. In this way, the magnifier can be held with one hand, while you can hold the product to be inspected in the other. Because of the sophisticated optic design, this magnifier is almost comparable to a microscope of the same size, while the field of view is larger. This magnifier is often used in photo technique, for the production of precision instruments and for inspection of precision work.

- Lens aperture:  $\varnothing 7$  mm.
- Dimensions:  $\varnothing 37 \times 20$  mm.
- Weight: 10 g.



### Stand magnifier with illumination 905.402

- Dimensions:  $\varnothing 43 \times 65 \times 184$  mm.
- Weight (without batteries): 40 g.
- Power supply: 2 batteries type AA.

Item No.	Description	Price
905.222	Stand magnifier $M=30x$	
905.402	Stand magnifier 905.222 with illumination (without batteries)	
495.111	Battery (2 needed)	

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## Monocular telescopes

Lightweight pocket-size telescopes with erect image.

- Dimensions 905.207:  $\varnothing$  22.5 x 50 mm,  
905.208:  $\varnothing$  22.5 x 53 mm.
- Weight: 32 g.
- Delivery in a case.

**NEW**



Item No.	Magnification	Lens aperture $\varnothing$ /mm	Close focus distance/mm	Field of view (angle)	Field of view* $\varnothing$ /mm $\varnothing$ /m	Price
905.207	2x	8	100	11°	12 192	
905.208	4x	10	220	10°	29 175	

\* Field of view respectively at close focus distance and at 1000 m.

## ABC magnifier 3-18x

The ABC magnifier consists of three lenses. Combining the three lenses, seven different magnifications are possible.

- Magnification: 3x, 6x, 9x, 12x, 14x, 16x and 18x.
- Magnification and diameter of the lenses:  
lens A: 12x,  $\varnothing$  14 mm,  
lens B: 3x,  $\varnothing$  28 mm,  
lens C: 6x,  $\varnothing$  20 mm.
- Dimensions: 60 x 39 x 24 mm.
- Weight: 76 g.

**NEW**



Item No.	Description	Price
905.196	ABC magnifier 3-18x	

## Stand microscopes 20x ... 60x

Standard and lightweight stand microscopes with eyepiece with scale. The detachable illumination provides extra light which helps observations at large magnifications. Suitable for inspection of surfaces and printed matter, photographic, biological and electronic applications, and more.

- Focusing with rack-and-pinion.
- Dimensions:  $\varnothing$  58 x 152 mm.
- Weight (without batteries): 493 - 528 g.
- Delivery in a case.
- Power supply: 2 batteries type AA.

**Schut**



Item No.	Magnification	Field of view $\varnothing$ /mm	Working distance/mm	Measuring range/mm	Graduation mm	Price
905.252	20x	7.2	52	6	0.05	
905.253	40x	4.3	28	3.4	0.02	
905.254	60x	2.2	6	1.6	0.02	

**Option:**  
495.111 Spare battery (2 needed)

The rack-and-pinion adjustment is 47 mm for all models.

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## Stand microscopes 20x ... 300x

These stand microscopes are available in five versions. All five are compact and lightweight, but are especially characterized by their large field of view. Delivery in a case, including illumination, matching standard scale and objective. The microscopes come with a Huygens eyepiece (magnification 10x) and with a detachable soft rubber eye adapter. All-purpose use with high precision.

### Type 2034

A scale graduation (with a 10 mm scale range) has been engraved on the focusing ring which allows height measurements at a resolution of 0.1 mm.

- Focusing with helicoid ring.
- Dimensions: ø 63 x 172 mm.
- Weight (without batteries): 237 - 241 g.
- Power supply: 2 batteries type AA.



Type 2034

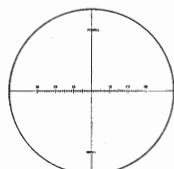
Item No.	Magnification	Field of view ø/mm	Working distance/mm	Measuring range/mm	Graduation mm	Price
905.320	20x	7.2	36	6	0.1	
905.330	40x	3.6	18.7	3	0.05	
905.340	60x	2.4	10.8	2	0.02	
905.350	100x	1.45	5.7	1.2	0.01	
905.355	150x	0.96	9.2	0.9	0.005	
905.370	200x	0.72	6.7	0.6	0.002	
905.374	300x	0.48	4	0.4	0.001	

### Option:

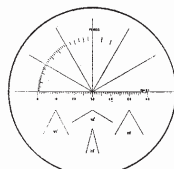
495.111 Spare battery (2 needed)

## Individual scales

The in the eyepiece integrated scale can be changed, for example when the magnification of the microscope changes (see "Individual objectives"). Additionally, an extra eyepiece (without scale and soft rubber eye adapter) is available, so the eyepiece doesn't need to be disassembled each time the scale is being changed.



905.321



905.325

Item No.	Magnification microscope	Scale	Price
<b>Standard scales:</b>			
905.321	20x	no. 54	
905.331	40x	no. 64	
905.341	60x	no. 74	
905.351	100x	no. 84	
905.356	150x	no. 94	
905.337	200x	no. 104	
905.388	300x	no. 114	
<b>For inspection of printed matter and tools:</b>			
905.325	20x	no. 55	
905.335	40x	no. 65	
904.042	Individual eyepiece		

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## Stand microscopes 20x ... 300x (continued)

### Types 2054/2054-EIM/2054-CIL/2064

These types primarily differ from the type 2034 in the focusing mechanism and the sturdy die-cast aluminum base.

