



Leica MZ95

Modular high-performance
stereomicroscope with 9.5 : 1 zoom

Leica
MICROSYSTEMS

The advanced class for research and precision work

Increasingly more complex tasks in science and industry require application-specific solutions with top-notch quality. Leica Microsystems is a leader in the development of innovative quality optics and enjoys an excellent reputation in research labs and companies.

The Leica M series consists of a high-quality and convincing stereomicroscope program for all applications. The Common-Main-Objective design consists of two parallel beam paths with a common main objective. This lavish and naturally lead-free optical system guarantees fatigue-free viewing, constant image sharpness during magnification change and allows adapting all types of accessories.

The Leica MZ9_s high-performance stereomicroscope was developed for research and education, for precision work and quality control. Its performance meets these refined demands: 300 Lp/mm resolution using the standard 1× plan objective, 0.63× – 6× zoom, extremely high image contrast and crystal clear image sharpness up to the edge of the image field.

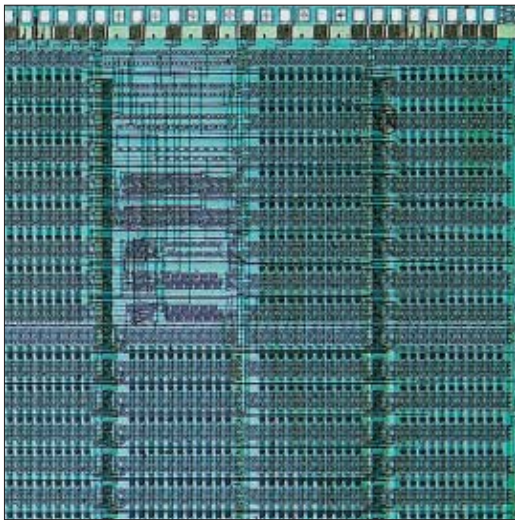
The modular stereomicroscopes are characteristic for their expandability. The widest selection of ergonomics accessories, binocular tubes, objectives as well as video and digital cameras is also available for the antistatic Leica MZ9_s. Such a high number of adjustment options for different users and working situations can only be found in this stereomicroscope series.

The elegant design of the Leica MZ9_s stems from the clean lines and the outstanding ergonomics. The soft shapes, and the use of modern materials, make handling easy and contribute to fatigue-free working.

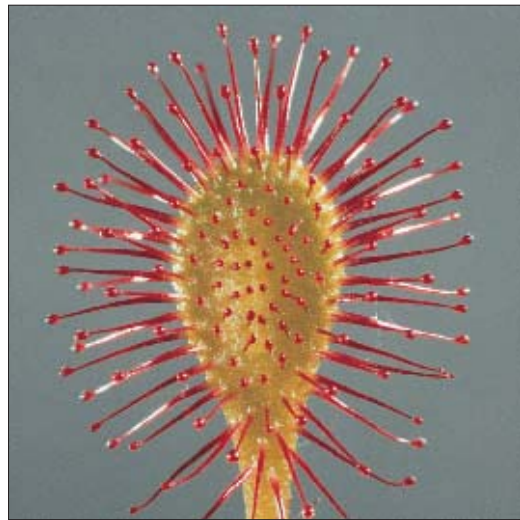
Right: Leica MZ9_s with 45 °inclined binocular tube, 1× plano objective, incident-light stand and coarse/fine focusing.



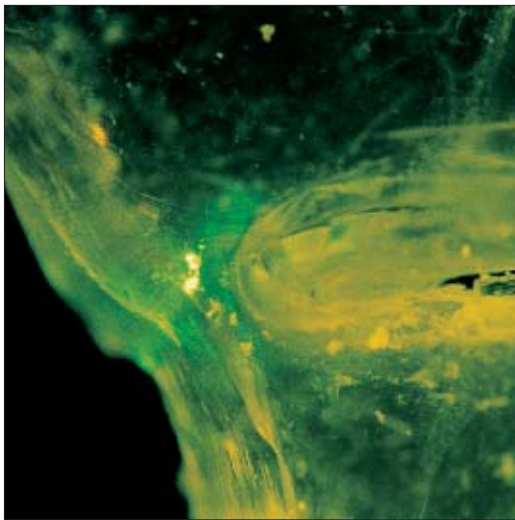
Circuit board



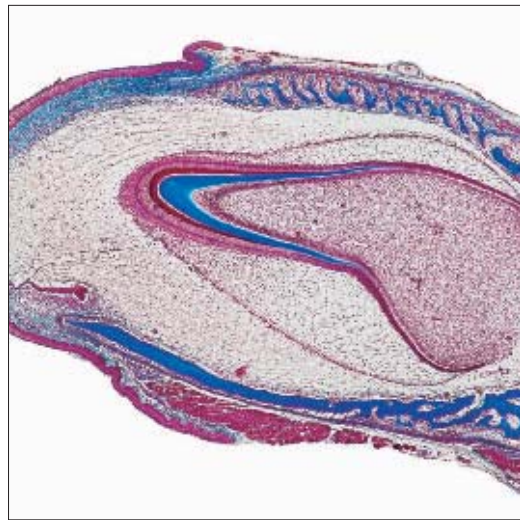
Drosera



Recycled polymer



Tooth development (cat)



Leica MZ9s with ErgoTube™ 10°–50°,
1× plano objective, high-performance
stand HL for transmitted light (bright
field), and coarse/fine focusing.

