




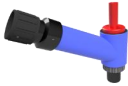

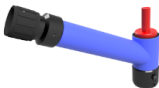






OptiMIC Microscopes











Microscopes are non-contact measuring instruments. They allow to visualize the edges of a part or to position it without constraint. A very wide range of reticles will allow you to superimpose crosses, concentric circles, graduations according to your specific needs. This document represents only a small part of our range, our specialty being to offer specific solutions to our customers' needs.

- Robustness.
- Fixed or adjustable optics in their magnifications.
- No electronics to manage.
- Attachment on the tube \varnothing or with chuck mounts aligned with the optic axis.
- High durability.
- Wide range of reticles available.

Comparison of chuck mounted microscopes

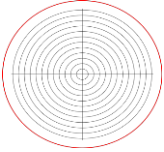
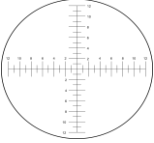
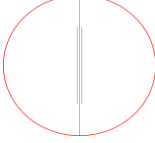
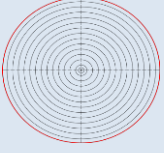


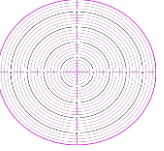
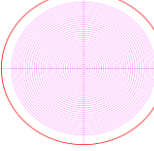
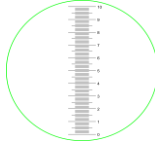
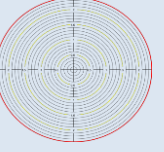
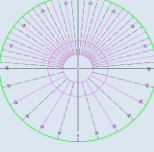
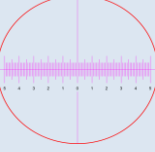
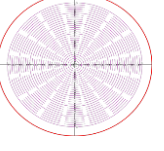
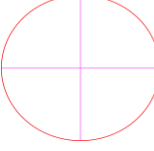
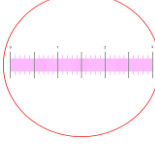
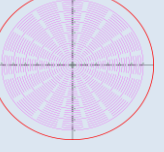
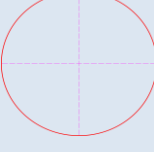
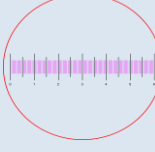
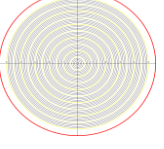
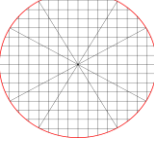
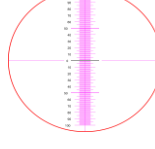
		Field of view range [mm]	Magnification range	Interchangeability of lenses at the end of the lens	Chuck mount	Built-in LED illumination	Angle between optical and ocular axis	Ocular distance to optical axis [mm]	Elbow height [mm]
MA 111		Ø1.3 - Ø13.8	100X - 10X	yes	M20x0.75	no	90°	125	77
MA 112							120°	110	
MA 112-2								150	
MA 112-2E							yes	150	
MA 117E-2		Ø4.6 - Ø13.8	30X - 10X	no		no	110°	170	44
MA 117SZ-1		Ø5.5 - Ø13.8	25X - 10X					150	
MA 117SZ-2		Ø4.6 - Ø13.8	30X - 10X					170	34.5
MA 117SZ-3								190	
MA 121C-010		Ø4.4 - Ø13.4	30X - 10X	no		no	90°	163	30
MA 118-020		Ø5.7 - Ø6.9	25X - 20X				M9x0.5	110°	97