- Focusing with rack-and-pinion.
- Dimensions:  $\varnothing 69 \times 172$  mm.
- Weight (without batteries):  
2054/2054-EIM: 263 - 267 g,  
2054-CIL/2064: 393 - 394 g.
- Power supply:  
2054/2054-EIM: 2 batteries type AA,  
2054-CIL: 4 batteries type AA,  
2064: 5 batteries type AA.



Type 2054-CIL



Type 2054-EIM

### Erected Image with Measure (EIM)

With standard microscopes, the magnification is upside down, but this is not the case with the microscopes of type 2054-EIM.

## Individual objectives

The objectives are also separately available. This gives you the great advantage that you can get all magnifications with one scale microscope. The magnification of the eyepiece is 10x.

Item No.	Magnification objective	Magnification microscope	Price
905.322	2x	20x	
905.332	4x	40x	
905.342	6x	60x	
905.352	10x	100x	
905.357	15x	150x	
905.372	20x	200x	
905.387	30x	300x	

### Coaxial Incident Light (CIL)

The microscopes of the types 2054-CIL and 2064 are besides the standard illumination also provided with a coaxial light source, which is especially suitable for the inspection of objects with deep structures as well as chromed, high reflective surfaces. For the type 2064 this is a LED illumination.

Item No.	Magnification	Price
<b>Type 2054:</b>		
905.410	20x	
905.411	40x	
905.412	60x	
905.413	100x	
905.414	150x	
905.415	200x	
905.416	300x	
<b>Type 2054-EIM:</b>		
905.417	20x	
905.418	40x	
905.419	60x	
905.420	100x	
<b>Type 2054-CIL:</b>		<b>Type 2064:</b>
905.429	40x	905.293
905.430	60x	905.294
905.431	100x	905.295
905.432	150x	905.296
905.433	200x	905.297
905.434	300x	905.298
<b>Option:</b>		
495.111	Spare battery type AA	

For other specifications: see table of type 2034.

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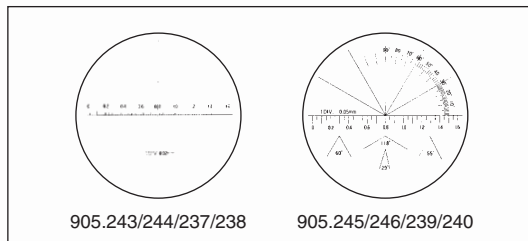
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## Stand microscopes 25x ... 100x

Compact and light-weight stand microscope with scale. The high resolution and bright images as well as its easy focusing make this instrument a practical measuring aid. A scale graduation (scale range 8 mm) has been engraved on the focusing ring which allows height measurements at a resolution of 0.1 mm. With detachable soft rubber eye adapter. Delivery in a case, with matching standard scale.

- Dimensions:  $\varnothing 41.5 \times 122$  mm.
- Weight: 83 g.

Item No.	Type	Magnification	Price
<b>Standard scales:</b>			
905.243	24	25x	
905.244	13	50x	
905.237	34	75x	
905.238	44	100x	
<b>Scales for inspection of printed matter and tools:</b>			
905.245	25	25x	
905.246	14	50x	
905.239	35	75x	
905.240	45	100x	



905.250

Item No.	Magnification	Field of view $\varnothing$ /mm	Working distance/mm	Measuring range/mm	Graduation mm	Price
905.249	25x	3.3	17.0	3.0	0.05	
905.250	50x	2.0	11.7	1.6	0.02	
905.251	75x	1.1	11.7	1.0	0.01	
905.258	100x	0.84	11.6	0.8	0.005	

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### Magnifying glass 2.5-5x

This model of the classical magnifying glass has a lens-in-lens construction. In the big  $\varnothing 75$  mm lens a smaller  $\varnothing 20$  mm lens has been integrated which offers extra strong magnification. The big lens has a 2.5x magnification, the small lens 5x.

- Dimensions:  $\varnothing 80 \times 170$  mm.
- Weight: 111 g.



Item No.	Description	Price
905.214	Magnifying glass 2.5-5x	

### Flexible stand magnifier

This magnifier has a flexible arm which can be adjusted freely from a solid and stabilized stand. The lens can be put in many positions for the most ergonomic use thus leaving both hands of the viewer free.

- Dimensions:  $145 \times 120 \times 485$  mm (maximum height).
- Weight: 1.5 kg.

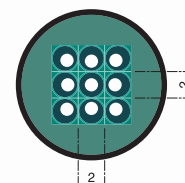


Item No.	Magnification	Lens $\varnothing$ /mm	Price
905.279	1.7x	115	
905.427	2.0x	100	
905.428	2.2x	90	

### Through hole loupe 8x

This loupe is used for the inspection of through holes in e.g. printed circuit boards. The 8x magnification permits detection of bore imperfections. Because of its unique design, the lens gives a full inside, ninefold view of a hole, without image distortion like with a fisheye lens. A good back illumination is necessary, e.g. with a light table.