Leica Design
by Ernest Igl/Christophe Apothéloz





Imaged information in new dimensions

Leica Microsystems is the global leader in the production of precision optical instruments, and has always had a clear goal: to present imaged information with exceptional high fidelity.

9.5 : 1 zoom

Three-dimensional, undisturbed objects and flat specimens can be viewed in large fields and continuously magnified from 6.3 to 60 times, with optical accessories even up to 600 times. The lead-free, parfocally-matched optical system ensures constant image sharpness throughout the zoom range.

Resolution up to 750 line-pairs / mm

The powerful planachromatic objective 1× replicates flat objects, such as thin sections or wafers, completely flat and very sharp – at a comfortable working distance of 81 mm. A reso-

lution of 300 Lp/mm, extremely high image contrast and very high image sharpness offer a maximum of image information.

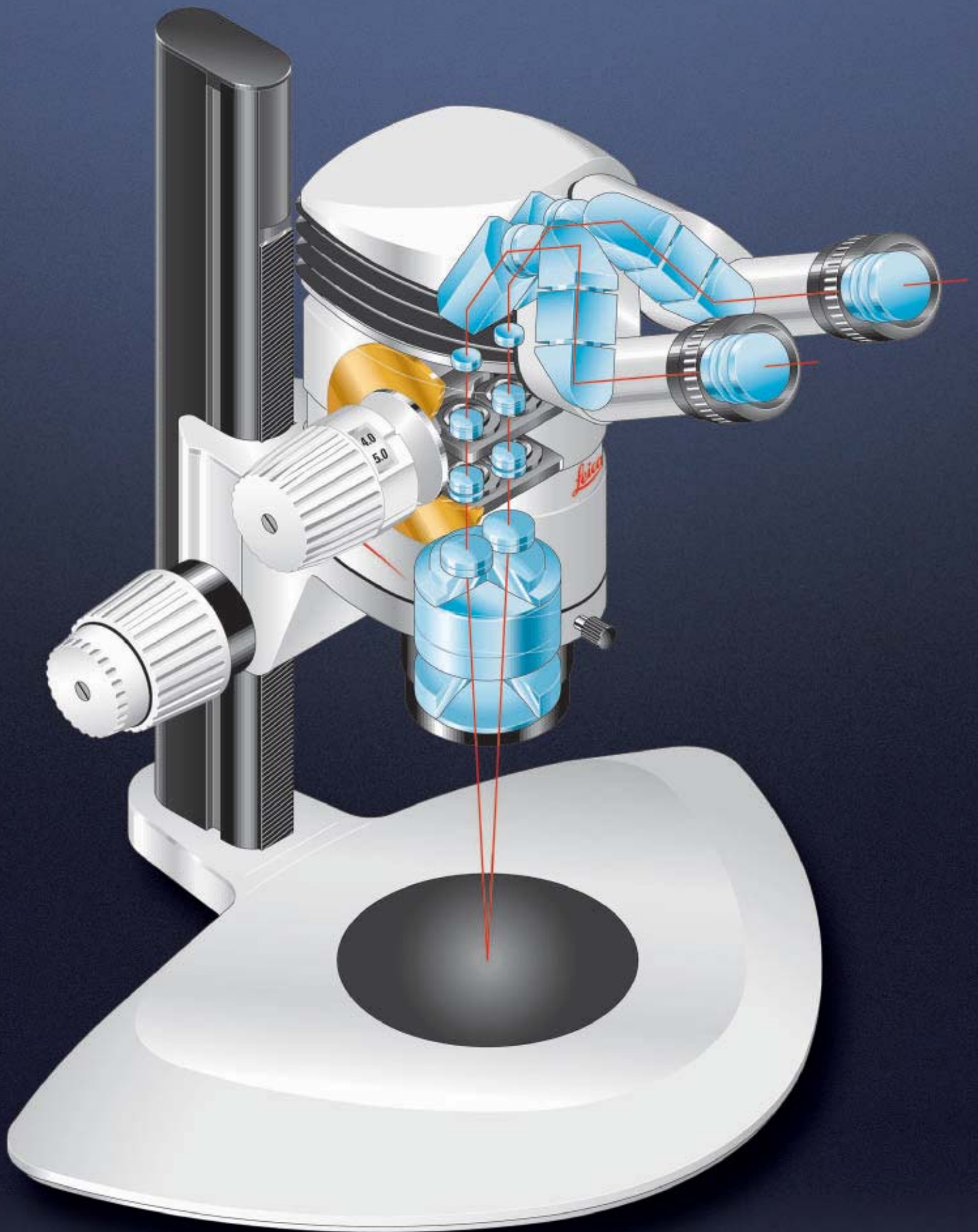
The **planapochromatic objectives** are ideally suited for observing transparent, low-contrast objectives that are commonly found in medicine and biology. Perfect imaging of the smallest details and an unmatched color fidelity are guaranteed at a resolution of 375 Lp/mm with planapo 1× or 750 Lp/mm with planapo 2×.