Comparison of tube microscopes

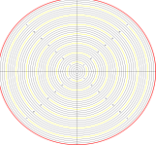
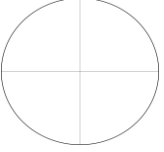
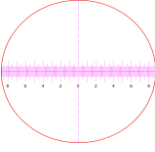
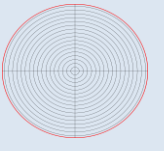
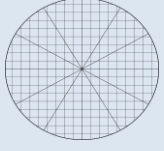
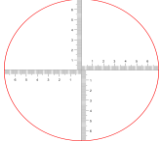
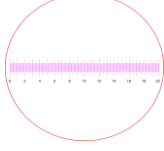
	Field of view range [mm]	Magnification range	Interchangeability of lenses at the end of the lens	Zoom	Angle between optical and ocular axis	Ocular distance to optical axis [mm]	Tube length [mm]	Tube material		
MA 113-110 	Ø1.3 - Ø13.8	100X - 10X	yes	no	120°	90	110	Aluminum		
MA 116-110 					90°	85				
MA 118-110 					135°	75	110			
MA 121-110 	180°	0			110					
MA 130GW-110 	Ø2.2 - Ø22.5	100X - 10X					97		Steel	
MA 130GW-Z1 	Ø1.7 - Ø85.2	130X - 3X			yes	120°	119		43.5	Aluminum
MA 130W-110 	Ø2.2 - Ø22.5	100X - 10X			no		103		110	Steel
MA 130W-Z1 	Ø1.7 - Ø85.2	130X - 3X			yes		120		43.5	Aluminum

Reticles

For small field of view microscopes of types MA 111 to MA 121

	R 1 cross 12 circles		R 3 cross graduation		R 14 gap
	R 1-1 cross 14 circles		R 3-4 cross graduation		R-M 100 horizontal divisions
	R 1-2 cross 23 circles		R 4 cross 32 circles		R-M-1 100 vertical divisions
	R 1-2-2 cross 23 circles		R 5-7 cross angles		R-M-6 cross 100 horizontal divisions
	R 1-4 cross 30 circles		R 6 cross		R-M-11 150 horizontal divisions
	R 1-4-1 cross 60 circles		R 6-1 fine cross		R-M-12 120 horizontal divisions
	R 1-8 cross 50 circles		R 13 cross angles grid pattern		R-M-17 200 horizontal divisions

For large field of view microscopes of type MA 130 (W)

	R 2-1-4-2 cross 38 circles		R 9a cross		R-M-5 cross 200 horizontal divisions
	R 7 cross 17 circles		R 13-3W angles grid pattern		
	R 3-4W cross graduations		R-M-4 200 horizontal divisions		








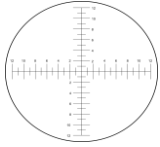
Calibrations

This table shows the space between two circles or between two division lines.
 Practical divisions can be obtained for the other reticles by adjusting the magnification.
 The reticles are not interchangeable.

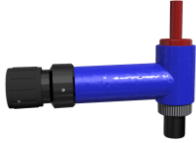

For "small field of view" microscopes of types MA 111 to MA 121															
	10X	12.5X	15X	20X	25X	30X	40X	42X	50X	60X	62.5X	75X	100X	120X	125X
R 1	0.5			0.25	0.2				0.1				0.05		
R 1-1	0.5			0.25	0.2				0.1				0.05		
R 1-2			0.2			0.1									
R 1-4				0.05			0.025								
R 1-4-1	0.1			0.05											
R 1-8		0.1			0.05										
R3	0.5			0.25	0.2								0.05		
R 4		0.15	0.125	0.1	0.075	0.025									
R 3-4	0.125				0.05				0.025		0.02		0.0125		0.01
R-M	0.125				0.05				0.025		0.02		0.0125		0.01
R-M-1	0.125				0.05				0.025		0.02		0.0125		0.01
R-M-6	0.125				0.05				0.025		0.02		0.0125		0.01
R-M-11								0.02							
R-M-12	0.1			0.05					0.02				0.01		
R-M17		0.05			0.025				0.0125		0.01				0.005
"Large field of view" microscopes (W) of type MA 130															
R 2-1-4-2			0.2			0.1				0.05				0.025	
R-M-4		0.1			0.05				0.025				0.0125		0.01
R-M-5		0.1			0.05				0.025				0.0125		0.01
R 7		0.5			0.25				0.125						0.05
R 3-4W			0.1			0.05			0.03			0.02			

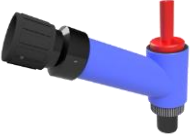
Description

We have 2 large families of microscopes:	
Microscopes with "small field of view":	They are generally used to position a part. Their size is small but they do not reach large fields of view.
Microscopes with "large field of view":	They are generally used to observe a part. Their fields of view are higher but they are more cumbersome. They are designated by a "W".