- Field of view:  $2 \times 2$  mm.
- Dimensions:  $\varnothing 30 \times 50$  mm.
- Weight: 28 g.



Item No.	Description	Price
905.610	Through hole loupe	

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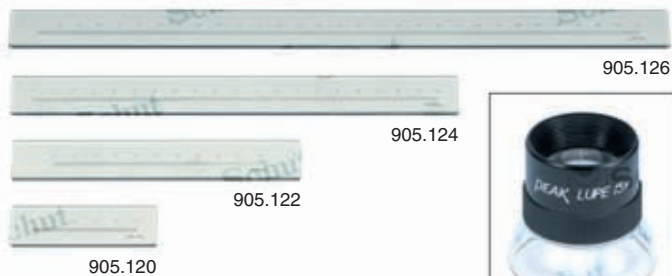
## Glass rulers L = 50 ... 1000 mm

The glass ruler is made from clear glass, on which a graduation has been engraved. The glass is highly resistant to temperature fluctuations. Main advantage of the glass ruler is that the entire product remains visible when the ruler is used, unlike the scale magnifiers where only part of the product stays visible. It can also be used as a reference ruler for magnification checks.

- Graduation: 0.1 mm.
- Accuracy:  $\pm 0.02$  mm.
- Delivery in a case.

### Standard glass rulers

- Thickness: 3 mm.
- Width: 25 mm.
- Delivery incl. 1 hand magnifier  $M=15x$ .



Item No.	Measuring range/mm	Length mm	Weight g	Price
<b>Standard glass rulers:</b>				
905.120	0- 50	70	31	
905.122	0- 100	140	39	
905.124	0- 200	220	57	
905.126	0- 300	330	77	
<b>Special glass rulers:</b>				
905.422	0- 300	360	590	
905.423	0- 500	560	807	
905.424	0- 700	760	1023	
905.425	0- 1000	1060	1348	

### Special glass rulers

- Thickness: 10 mm.
- Width: 50 mm.
- Delivery incl. 2 magnifiers  $M=10x$ .



## Special cleaner

Special cleaner (120 ml) for objectives, glass plates and other optical components.



Item No.	Description	Price
111.534	Special cleaner	

## Field of view qualifier

- Accuracy:  $\pm 0.002$  mm.



Item No.	Description	Price
635.222	Field of view qualifier	

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## Light magnifiers with fluorescent or LED illumination

Large lens with a large field of view. Very suitable for production and assembly of precision instruments.

- Magnification: 1.75x.
- Span table clamp: 50 mm.
- Power supply: 230 V.



Item No.	Description	Lens ø/mm	Price
<b>Light magnifier with circular fluorescent tube:</b>			
909.650	With table clamp	120	
909.651	With base	120	
909.654	Spare bulb 22 W		
<b>Light magnifier with LED ring light:</b>			
909.648	90 LEDs, with table clamp	120	
909.649	60 LEDs, with base	100	



## Video microscopes

Compact and portable video microscopes with built-in camera for several applications in the medical, industrial and educational sector. Your optical product inspection is possible on each location and with the 5x up to 108x magnification and the built-in LED illumination the products are displayed very sharply on the screen. The internal camera can record each picture and compare this one with the live-view in the dual view mode, the optional stand makes stable inspection very simple.

- Optical magnification: 5x, 12x, 24x, or 7-27x with optical zoom.
- Digital zoom: up to 4x.
- Camera resolution: 640 x 480 px.
- Field of view: approx. 1.25 x 0.95 mm (at magnification 108x).
- LCD display: 1.8", with scale.
- Illumination: 3 LEDs (white).
- Image effect: scale, gray, inverse and dual view (inspection for comparison).
- With 2 MB intern memory and USB output (only 909.400).
- Operating system: Windows 2000/XP/Vista.
- Dimensions: 120 x 56 x 20.7 mm.
- Delivery incl. 3 rechargeable batteries (use only rechargeable batteries).



Item No.	Magnification	Price
909.400	7 - 108x	
909.401	5 - 20x	
909.402	12 - 48x	
909.403	24 - 90x	
<b>Option:</b>		
909.404	Stand with holder	



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## Stereo microscope SSM

Plastic stereo microscope with a sharp erect image and a large field of view. The magnification is 20x (eyepiece: 10x, objective: 2x).

- Field of view:  $\varnothing$ 9.5 mm.
- Viewing angle: 90°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Working distance: 70 mm.
- Max. object height: 30 mm.
- Incident light (LED).
- Stage plate: white plastic,  $\varnothing$ 50 mm.
- Dimensions *l x w x h*: 135 x 120 x 230 mm.
- Weight: 0.6 kg.
- Delivery incl. dust cover.
- Power supply: 2 batteries type AA.



Item No.	Type	Magnification	Price
909.012	SSM	20x	
<b>Option:</b>			
495.111	Spare battery (2 needed)		

## Microscope SSM-1

Microscope on a column stand, with a sharp erect image and a large field of view. The magnification is 20x (eyepiece: 10x, objective: 2x).