Ergo objective

The new 0.4× – 0.63× ergo objective can focus ergonomically and sharply in the field of 90 mm (working distance 63.5 – 153.5 mm) without changing the comfortable viewing height. At the same, the magnification range can be expanded without time-consuming changes of the objective lens.



The planapochromatic objective 2× achieves a magnification of 600×, a numeric aperture of 0.25 and a resolution of 750 Lp/mm (with 40× eye-pieces). The plano objective 0.5× with its working distance of 135 mm offers plenty of free space for tools and manipulations at the object. All objectives are lead-free.



Total system with unlimited possibilities

Because of its modular design, its complete range of accessories, and the widest ergonomics program on the market, the Leica MZ95 is suitable for every investigational task, every type of instruction, every sort of documentation.

Accommodating people's differences

No other line of stereomicroscopes offers as many choices, from observation tubes to ErgoModules™ as does the M-Series from Leica. This means that the Leica MZ95 adapts to every user in any situation, providing fatigue-free working with relaxed body posture and head position. It is now universally accepted that an ergonomically-correct workplace has a positive effect on efficiency and productivity. An ergonomically-correct workplace also includes the **motor focus** for effortless and fatigue-free focusing.

ErgoTube® and ErgoModule® are registered in the "United States Patent and Trademark Office".

More room, more light for every job

The building blocks for the stand and illuminator enable the Leica MZ95 to be equipped for any task. The **high-performance stands for transmitted-light**, for example, ensure that transparent specimens are perfectly illuminated, whether for observation in bright field or dark field, and offer room for comfortable specialty stages such as the new **Leica MATS thermo stage**. The **swinging-arm stand** permits bulky objects such as circuit boards or geological specimens to be manipulated.

The coaxial illuminator effectively displays the surface contrasts of flat, highly-reflecting objects such as wafers or polished metals. The fluorescence illuminator, available with filter sets for various types of fluorescence (e.g. GFP), makes it possible to differentiate even the finest of fluorescing structures.

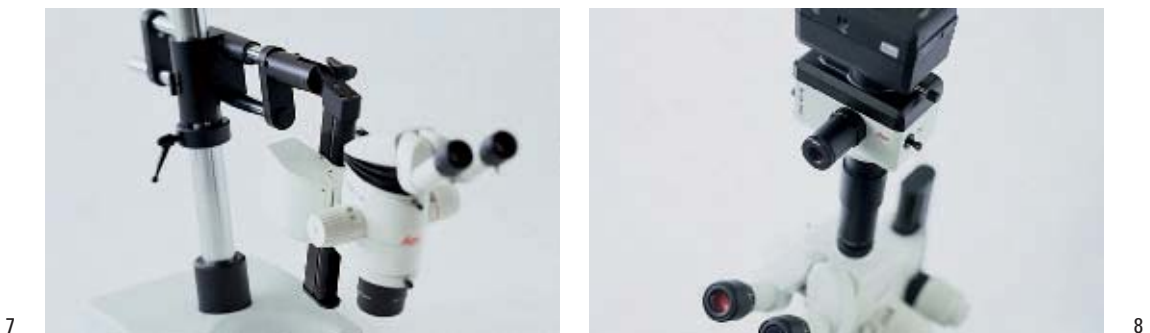
ESD protection

The Leica MZ95 optics carrier, 45° binocular tube, ErgoTube™, ErgoWedge™ 5°–25°, ESD swinging-arm stand and Leica L2 and Leica CLS cold-light sources consist of patented antistatic materials that protect against electrostatic discharge (ESD). Costly damages through electrostatic discharge during assembly and quality control of sensitive electronic components, such as circuit boards, integrated circuits and read heads, are avoided.

- 1 Motor focus for effortless focusing and for repetitive tasks
- 2 Leica IC A integrated analog video camera
- 3 Coaxial illuminator for flat, highly-reflecting surfaces, effectively allows imaging of small defects on silicon wafers.
- 4 Fluorescence module with various filter combinations (e.g. GFP) for optimal differential observation of fine fluorescing structures.
- 5 Attachment for vertical and oblique observation: All-round, bird's-eye view without tilting or turning the object
- 6 High-performance transmitted-light stands for the efficient illumination of transparent specimens. Example: Transmitted-light stand for bright- and dark field
- 7 Swing-arm stand for bulky objects readily adapts to most workstations without changing workflow.
- 8 Leica MPS60 photoautomat (shutter-piece with 1% spot measurement)



The Leica MZ95: A fine example of ergonomics and versatility



Documentation and training

Thanks to its modular design, the Leica MZ9s is perfectly suited for all modern documentation and image transmission techniques. Leica Microsystems offers a comprehensive program of accessories for the simple, quick setup of professional digital image recording systems, photo systems and conventional film or analog video cameras. The six video/photo tubes are universally applicable for Leica photomicrographic systems, digital, video, film or single-lens reflex cameras.