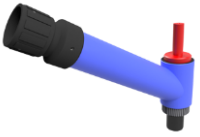
These 2 families can include different specificities:	
Mounts :	<div style="text-align: center;"></div> <p>On cylindrical chuck mounts (75-...) or tapered chuck mounts (70-...). See large choice on the last page.</p> <p>On tube, fixed on a rigid Ø between the elbow and the lense. Green part on figure B.</p>
Oculars (OCU) :	<div style="text-align: center;"></div> <p>This refers to the part of the microscope where the eye is resting. This element is adjustable and adapts to the vision of each human being.</p>
Elbows :	<div style="text-align: center;"></div> <p>They have different angles in order to correspond as well as possible to the ergonomics of each workstation. 90° = MA 116 / 110° = MA 117 120° = MA 113 and MA 130 / 135° = MA 118 180° = MA 121</p>
Illuminators (LED) :	<div style="text-align: center;"></div> <p>They are optional and can be mounted on the lens. Some are integrated into the microscopes and have the advantage of reducing the size of this construction. They are designated by the letter "E".</p>
Goniometers :	<div style="text-align: center;"></div> <p>Most of our microscopes do not include them but we can, upon request, adapt them to almost all our models. This angle measuring instrument is designated by the letter "G".</p>
Lenses (OBJ) :	<div style="text-align: center;"></div> <p>They can be interchanged. You can buy a microscope and several lenses. This applies to: MA 111 / MA 112 / MA 112 / MA 112-2 / MA 113 / MA 116 / MA 118 / MA 121</p> <div style="text-align: center;"></div> <p>They can be integrated into the microscope. This applies to: MA 112-2E / MA 117SZ / MA 117SZ-E</p> <p>They can be "zoom". This allows the field of view to be changed without changing the working distance. These optics are designated by the letter "Z".</p>
Reticles (R...) :	<div style="text-align: center;"></div> <p>Reticles for microscopes with small fields of view are usually supplied with R1 reticles (cross and 12 circles).</p> <p>Reticles for microscopes with large fields of view are usually supplied with R2-1-4-2 reticles (cross and 38 circles).</p> <p>Other reticles are also available. Caution: reticles are not interchangeable.</p> <p>Special versions: Other reticle versions are available according to customer specifications. However, they do require a financial contribution for the preparation cost.</p>

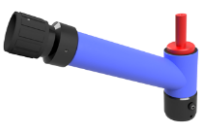
OptiMIC
Microscope with small field of view and interchangeable lens

Microscope with small field of view and interchangeable lens 90° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p style="text-align: center;">MA 111</p>	M20x0.75	125	77	13.8	147	10X
				9.2	72	15X
				6.9	102	20X
				5.5	55	25X
				4.6	47	30X
				3.4	34	40X
				2.7	32	50X
				2.3	18	60X
				1.3	13	100X
Options (see last page) LED circular illuminator Ø18 : MA 114a-08 LED transmitted illuminator Ø30 : MA 212-95 90° redirection prism : MA 123 XY table 20x20mm : MA 110-2-040 Cylindrical or tapered chuck mounts : 75-... or 70-... Storage case						
 Variants LED integrated circular illuminator : MA 114b-01 Goniometer : MA 129-...						