- Field of view:  $\varnothing$ 9.0 mm.
- Microscope head: 360° rotatable.
- Viewing angle: 45°.
- Working distance: 80 mm.
- Max. object height: 35 mm.
- Travel of the rack: 30 mm.
- Anti drop facility.
- Stage plate: black/white (two-sided),  $\varnothing$ 60 mm.
- Dimensions *l x w x h*: 195 x 110 x 245 mm.
- Weight: 1.2 kg.
- Delivery incl. dust cover.



Item No.	Type	Magnification	Price
909.013	SSM-1	20x	

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## Stereo microscopes SSM-2

Stereo microscopes on a column stand, with a sharp erect image and a large field of view. The magnification is 20x (eyepiece: 10x, objective: 2x); eyepieces 5x, 15x and 20x are optionally available. See for all accessories the pages "SSM stereo microscope accessories".

- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Left eyepiece with diopter adjustment: ±5 dpt.
- Objective: with dovetail mounting.
- Stage plate: black/white (two-sided).
- Delivery incl. dust cover and soft rubber eye adapters.

Item No.	Type	Magnification	Price
909.000	SSM-2A	20x	
909.001	SSM-2C	20x	

See for accessories the pages "SSM stereo microscope accessories".



909.000



909.001

Type		SSM-2A	SSM-2C
Eyepiece	M	10x	10x
Objective	M	2x	2x
Total range*	M	10-40x	10-40x
Illumination		no	yes
Working distance	mm	70	70
Max. object height	mm	60	70
Travel of rack	mm	40	40
Stage plate	ø/mm	60	95
Dimensions	lxwxh/mm	220x115x250	220x115x290
Weight	kg	1.6	2.6

\* The magnification range of the microscope in combination with the optional eyepieces 5-20x.

### Illumination: incident light and backlight

Model SSM-2C is equipped with incident light and backlight (switchable incident light or backlight).

- Stage plate: opal glass. Delivery incl. black/white stage plate. Dark field condenser optional.
- Power supply: 230 Vac (50 Hz).

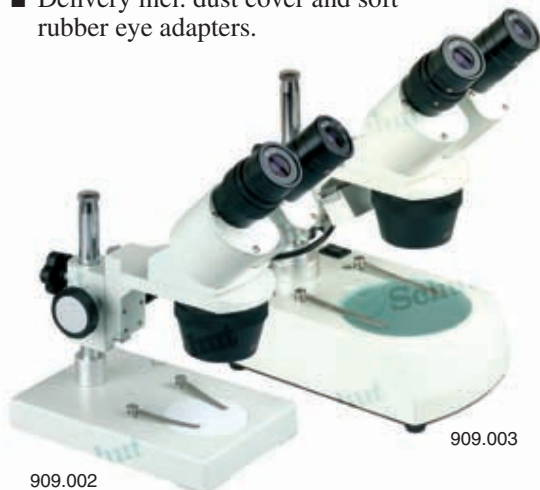


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## Stereo zoom microscopes SSM-3/5

Stereo zoom microscopes with a sharp erect image and a large field of view. Equipped with a double objective (2x/4x is used most; also available 1x/2x and 1x/3x), so that the magnification can be changed with a simple rotary motion. The magnification of the eyepieces is 10x (optionally 5x, 15x and 20x). See for all accessories the pages "SSM stereo microscope accessories".

- SSM-3: stand with round column.  
SSM-5: fixed stand.
- Microscope head: 360° rotatable (only SSM-5).
- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Left eyepiece with diopter adjustment: ±5 dpt.
- Stage plate: black/white (two-sided).
- Delivery incl. dust cover and soft rubber eye adapters.



909.002

909.003

### Illumination: incident light and backlight

Models SSM-3C/5CW are equipped with incident light and backlight (switchable incident light or backlight).

- Stage plate: opal glass. Delivery incl. black/white stage plate. Dark field condenser optional.
- Power supply: 230 Vac (50 Hz).

Item No.	Type	Magnification	Price
909.002	SSM-3A	20x/40x	
909.042	SSM-3A	10x/20x	
909.032	SSM-3A	10x/30x	
909.003	SSM-3C	20x/40x	
909.043	SSM-3C	10x/20x	
909.033	SSM-3C	10x/30x	
909.034	SSM-5AW	20x/40x	
909.044	SSM-5AW	10x/20x	
909.004	SSM-5AW	10x/30x	
909.005	SSM-5CW	20x/40x	
909.045	SSM-5CW	10x/20x	
909.035	SSM-5CW	10x/30x	

See for accessories the pages "SSM stereo microscope accessories".



909.004

909.005

Type		SSM-3A	SSM-3C	SSM-5AW	SSM-5CW
Eyepiece	M	10x	10x	10x	10x
Objective	M	2x/4x, 1x/2x or 1x/3x			
Total range*	M	10-80x, 5-40x or 5-60x			
Illumination		no	yes	no	yes
Working distance	mm	57	57	70	70
Max. object height	mm	60	70	20	20
Travel of rack	mm	40	40	30	20
Stage plate	ø/mm	60	95	60	95
Dimensions	lxwxh/mm	220x115x250	220x115x290	220x115x280	220x115x320
Weight	kg	1.7	2.6	1.7	2.5

\* The magnification range of the microscope in combination with the optional eyepieces 5-20x.