Leica DC camera line for professional microscopy

The Leica DC camera line allows rational creation, processing, advanced application and archiving of digitized images and is directed at professional microphotographers in medicine, natural science, research, development and industry. The product range stretches from standard camera for universal use to the high-end camera and is perfectly suited for all microscopic processes – for low-contrast and low-light incident light and transmitted light microscopy as well as low-light fluorescence processes.

Leica Microsystems offers not only a modular camera system for the professional recording of digitized images, but also suitable software with easy-to-use functions for inserting and editing images as well as image management software for archiving, processing and analysis. Images can be transferred to and from PhotoShop,

PaintShop Pro, Leica Image Manager or analysis systems (Leica QWin/ FW4000/Materials Workstation) using the TWAIN interface.

The Leica IC A video system

With the Leica IC A, an integrated video module of the high-performance class, workstations can be equipped ergonomically and economically without using additional adapters. The Leica IC A opens up new perspectives for image analysis in the natural sciences and quality control in industry, but also for live presentations to large audiences and digital post-processing.

The Leica MPS60 photoautomat

If documenting on conventional film, Leica offers advanced systems. The Leica MPS60 uses 1% spot metering and directs 100% of the light to the highly-sensitive measuring diode, enabling perfect photographs to be taken even under the low-light conditions of fluorescence applications.