Microscope with small field of view and interchangeable lens 120° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p style="text-align: center;">MA 112</p>	M20x0.75	110	77	13.8	145	10X
				9.2	100	15X
				6.9	78	20X
				5.5	65	25X
				4.6	54	30X
				3.4	40	40X
				2.7	31	50X
				2.3	16	60X
				1.3	14	100X
Options (see last page) LED circular illuminator Ø18 : MA 114a-08 LED transmitted illuminator Ø30 : MA 212-95 90° redirection prism : MA 123 XY table 20x20mm : MA 110-2-040 Cylindrical or tapered chuck mounts : 75-... or 70-... Storage case						
Variant Goniometer : MA 129-...						


OptiMIC
Microscope with small field of view and interchangeable lens

Microscope with small field of view and interchangeable lens 120° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p>MA 112-2</p>	M20x0.75	150	77	13.8	170	10X
				9.2	145	15X
				6.9	100	20X
				5.5	77	25X
				4.6	65	30X
				3.4	53	40X
				2.7	40	50X
				2.3	33	60X
				1.8	25	75X
1.3	15	100X				
Options (see last page) LED circular illuminator Ø18 : MA 114a-08 LED transmitted illuminator Ø30 : MA 212-95 90° redirection prism : MA 123 XY table 20x20mm : MA 110-2-040 Cylindrical or tapered chuck mounts : 75-... or 70-... Storage case						
Variant Goniometer : MA 129-...						


Microscope with small field of view and integrated LED illuminator. 120° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p>MA 112-2E</p>	M20x0.75	150	77.5	13.8	170	10X
				9.2	145	15X
				6.9	100	20X
				5.5	77	25X
				4.6	65	30X
				3.4	53	40X
				2.7	40	50X
				2.3	33	60X
				1.8	25	75X
1.3	15	100X				
Options (see last page) LED transmitted illuminator Ø30 : MA 212-95 XY table 20x20mm : MA 110-2-040 Cylindrical or tapered chuck mounts : 75-... or 70-... Storage case						


OptiMIC


Compact microscope with small field of view and integrated LED illuminator

Compact microscope with small field of view and integrated LED illuminator 110° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 MA 117E-2	M20x0.75	170	44	13.8	65	10X
				9.2	33	15X
				6.9	41	20X
				5.5	32	25X
				4.6	15	30X
Options (see last page) LED transmitted illuminator Ø30 : MA 212-95 XY table 20x20mm : MA 110-2-040 Cylindrical or tapered chuck mounts : 75-... or 70-... Storage case						

OptiMIC
Compact microscope with small field of view


Compact microscope with small field of view 110° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 MA 117SZ-1	M20x0.75	150	34.5	13.8	65	10X
				9.2	45	15X
				6.9	43	20X
				5.5	32	25X
Options (see last page) LED transmitted illuminator Ø30 : MA 212-95 XY table 20x20mm : MA 110-2-040 Cylindrical or tapered chuck mounts : 75-... or 70-... Storage case						

Compact microscope with small field of view 110° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 MA 117SZ-2	M20x0.75	170	34.5	13.8	75	10X
				9.2	45	15X
				6.9	53	20X
				5.5	42	25X
				4.6	27	30X
Options (see last page) LED transmitted illuminator Ø30 : MA 212-95 XY table 20x20mm : MA 110-2-040 Cylindrical or tapered chuck mounts : 75-... or 70-... Storage case						

Compact microscope with small field of view 110° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 MA 117SZ-3	M20x0.75	190	34.5	13.8	95	10X
				9.2	50	15X
				6.9	60	20X
				5.5	50	25X
				4.6	25	30X
Options (see last page) LED transmitted illuminator Ø30 : MA 212-95 XY table 20x20mm : MA 110-2-040 Cylindrical or tapered chuck mounts : 75-... or 70-... Storage case						
Variant Goniometer : MA 129-...						