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## Stereo zoom microscopes with auxiliary lenses SSM-10/20

Stereo zoom microscopes with a sharp erect image and a large field of view. Equipped with a double objective (2x/4x is used most; also available 1x/2x and 1x/3x), so that the magnification can be changed with a simple rotary motion. The magnification of the eyepieces is 10x (optionally 5x, 15x and 20x). The magnification can be adjusted to your application even more with an optional auxiliary lens (0.5x, 0.75x, 1.5x or 2x). See for all accessories the pages "SSM stereo microscope accessories".

- SSM-10/20C2: stand with round (flattened) column and anti drop facility.  
SSM-20W: fixed stand.
- Microscope head: 360° rotatable.
- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Left eyepiece with diopter adjustment: ±5 dpt.
- Working distance (without aux. lens): 72 mm.
- Stage plate: black/white (two-sided).
- Delivery incl. dust cover and soft rubber eye adapters.

Item No.	Type	Magnification	Price
909.006	SSM-10	20x/40x	
909.046	SSM-10	10x/20x	
909.036	SSM-10	10x/30x	
909.007	SSM-20C2	20x/40x	
909.047	SSM-20C2	10x/20x	
909.037	SSM-20C2	10x/30x	
909.008	SSM-20W	20x/40x	
909.048	SSM-20W	10x/20x	
909.038	SSM-20W	10x/30x	

See for accessories the pages "SSM stereo microscope accessories".



909.006

### Illumination: incident light and backlight

Models SSM-20C2/20W are equipped with incident light and backlight. With the SSM-20C2, the luminous intensity is adjustable (switchable incident light or backlight). With the SSM-20W, incident light and backlight can be switched on at the same time.

- Stage plate: opal glass. Delivery incl. black/white stage plate. Dark field condenser optional.
- Power supply: 230 Vac (50 Hz).



909.007



909.008

Type		SSM-10	SSM-20C2	SSM-20W
Eyepiece	M	10x	10x	10x
Objective	M	2x/4x, 1x/2x or 1x/3x		
Total range*	M	5-160x, 2½-80x or 2½-120x		
Illumination		no	yes	yes
Max. object height	mm	100	100	50
Travel of rack	mm	60	60	60
Stage plate	ø/mm	75	95	95
Dimensions	lxwxh/mm	260x170x290	270x235x330	255x145x330
Weight	kg	3.0	4.3	4.0

\*The magnification range of the microscope in combination with the optional eyepieces 5-20x and auxiliary lenses 0.5-2x.

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## Stereo microscopes with stepless zoom SSM-E

Stereo zoom microscopes with a sharp erect image and a large field of view. The special microscope head is equipped with stepless zoom; in combination with the standard 10x eyepieces (optionally 20x) you can smoothly zoom in from 10x to 40x magnification. The magnification can be adjusted to your application even more with an optional auxiliary lens (0.5x, 0.75x, 1.5x or 2x). See for all accessories the pages "SSM stereo microscope accessories".

- SSM-EW: fixed stand. SSM-EC2/3E/3EC2: stand with round (flattened) column and anti drop facility.
- Microscope head: 360° rotatable.
- Viewing angle: 45°.
- Interpupillary distance: adjustable (55 - 75 mm).
- Both eyepieces with diopter adjustment: ±5 dpt.
- Working distance (without aux. lens): 85 mm.
- Equipped with incident light and backlight. With the SSM-EC2/3EC2 the luminous intensity is adjustable (switchable incident light or backlight). With the SSM-EW/3E incident light and backlight can be switched on at the same time.
- Stage plate: opal glass.
- Delivery incl. dust cover, soft rubber eye adapters and black/white stage plate. Dark field condenser optional.
- Power supply: 230 Vac (50 Hz).

Item No.	Type	Magnification	Price
909.009	SSM-EW	10-40x	
909.010	SSM-EC2	10-40x	
909.011	SSM-3E	10-40x	
908.998	SSM-3EC2	10-40x	

See for accessories the pages "SSM stereo microscope accessories".

PRICE



Type		SSM-EW	SSM-EC2	SSM-3E	SSM-3EC2
Eyepiece	M	10x	10x	10x	10x
Objective	M	1-4x	1-4x	1-4x	1-4x
Total range*	M	5-160x	5-160x	5-160x	5-160x
Illumination		yes	yes	yes	yes
Max. object height	mm	50	110	110	110
Travel of rack	mm	60	60	60	60
Stage plate	ø/mm	95	95	95	95
Dimensions	lxwxh/mm	310x150x360	330x235x360	330x150x395	330x235x395
Weight	kg	4.5	4.8	5.1	5.4

### Camera connection

Models SSM-3E and 3EC2 are equipped with camera connection. See the accessories page for the total magnification range with camera.



\*The magnification range of the microscope in combination with the 10x eyepieces, the optional 20x eyepieces and the optional auxiliary lenses 0.5-2x.

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## SSM stereo microscope accessories

### USB microscope cameras

For viewing and saving images. They fit in the ocular ( $\varnothing 30$  mm) of an SSM microscope and/or the adapter bushing ( $\varnothing 23$  mm) of the models SSM-3E/3EC2.

- Field of view: see table.
- Resolution: 640 x 480 px or 1.3 Mpx.
- With software for Windows 2000/XP (909.040; English) or 2000/XP/Vista/7 (774.083/084/102).
- Measuring of distances, radii and angles (except 909.040).