Leica DC digital imaging system,
Leica MZ9s with trinocular video/
phototube

COMPACT



Leica MZ95 stereomicroscope

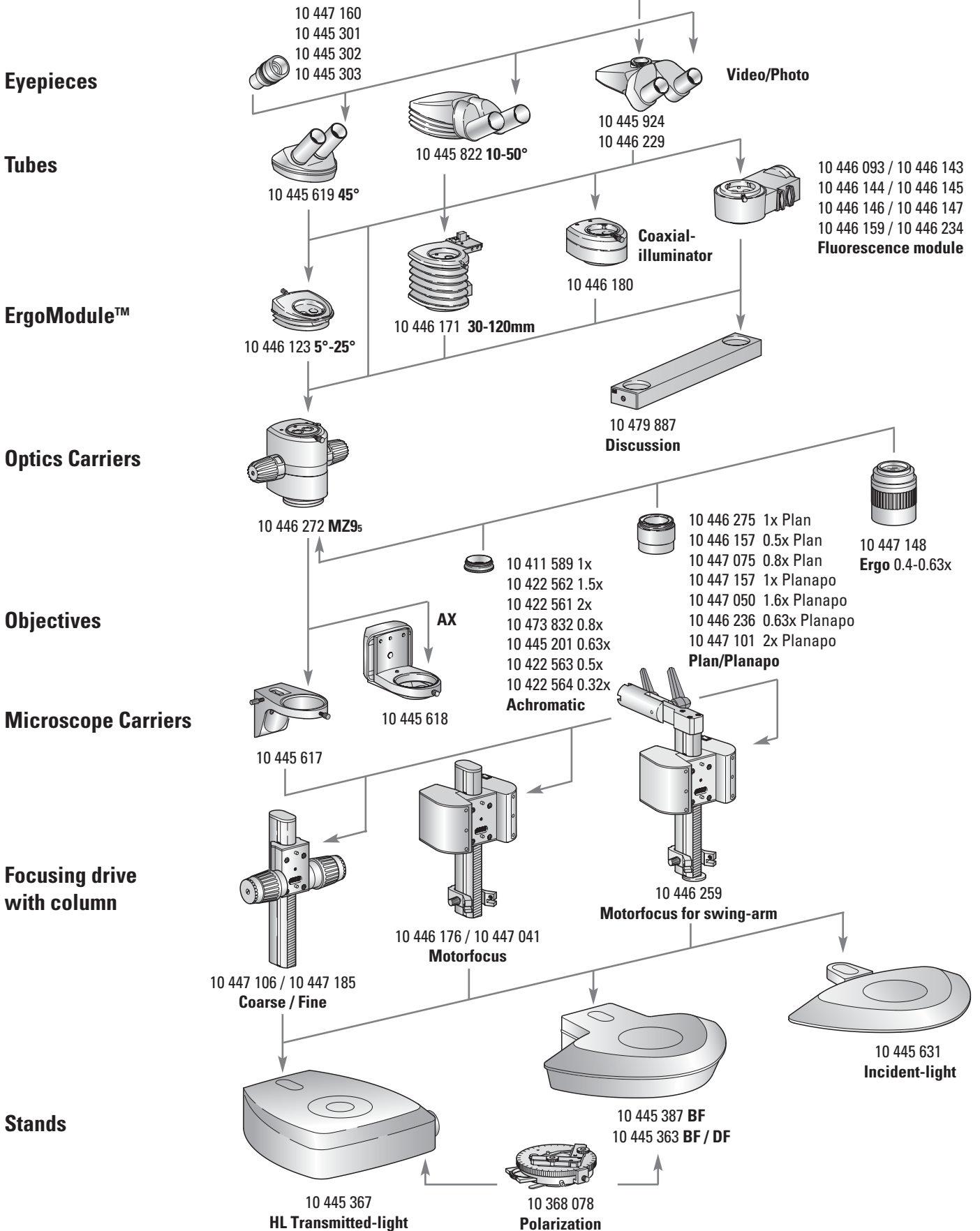
Design principle	Multiple-coated, high-performance optical system with two parallel beam paths (infinity optics) and one main objective (CMO), parfocal, lead-free
Surface resistance of antistatic material	<10 ¹¹ Ohm/square centimeter, discharge time <2 seconds from 1000V to 100V
Numerical aperture	0.25 with planapochromatic objective 2×, 0.2 with planapochromatic objective 1.6×, 0.1 with plano objective 1×, 0.125 with planapochromatic 1×
Resolution	300 line-pairs / mm with plano objective 1×, 375 line-pairs / mm with planapochromatic objective 1×, 600 line-pairs / mm with planapochromatic objective 1.6×, 750 line-pairs / mm with planapochromatic objective 2×
Magnification changer	9.5 : 1 zoom, 0.63×–6×
9 engageable ratchet positions	At 0.8, 1, 1.25, 1.6, 2, 2.5, 3.2, 4, 5
Magnifications	6.3× to 60× (with objective 1×/eyepieces 10×)
Total magnification	2× to 600×
Field diameter	1 mm to 53.8 mm (plano), max. 105 mm (achromat)
Working distances	81 mm (1× plano), 112 mm (0.8× plano), 135 mm (0.5× plano), 97 mm (0.63× planapo), 55 mm (1× planapo), 19 mm (1.6× planapo), 27–297 mm (achromats)
Planachromatic and planapochromatic objectives	1× (plano, planapo), 0.5× (plano), 0.8× (plano), 0.63× (planapo), 1.6× (planapo), 2× (Planapo), lead-free
Ergo objective 0.4× – 0.63×	90 mm adjustment range (working distance 63.5 – 153.5 mm)
Eyepieces	Distortion-free wide-field eyepieces for eyeglass wearers 10×/21B, 16×/14B, 25×/9.5B, 40×/6B, low-priced wide-field eyepieces 10×/21, soft eyecups
Dioptic correction	+5 to –5
Eyecups	Variable degree of eye contact
Binocular tubes	Apochromatic ErgoTube™ 10° to 50° with synchronized interpupillary adjustment Various ErgoModules™
Interpupillary distance	52 to 76 mm
Stands, illuminators	
Focusing drive	Coarse, fine, manual and motorized, tiltable for OEM adaptations (bonders)
Length of column	300 mm and 500 mm, side-faced profile
Microscope carrier	Two basic heights, optics carrier rotatable through 360°, stereoscopic or vertical observation
Swing-arm stand	ESD version with 400/25 m column, large stand with 550/50 mm column, alternative with clamp for 20–50 mm thick table tops
Universal stand	450/50 mm or 800/50 m column, 52 cm × 34 cm baseplate, magnetic carrier for stages
Transmitted-light stands	Bright field, bright and dark field, high-performance base
Stages	Various, incl. rotatable polarization stage, Leica MATS thermocontrol system with thermo stage
Illuminators	Various, inclined, coaxial, vertical, fiber-optic light guides and cold-light sources, ESD discharging, LED illumination (Laser Emitting Diode), fluorescence module
Accessories	
Photomicrographic systems	Leica MPS30 and MPS60, fully automatic, with data back
Video, filming, software for archiving and image processing	Various configurations, Leica IC A integrated video module, Leica DC camera line, Image Manager
Attachm. for second observers	For training and education
Drawing tube	For both left- and right-handed users
Double-iris diaphragm	For increasing the depth of field
Measuring graticules	For measuring lengths and for counting
Filter-slide housing	For two gelatine filters
Vertical and oblique observation	45° bird's-eye, all-round view moving optics not specimen

For the latest information and updates, please visit our homepage: www.stereomicroscopy.com

Quality comes first: When manufacturing components, Leica has access to an infrastructure which meets the most stringent demands, without compromise. Perfection is ensured by certified quality-assurance systems.