OptiMIC

Compact microscope with small field of view

Straight and compact microscope with small field of view 90° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 MA 121C-010	M20x0.75	163	30	13.4	25	10X
				8.5	17	16X
				4.4	19	30X


Options (see last page)

LED transmitted illuminator Ø30 : MA 212-95
Cylindrical or tapered chuck mounts : 75-... or 70-...
Storage case

Mini microscope with small field of view reversed image 110° elbow	Chuck mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 MA 118-020	M9x0.5	97	22	6.9	27	20X
				5.7	18	25X

Options (see last page)

LED transmitted illuminator Ø30 : MA 212-95
Cylindrical or tapered chuck mounts M9x0.5 : 75-029, 75-035 or 70-020
Storage case

Microscope with small field of view and interchangeable lens 135° elbow	Tube mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 MA 118-110	Ø25h7 aluminum	75	110	13.8	109	10X
				6.9	107	20X
				4.6	106	30X
				3.4	70	40X
				2.7	62	50X
				1.3	33	100X

Options (see last page)


LED circular illuminator Ø18 : MA 114a-08
LED transmitted illuminator Ø30 : MA 212-95
90° redirection prism : MA 123
Focus geared drive : MA 153-5-009
Quick-displacement column with geared drive : MA 333-S1
Ø25 mounts : MA 567-58 and MA 567-61
Storage case

Variants

Steel tubes Ø25h5 or Ø30h5. Tube lengths: 60 / 77 / 100 / 125 / 150
Lens end at Ø25
Goniometer : MA 129-...



OptiMIC
Microscope with small field of view and interchangeable lens

Microscope with small field of view and interchangeable lens 120° elbow	Tube mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p style="text-align: center;">MA 113-110</p>	Ø25h7 aluminum	90	110	13.8	260	10X
				9.2	160	15X
				6.9	115	20X
				5.5	90	25X
				4.6	80	30X
				3.4	60	40X
				2.7	50	50X
				2.3	45	60X
				1.8	35	75X
1.3	28	100X				


Options (see last page)

LED circular illuminator Ø18 : MA 114a-08
LED transmitted illuminator Ø30 : MA 212-95
90° redirection prism : MA 123
Focus geared drive : MA 153-5-009
Quick-displacement column with geared drive : MA 333-S1
Ø25 mounts : MA 567-58 and MA 567-61
Storage case

Variants

Steel tubes Ø25h5 or Ø30h5
Tube lengths : 60 / 77 / 100 / 125 / 150
Lens end at Ø25
Goniometer : MA 129-...



Microscope with small field of view and interchangeable lens 90° elbow	Tube mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p style="text-align: center;">MA 116-110</p>	Ø25h7 aluminum	85	110	13.8	230	10X
				9.2	162	15X
				6.9	120	20X
				5.5	97	25X
				4.6	80	30X
				3.4	55	40X
				2.7	47	50X
				2.3	40	60X
				1.8	30	75X
1.3	22	100X				

Options (see last page)


LED circular illuminator Ø18 : MA 114a-08
LED transmitted illuminator Ø30 : MA 212-95
90° redirection prism : MA 123
Focus geared drive : MA 153-5-009
Quick-displacement column with geared drive : MA 333-S1
Ø25 mounts : MA 567-58 and MA 567-61
Storage case

Variants

Steel tubes Ø25h5 or Ø30h5
Tube lengths : 60 / 77 / 100 / 125 / 150
Lens end at Ø25
Goniometer : MA 129-...



OptiMIC
Microscope with small field of view


Microscope with small field of view and interchangeable lens 135° elbow	Tube mount [mm]	Ocular to optical axis [mm]	Height elbow and lens [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p style="text-align: center;">MA 118-110</p>	Ø25h7 aluminum	75	110	13.8	109	10X
				6.9	107	20X
				4.6	106	30X
				3.4	70	40X
				2.7	62	50X
				1.3	33	100X

Options (see last page)

LED circular illuminator Ø18 : MA 114a-08
LED transmitted illuminator Ø30 : MA 212-95
90° redirection prism : MA 123
Focus geared drive : MA 153-5-009
Quick-displacement column with geared drive : MA 333-S1
Ø25 mounts : MA 567-58 and MA 567-61
Storage case

Variants

Steel tubes Ø25h5 or Ø30h5. Tube lengths: 60 / 77 / 100 / 125 / 150
Lens end at Ø25
Goniometer : MA 129-...