### Auxiliary lenses

The magnification can be adjusted to your application even more with an optional auxiliary lens. Note concerning stereo microscopes with a fixed stand: auxiliary lens 0.5x is not suitable, and with auxiliary lenses 1.5x and 2x focusing on the stage plate is not possible (the product needs to be positioned higher).



Item No.	Description	Price
<b>Pairs of eyepieces for SSM-2/3/5/10/20:</b>		
909.050	M=5x	
909.051	M=10x	
909.052	M=15x	
909.053	M=20x	
<b>Pairs of eyepieces for SSM-E:</b>		
909.055	M=10x	
909.057	M=20x	
<b>Eyepieces with crosshair for SSM-E:</b>		
909.095	M=10x (per piece)	
909.096	M=20x (per piece)	
<b>Auxiliary lenses (for SSM-10/20/E):</b>		
909.018	M=0.5x	
909.019	M=0.75x	
909.020	M=1.5x	
909.021	M=2x	
<b>USB microscope cameras:</b>		
909.040	640 x 480 px, $\varnothing 23/30$ mm	
774.083	1.3 Mpx, $\varnothing 30$ mm	
774.084	1.3 Mpx, $\varnothing 23$ mm	
774.102	1.3 Mpx, $\varnothing 23/30$ mm	



Magnification objective	Microscope magnification / Field of view/mm				
	Eyepiece 5x	Eyepiece 10x	Eyepiece 15x	Eyepiece 20x	
<b>Stereo microscope SSM-2:</b>					
2x	10x / $\varnothing 10.0$	20x / $\varnothing 10.0$	30x / $\varnothing 7.5$	40x / $\varnothing 6.5$	
<b>Stereo zoom microscope SSM-3/5:</b>					
1x	5x / $\varnothing 20.0$	10x / $\varnothing 20.0$	15x / $\varnothing 15.0$	20x / $\varnothing 9.5$	
2x	10x / $\varnothing 10.0$	20x / $\varnothing 10.0$	30x / $\varnothing 7.5$	40x / $\varnothing 4.6$	
3x	15x / $\varnothing 7.0$	30x / $\varnothing 6.7$	45x / $\varnothing 5.0$	60x / $\varnothing 3.1$	
4x	20x / $\varnothing 5.0$	40x / $\varnothing 5.0$	60x / $\varnothing 3.7$	80x / $\varnothing 2.3$	
<b>Stereo zoom microscope SSM-10/20 (without auxiliary lens):</b>					
1x	5x / $\varnothing 20.0$	10x / $\varnothing 20.0$	15x / $\varnothing 15.0$	20x / $\varnothing 10.0$	
2x	10x / $\varnothing 10.0$	20x / $\varnothing 10.0$	30x / $\varnothing 7.5$	40x / $\varnothing 4.9$	
3x	15x / $\varnothing 7.0$	30x / $\varnothing 7.0$	45x / $\varnothing 5.0$	60x / $\varnothing 3.2$	
4x	20x / $\varnothing 5.0$	40x / $\varnothing 5.0$	60x / $\varnothing 3.8$	80x / $\varnothing 2.5$	
Magnification objective	Magnification / Field of view/mm		Field of view camera/mm		
	Eyepiece 10x	Eyepiece 20x	909.040	774.083	774.084
<b>Stereo microscope with stepless zoom SSM-E (without auxiliary lens):</b>					
from 1x to 4x	10x / $\varnothing 23.0$ 40x / $\varnothing 5.5$	20x / $\varnothing 10.5$ 80x / $\varnothing 3.0$	4.0 x 3.0 0.89 x 0.66	6.1 x 4.6 1.7 x 1.3	6.6 x 4.8 1.8 x 1.35

### Pairs of eyepieces



### Soft rubber eye adapters



All stereo microscopes from the series SSM-2 and above are delivered incl. soft rubber eye adapters.

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## SSM stereo microscope accessories (continued)

### Halogen optical fiber illumination



### Halogen optical fiber ring light<sup>1,2</sup>

Suitable for stereo microscopes SSM-10/20/E.  
Note: not for use in combination with auxiliary lenses.



### Ring lights<sup>2</sup>

Suitable for SSM-10/20/E (909.085) or SSM-3/5/10/20/E (909.024).

### Dark field condenser

The contrast of transparent objects is enhanced. Suitable for all SSM stereo microscopes with backlight.

- Diameter: 94 mm.
- Stage:  $\varnothing$  27 mm.



### XY measuring table

- Range: X, Y: 25 mm.
- Intake microscope:  $\varnothing$  94 mm.
- Turnable object plate with degree indication.
- Including two analog micrometer heads (intake  $\varnothing$  12 mm).



Item No.	Description	Price
<b>Halogen optical fiber illumination:</b>		
909.027	Light source 24 V, 150 W	
909.030	Single flexible arm	
909.028	Dual flexible arm	
909.029	Optical fiber ring light <sup>1,2</sup>	
909.113	Spare bulb for 909.027	
<b>Ring lights<sup>2</sup>:</b>		
909.024	Circular fluoresc. tube 10 W	
909.059	Spare bulb for 909.024	
909.085	Ring light 60 LEDs	
<b>Spare bulbs (standard illumination):</b>		
499.377	For SSM-2/3/5	
498.157	For SSM-20W/EW, and for transmitted light SSM-20C2/EC2/3E	
499.379	For incident light SSM-20C2/EC2/3E	
438.211	Fuse F 0.5 A, 250 V	
<b>Other options:</b>		
909.022	Dark field condenser	
908.999	XY measuring table	
960.255	Dial indicator holder	
635.222	Field of view qualifier	

<sup>1</sup> Delivery incl. adapter ring.