Leica, the standard for individual solutions

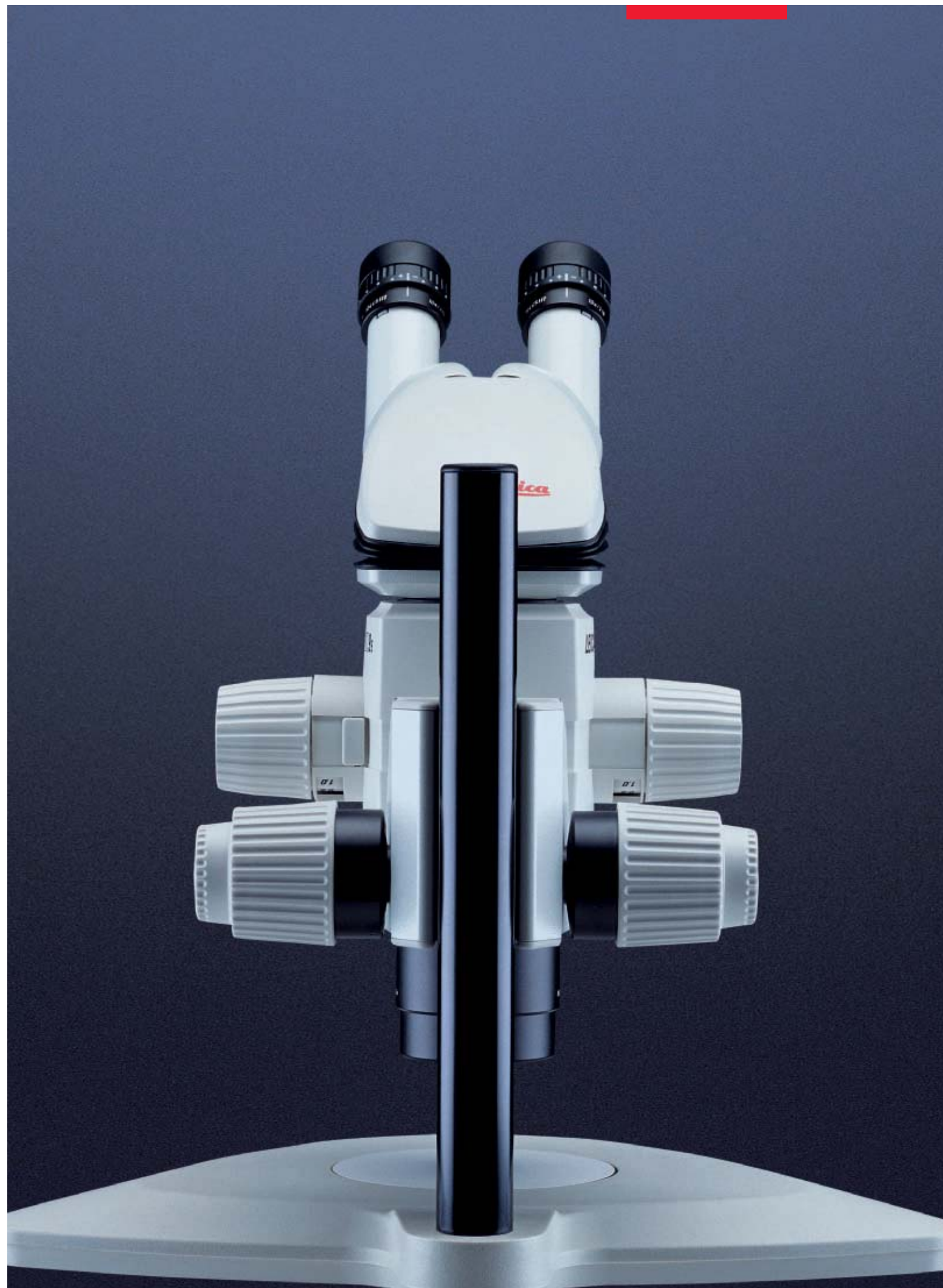
Leica Photoautomats & Digital Cameras



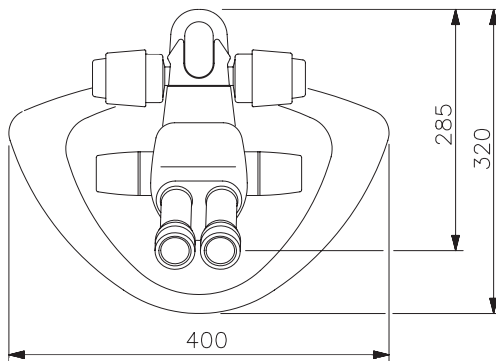
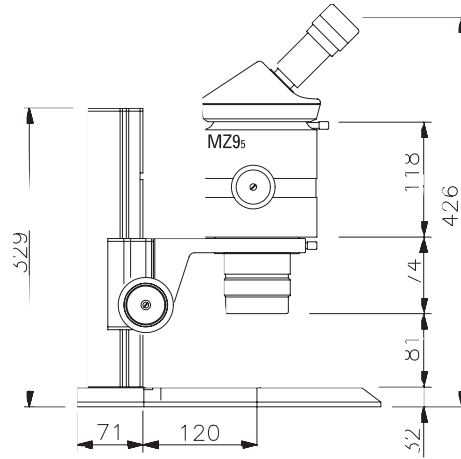
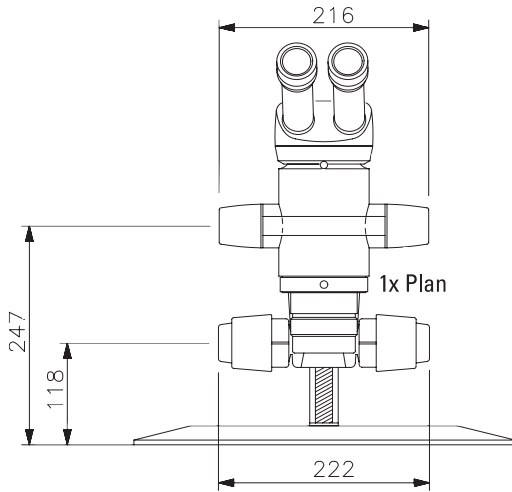
Optical data