Straight microscope with small field of view and interchangeable lens 180° oriented	Tube mount [mm]	Tube length [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p style="text-align: center;">MA 121-110</p>	Ø25h7 aluminum	110	13.8	165	10X
			9.2	125	15X
			6.9	92	20X
			5.5	73	25X
			4.6	60	30X
			3.4	48	40X
			2.7	35	50X
			2.3	30	60X
			1.8	26	75X

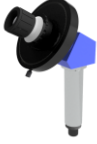
Options (see last page)

LED circular illuminator Ø18 : MA 114a-08
LED transmitted illuminator Ø30 : MA 212-95
90° redirection prism : MA 123
Focus geared drive : MA 153-5-009
Quick-displacement column with geared drive : MA 333-S1
Ø25 mounts : MA 567-58 and MA 567-61
Storage case

Variants

Steel tubes Ø25h5 or Ø30h5
Goniometer : MA 129-...

OptiMIC
Microscope with large field of view and goniometer


Microscope with large field of view and goniometer 120° elbow	Tube mount [mm]	Ocular to optical axis [mm]	Tube length [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 <p style="text-align: center;">MA 130GW-110</p>	Ø30h5 steel	97	110	22.5	92	10X
				11.25	90	20X
				7.5	103	30X
				5	71	50X
				2.25	39	100X

Options (see last page)

LED circular illuminator Ø18 : MA 114a-08
LED transmitted illuminator Ø30 : MA 212-95
90° redirection prism : MA 123
Focus geared drive : MA 153-5-010
Precision column : MA 173-S2
Quick-displacement column with geared drive : MA 333-S2
Storage case

Variant


Lens end at Ø25

Microscope with large field of view, goniometer and 6.5X zoom 120° elbow	Tube mount [mm]	Ocular to optical axis [mm]	Lens	Field of view Ø [mm]	Working distance [mm]	Magnification
	Ø39.7 aluminum	120	0.25X	85.2 - 13.2	356	3 - 16X
			0.50X	42.6 - 6.6	175	5 - 33X
			0.75X	28.4 - 4.4	113	8 - 49X
			---	21.3 - 3.3	92	10 - 65X
			1.50X	14.2 - 2.2	51	15 - 98X
			2.00X	10.7 - 1.7	36	20 - 130X

Options (see last page)

LED circular illuminator Ø40 : MA 114-033
LED transmitted illuminator Ø59 : MA 212-92
Adapter ring for illuminator Ø40 on zoom : 85-177
Focus geared drive : MA 153-5-027
Fine displacement focus geared drive : MA 154-5-018
Precision column : MA 173-S4
Quick-displacement column with geared drive : MA 333-S4
Additional lens : POC-101
Storage case

OptiMIC
Microscope with large field of view


Microscope with large field of view 120° elbow	Tube mount [mm]	Ocular to optical axis [mm]	Tube length [mm]	Field of view Ø [mm]	Working distance [mm]	Magnification
 MA 130W-110	Ø30h5 steel	97	110	22.5	92	10X
				11.25	90	20X
				7.5	103	30X
				5	71	50X
				2.25	39	100X

Options (see last page)

LED circular illuminator Ø18 : MA 114a-08
 LED transmitted illuminator Ø30 : MA 212-95
 90° redirection prism : MA 123
 Focus geared drive : MA 153-5-010
 Precision column : MA 173-S2
 Quick-displacement column with geared drive : MA 333-S2
 Storage case

Variant




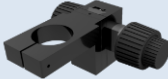
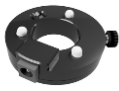
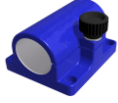
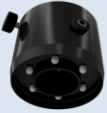
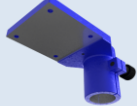