<sup>2</sup> Note: microscopes with standard provided incident light, this incident light must be removed before installing the ring light.

### Dial indicator holder

Suitable for stereo microscopes with round column from the series SSM-10/20/E, for height measurements. The accuracy increases with higher magnification.

- Excl. dial indicator.
- The travel of the microscopes is 60 mm; see the dial indicators category for a suitable dial indicator with measuring range 50 or 60 mm.



### Field of view qualifier

- Accuracy:  $\pm 0.002$  mm.

635.222



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## SSM stereo microscope accessories (continued)

### Large stand

- Base: 255 x 255 cm.
- Column height: 390 mm.
- Arm length: 490 mm.
- Height adjustment: 60 mm.



908.997

### Stand with illumination

Equipped with incident light and backlight. The luminous intensity is adjustable (switchable incident light or backlight).

- Column height: 185 mm.



909.405

### LCD microscope head

- Screen: 8" color.
- CCD: 1/3" color.
- Zoom lens: 0.65 - 5.5.
- Magnification: 10 - 85x.
- Working distance: 10.5 cm.
- Crosshair can be toggled on/off.
- Field of view: from 1.3 x 1.8 mm ( $M=85x$ ) to 12 x 16 mm ( $M=10x$ ).



909.405  
+909.406  
+870.006  
+334.695



909.406

### Microscope heads

- With or without camera connection.



909.093



Item No.	Description	Price
<b>Microscope stands:</b>		
908.997	Large stand	
909.405	Stand with illumination	
870.006 <sup>1</sup>	Column 400 mm	
<b>Microscope heads:</b>		
909.092	Microscope head	
909.093	Microscope head with camera connection	
909.406 <sup>2</sup>	LCD microscope head	
334.695	Mini AC adapter 12 Vdc, 1 A	

<sup>1</sup> To be used with stand 909.405 for a larger Z axis range.

<sup>2</sup> Adapter 334.695 required.

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## USB video measuring microscopes

Very versatile and compact digital microscopes with measuring functions for various medical, industrial and educational applications. Optical product inspection can even be performed around your production machine; thanks to the stepless magnification and LED illumination you can display your products very sharply on the screen. Images can be saved as a picture or video file. Geometrical forms, such as distances, radius and angles can be measured.

- Magnification: stepless 10-70x or 10-92x. With or without additional fixed magnification 200x.
- Resolution: 640 x 480 px, 1.3 Mpx (1280 x 1024 px) or 5 Mpx (2592 x 1944 px).
- Illumination: 8 LED white ring light.
- With software for Windows XP/Vista/7 and Mac OS X. (5 Mpx models are not compatible with Mac OS. For displaying the 5 Mpx resolution a Motion JPEG codec is required.)
- Measuring and calibration function.
- Plastic or aluminum housing.
- Dimensions: ø32 x 120 mm.
- Connection and power supply: USB 2.0 cable (1.8 m).
- The microscopes with polarizer are delivered with an appropriate holder for mounting on a microscope stand. With the microscopes without polarizer the appropriate holder 774.086 is not included.

### Also available:

- models with fixed magnification 400x,
- models with PAL or VGA connection for live images on TV screen, monitor or beamer,
- models with special illumination by near-UV, near-IR or stroboscopic LEDs,
- mobile models with portable 3.5" screen that can record images and videos on an SD card.



774.089

Item No.	774.080	774.081	774.085	774.129	774.088	774.089	774.087	774.090	774.106	
Price										
Magnification (stepless)	10-70x	10-70x	10-70x	10-70x	10-70x	10-70x	10-92x	10-92x	10-92x	
Magnification (fixed)	200x	200x	200x	200x	200x	200x	-	-	-	
Resolution px	640x480	1.3 M	1.3 M	5 M	1.3 M	1.3 M	1.3 M	1.3 M	1.3 M	
Measuring function	✓	✓	✓	✓	✓	✓	✓	✓	✓	
LED illumination	8	8	8	8	8	8	8	8	8	
Polarizer	-	-	-	-	✓	✓	-	-	✓	
Long working distance	-	-	-	-	-	-	✓	✓	✓	
Removable front	-	-	-	-	-	-	-	✓	-	
Aluminum housing	-	-	✓	✓	-	✓	-	-	✓	
Weight g	90	90	132	155	90	132	90	90	132	
M	Field of view/mm		Working distance*/mm / Depth of field (approx.)/mm							
20x	18 x 10	42 / 4					144 / 4.8			
27x	13 x 9	22 / 2.4					115 / 3			
52x	6.8 x 5.1	10 / 0.8					63 / 0.8			
79x	4.5 x 3.3	-					50 / 0.3			
92x	3.8 x 2.85	-					47 / 0.2			

There are many other combinations available.