Objectives		1× Plan 1× Achromat 0.8× Plan*		1× Planapo*		1.6× Planapo* 2× Achromat		0.63× Planapo* 0.8× Achromat		0.5× Plan* 0.63× Achromat		0.32× Achromat		0.5× Achromat		1.5× Achromat		0.4× – 0.63× Ergo objective			
		Working distance in mm																			
Eyepieces	Magnification changer position	81 Plan 89 Achromat 112 Plan		55 Planapo		19 Planapo 27 Achromat		97 Planapo 112 Achromat		135 Plan 149 Achromat		297 Achromat		187 Achromat		49 Achromat		63.5 Achromat		153.5 Achromat	
		Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)	Total magnification	Field diameter (mm)
10×/21B	0.63	6.3	33.3	7.9	26.6	12.6	16.7	5	42	3.9	53.8	2	105	3.2	65.6	9.4	22.3	4	52.5	2.6	80.8
	0.8	8	26.3	10	21	16	13.1	6.4	32.8	5	42	2.5	84	4	52.5	11.9	17.6	5	41.2	3.3	63.6
	1	10	21	12.5	16.8	20	10.5	8	26.3	6.3	33.3	3.1	67.7	5	42	14.9	14.1	6.4	32.8	4	51.2
	1.25	12.5	16.8	15.6	13.5	25	8.4	10	21	7.8	26.9	3.9	53.8	6.3	33.3	18.7	11.2	8.0	26.3	5	41.2
	1.6	16	13.1	20	10.5	32	6.6	12.8	16.4	10	21	5	42	8	26.3	23.9	8.8	10.2	20.6	6.6	31.8
	2	20	10.5	25	8.4	40	5.3	16	13.1	12.5	16.8	6.3	33.3	10	21	29.9	7	12.7	16.5	8.2	25.6
	2.5	25	8.4	31.3	6.7	50	4.2	20	10.5	15.6	13.5	7.8	26.9	12.5	16.8	37.3	5.6	15.9	13.2	10.3	20.4
	3.2	32	6.6	40	5.3	64	3.3	25.6	8.2	20	10.5	10	21	16	13.1	47.8	4.4	20.4	10.3	13.2	15.9
	4	40	5.3	50	4.2	80	2.6	32	6.6	25	8.4	12.5	16.8	20	10.5	59.7	3.5	25.5	8.2	16.5	12.7
	5	50	4.2	62.5	3.4	100	2.1	40	5.3	31.3	6.7	15.6	13.5	25	8.4	74.6	2.8	31.8	6.6	20.6	10.2
6	60	3.5	75	2.8	120	1.8	48	4.4	37.5	5.6	18.8	11.2	30	7	89.6	2.3	38.2	5.5	24.7	8.5	
16/14B	0.63	10.1	22.2	12.6	17.8	20.2	11.1	8.1	27.7	6.3	35.6	3.2	70	5	44.8	15	14.9	6.4	35	4	54.6
	0.8	12.8	17.5	16	14	25.6	8.8	10.2	22	8	28	4	56	6.4	35	19.1	11.7	8.2	27.3	5.3	42.3
	1	16	14	20	11.2	32	7	12.8	17.5	10	22.4	5	44.8	8	28	23.9	9.4	10.2	22	6.6	33.9
	1.25	20	11.2	25	9	40	5.6	16	14	12.5	17.9	6.3	35.6	10	22.4	29.9	7.5	12.7	17.6	8.2	27.3
	1.6	25.6	8.8	32	7	51.2	4.4	20.5	10.9	16	14	8	28	12.8	17.5	38.2	5.9	16.3	13.7	10.5	21.3
	2	32	7	40	5.6	64	3.5	25.6	8.8	20	11.2	10	22.4	16	14	47.8	4.7	20.4	11	13.2	17
	2.5	40	5.6	50	4.5	80	2.8	32	7	25	9	12.5	17.9	20	11.2	59.7	3.8	25.5	8.8	16.5	13.6
	3.2	51.2	4.4	64	3.5	102.4	2.2	41	5.5	32	7	16	14	25.6	8.8	76.4	2.9	32.6	6.9	21	10.6
	4	64	3.5	80	2.8	128	1.8	51.2	4.4	40	5.6	20	11.2	32	7	95.5	2.3	40.8	5.5	26.3	8.5