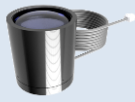

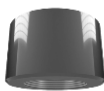





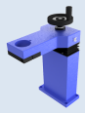





Lens end at Ø25

Microscope with large field of view and 6.5X zoom 120° elbow	Tube mount [mm]	Ocular to optical axis [mm]	Lens	Field of view Ø [mm]	Working distance [mm]	Magnification
	Ø39.7 aluminum	120	0.25X	85.2 - 13.2	356	3 - 16X
			0.50X	42.6 - 6.6	175	5 - 33X
			0.75X	28.4 - 4.4	113	8 - 49X
			---	21.3 - 3.3	92	10 - 65X
			1.50X	14.2 - 2.2	51	15 - 98X
			2.00X	10.7 - 1.7	36	20 - 130X

Options (see last page)

LED circular illuminator Ø40 : MA 114-033 + Adapter Ring : 85-177
 LED transmitted illuminator Ø59 : MA 212-92
 Adapter ring for illuminator Ø40 on zoom : 85-177
 Focus geared drive : MA 153-5-027
 Fine displacement focus geared drive : MA 154-5-018
 Precision column : MA 173-S4
 Quick-displacement column with geared drive : MA 333-S4
 Additional lens : POC-101
 Storage case

Options

	90° redirection prism Attachment Ø18 MA 123		Geared drive Range 40mm Interior Ø25 / Ø30 / Ø39.7 MA 153-5
	6 LED incident illuminator Interior Ø18 MA 114a-08		Fine displacement geared drive Range 40mm Interior Ø25 / Ø30 / Ø39.7 MA 154-5
	3 LED incident illuminator Interior Ø25 MA 114-047		Parallel support Attachment Ø25 MA 567-58
	6 LED incident illuminator Interior Ø25 MA 114a-09		Perpendicular support Attachment Ø25 MA 567-61
	54 LED incident illuminator Interior Ø25 MA 114-029		Cylindrical chuck mount Attachment M20x0.75 Ø4 to Ø25mm / lg 20 to lg 120mm 75-005 / 75-001
	84 LED incident illuminator Interior Ø40 MA 114-033		Tapered chuck mount Attachment M20x0.75 Jaw N°1 / 2 / 4 70-002 / 70-003 / 70-004
	LED transmitted illuminator Mounting and exterior Ø30 MA 212-095		Tapered chuck mount Attachment M20x0.75 ISO 30 / 40 with or without pull 70-010 / 70-043 / 70-073
	LED trans. telecentric illuminator Mounting and exterior Ø56 MA 212-092		Tapered chuck mount Attachment M20x0.75 W10 / W12 70-019 / 70-020
	Adapter ring for incident illuminator Ø40 on Z1 zoom without coaxial illuminator 85-177		Tapered chuck mount Attachment M20x0.75 Japan BT 30 / 40 70-040 / 70-055
	Adapter ring for incident illuminator Ø25 or Ø40 on Z1 zoom with coaxial illuminator 85-176-02		Tapered chuck mount Attachment M20x0.75 DIN 69871-A40-NC / M16 70-057
	Quick-displacement column for Ø25 / 30 / 39.7 MA 333-S1 / S2 / S4		Tapered chuck mount Attachment M20x0.75 HSK-A32 / A40 / A63 70-063 / 70-060 / 70-065
	Precision column range 150mm for Ø30 / 39.7 MA 173-S2 / S4		Tapered chuck mount Attachment M20x0.75 HSK-E25 70-068
	Heavy-duty arm stands for geared drive heights : 350 / 450 / 550 CLC-048		Cylindrical chuck mount Attachment M9x0.5 Ø5 / Ø6 / Ø10 / Ø12 75-029 / 75-035
	Rotation mechanism ±90° for geared drive 67-071		Tapered chuck mount Attachment M9x0.5 W12 70-020-01