\* The working distance is measured from the top of the transparent front.

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## USB video measuring microscope accessories

Stable positioning is required for sharp pictures and accurate measurements. The measuring microscopes can be positioned stably with a microscope stand, or with a stand from our range of dial indicator stands (in combination with a reducing coupling and a microscope holder). Good illumination is also a requirement. When the LED illumination is too bright (especially on reflective objects), a model with polarizer, in combination with external illumination, can provide an ideal solution.



Item No.	Description	Price
<b>Microscope stands<sup>1</sup>:</b>		
774.108	Stand with height fine adjustment (15 mm) and flexible arm	
774.116	Table clamp (span 3 cm) with flexible arm	
774.095	Stand	
774.093	Stand with pivoting arm	
774.115	Flexible arm for 774.093/095	
774.117	Heavy-duty stand with table clamp and jointed arm	
774.118	Heavy-duty stand with base and jointed arm	
<b>Microscope holders:</b>		
774.092	Transparent table model	
774.086 <sup>1</sup>	Holder for mounting on a microscope stand	
996.390 <sup>2</sup>	Reducing coupling $\varnothing$ 10/8 mm	
<b>Other options:</b>		
774.119	Specimen holder (incl. 3 clips)	
774.091 <sup>3</sup>	Mirror 45°	
774.094	XY table	
774.100 <sup>4</sup>	Polarized backlight stage	
774.120 <sup>4</sup>	Polarized LED illumination (flexible construction, USB-powered)	
774.121	USB foot switch	
774.122	Robust case (IP67)	



<sup>1</sup> All microscope stands are delivered with holder 774.086.  
<sup>2</sup> For mounting holder 774.086 on a dial indicator stand.  
<sup>3</sup> For use with long working distance microscopes with removable front.  
<sup>4</sup> For use with the measuring microscopes with polarizer.

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## Endoscopes

Endoscopes for inspecting hard-to-reach places by means of a flexible cable. Equipped with built-in illumination. Delivery in a case.

### Endoscopes GSI

- Resolution: 7400 px.
- Soft flexible cable ø4 mm, or rigid bendable cable ø8 mm.
- Field of view: 40°.
- Viewing distance: 3 mm to infinite (depends on ambient light).
- Xenon halogen illumination.
- Power supply: 2 batteries type AA.

### USB endoscope GSIV

- Camera resolution: 1.3 Mpx.
- Rigid bendable cable ø9 mm.
- Field of view: 67°.
- Viewing distance: 2- 10 cm.
- Illumination: 6 LEDs (intensity adjustable).
- Delivery with software (English) for Windows 2000/XP and USB cable.
- Power supply: via USB.

### Portable monitoring endoscopes GSIM

With control panel (English) for taking and saving pictures and video.

- Camera resolution: 320 x 240 px.
- Resolution: 640 x 480 px (JPEG pictures), 320 x 240 px (ASF video).
- 3.5" TFT LCD monitor 320 x 240 px.
- Soft flexible cable ø5.5 mm.
- Field of view: 67°.
- Viewing distance: 1.5 - 10 cm.
- Illumination: 4 LEDs (intensity adjustable).
- Memory card: SD 1 GB.
- USB connection for data transfer to PC.
- Delivery with USB cable, video cable, memory card SD 1 GB and adapter 5.5 V.
- Power supply: 1 rechargeable battery 3.7 V.

### Portable monitoring endoscope ZE

- Camera resolution: 640 x 480 px.
- 2.5" TFT LCD monitor 320 x 240 px.
- Rigid bendable cable ø7 mm. Camera: ø10 mm.
- Field of view: 53°.
- Viewing distance: 8 - 2000 cm
- Illumination: 6 LEDs (intensity adjustable).
- Power supply: 4 batteries type AA.



Item No.	Type	Cable ø/mm	Cable length/cm	Price
909.270	GSI-4	4	40 <sup>1</sup>	
909.271	GSI-8	8	40 <sup>1</sup>	
909.272	GSIV	9	40 <sup>1</sup>	
909.273	GSIM	5.5	100	
909.296	GSIM	5.5	200	
909.299	GSIM	5.5	300	
909.334	ZE	7	100 <sup>2</sup>	
<b>Options:</b>				
495.111	Spare battery for GSI/ZE (2 or 4 needed)			
909.277	Xenon bulb for GSI			
<b>Options for GSI-4:</b>				
909.278	Mirror 35°			
909.274	Mirror 45°			
909.275	Mirror 55°			
<b>Options for GSI-8:</b>				
909.287	Mirror 35°			
909.280	Mirror 45°			
909.286	Mirror 55°			
909.281	Magnet			
<b>Options for GSIV:</b>				
909.289	Mirror 35°			
909.282	Mirror 45°			
909.288	Mirror 55°			
909.283	Magnet			
<b>Options for GSIM:</b>				
909.291	Mirror 35°			
909.284	Mirror 45°			
909.290	Mirror 55°			
<b>Options for ZE:</b>				
909.335	Mirror 35°			
909.336	Mirror 45°			
909.337	Mirror 55°			
909.338	Magnet			
909.339	Hook			

<sup>1</sup> Also available with cable length 80 cm.

<sup>2</sup> Available with cable length up to 10 m.

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