	5	80	2.8	100	2.2	160	1.4	64	3.5	50	4.5	25	9	40	5.6	119.4	1.9	51	4.4	32.9	6.8
6	96	2.3	120	1.9	192	1.2	76.8	2.9	60	3.7	30	7.5	48	4.7	143.3	1.6	61	3.7	39.5	5.7	
25×/9.5B	0.63	15.8	15	19.7	12.1	31.5	7.5	12.6	18.8	9.8	24.2	4.9	48.5	7.9	30.1	23.5	10.1	10	23.8	6.5	36.5
	0.8	20	11.9	25	9.5	40	5.9	16	14.8	12.5	19	6.3	37.7	10	23.8	29.9	7.9	12.7	18.7	8.2	29
	1	25	9.5	31.3	7.6	50	4.8	20	11.9	15.6	15.2	7.8	30.4	12.5	19	37.3	6.4	15.9	14.9	10.3	23
	1.25	31.3	7.6	39.1	6.1	62.5	3.8	25	9.5	19.5	12.2	9.8	24.2	15.6	15.2	46.6	5.1	19.9	11.9	12.9	18.4
	1.6	40	5.9	50	4.8	80	3	32	7.4	25	9.5	12.5	19	20	11.9	59.7	4	25.5	9.3	16.5	14.4
	2	50	4.8	62.5	3.8	100	2.4	40	5.9	31.3	7.6	15.6	15.2	25	9.5	74.6	3.2	31.8	7.5	20.6	11.5
	2.5	62.5	3.8	78.1	3	125	1.9	50	4.8	39.1	6.1	19.5	12.2	31.3	7.6	93.3	2.5	39.8	6	25.7	9.2
	3.2	80	3	100	2.4	160	1.5	64	3.7	50	4.8	25	9.5	40	5.9	119.4	2	51	4.7	32.9	7.2
	4	100	2.4	125	1.9	200	1.2	80	3	62.5	3.8	31.3	7.6	50	4.8	149.3	1.6	63.7	3.7	41.2	5.8
	5	125	1.9	156.3	1.5	250	1	100	2.4	78.1	3	39.1	6.1	62.5	3.8	186.6	1.3	79.6	3	51.4	4.6
6	150	1.6	187.5	1.3	300	0.8	120	2	93.8	2.5	46.9	5.1	75	3.2	223.9	1.1	95.5	2.5	61.7	3.8	
40/6B	0.63	25.2	9.5	31.5	7.6	50.4	4.8	20.2	11.9	15.8	15.2	7.9	30.4	12.6	19	37.6	6.4	16	14.9	10.4	23
	0.8	32	7.5	40	6	64	3.8	25.6	9.4	20	12	10	24	16	15	47.8	5	20.4	11.8	13.2	18.2
	1	40	6	50	4.8	80	3	32	7.5	25	9.6	12.5	19.2	20	12	59.7	4	25.5	9.4	16.5	14.5
	1.25	50	4.8	62.5	3.8	100	2.4	40	6	31.3	7.7	15.6	15.4	25	9.6	74.6	3.2	31.8	7.5	20.6	11.7
	1.6	64	3.8	80	3	128	1.9	51.2	4.7	40	6	20	12	32	7.5	95.5	2.5	40.8	5.9	26.3	9
	2	80	3	100	2.4	160	1.5	64	3.8	50	4.8	25	9.6	40	6	119.4	2	51	4.7	32.9	7.3
	2.5	100	2.4	125	1.9	200	1.2	80	3	62.5	3.8	31.3	7.7	50	4.8	149.3	1.6	63.7	3.8	41.2	5.8
	3.2	128	1.9	160	1.5	256	0.9	102.4	2.3	80	3	40	6	64	3.8	191	1.3	81.5	2.9	52.7	4.6
	4	160	1.5	200	1.2	320	0.8	128	1.9	100	2.4	50	4.8	80	3	238.8	1	101.9	2.4	65.8	3.6
	5	200	1.2	250	1	400	0.6	160	1.5	125	1.9	62.5	3.8	100	2.4	298.5	0.8	127.4	1.9	82.3	2.9
6	240	1	300	0.8	480	0.5	192	1.3	150	1.6	75	3.2	120	2	358.2	0.7	152.9	1.6	98.8	2.4	

* The magnification is increased by the factor 1.25× if plan and planapo objectives MZ12s are used.



Leica MZ9_s: The dimensions



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