Motic®

MORE THAN MICROSCOPY

C.P.M. COMPAGNIA PER LA MEDICINA S.R.L.



REVOLUTIONARY EDUCATIONAL DESIGN

RED LINE



RED LINE

The RED-Line is a self-confident statement in microscope hardware. Motic, as an experienced manufacturer of microscopes, has listened carefully to the special demands of the educational market. Unexperienced users will need reliable and easy-to-use instruments with repeatable image results to take their first steps into the “world of small things”. Taking these special requirements into consideration, this catalogue presents a complete new line of biological and stereo microscopes. New illumination technologies and further clever ideas with focus on young users have been implemented to make microscopic teaching more simple and effective.



REVOLUTIONARY EDUCATIONAL DESIGN



RED LINE WARRANTY 10 YEARS

Once again Motic with its RED-Line strides ahead of the competition by offering quality instruments for a limited budget. Our 10-Year Limited Warranty is supported by a complete parts inventory that assures availability even beyond the warranty period. A Motic microscope is therefore a solid investment that will pay off with years of hassle-free and effective work.

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RED100 SERIES

THE RED100 SERIES REPRESENTS THE IDEAL MICROSCOPE LINE FOR PRIMARY, SECONDARY AND HIGH SCHOOL STUDENTS













Student dedication of the RED100 Series starts with the microscope head. Depending on budget and teaching situation, monocular, dual-view or binocular options are available. For easy storage in a cabinet, the eyepiece tubes may be rotated 180°. The fixation by a countersunk screw prevents inadmissible removal by students.

The well positioned focus controls can easily be found by following the curves of the microscope stand. A relaxed seating position allows an intuitive evaluation of the sample by the coaxial coarse/fine focus mechanism. The convenient carrying handle on the back of the stand simplifies storage or just transport.

The optics of a microscope of course is the most important component for an instructive teaching. Motic supplies his RED100 Series with high quality EA objectives; Achromats with good colour reproduction, contrast and a time saving field flatness: flat samples like sections or smears can be evaluated fast and efficiently. The reversed positioning of the nosepiece gives good space for placing or exchanging the glass slides, avoiding the risk of damaging the sample or the objectives.

The standard WF10X/18mm eyepieces work perfectly fine with the EA Achromats. In binocular packages, diopter adjustment is possible on the left eyepiece tube. An eyepiece pointer is integral part of any RED100 package, allowing the teacher to point out regions of interest to the student. In order to prevent un-authorised removal, again countersunk screws fix the eyepieces and help to keep the equipment complete.

All RED100 microscopes incorporate a cordless LED illumination. Especially in educational environments, LEDs display several advantages over the traditional halogen bulbs: extended life time (>10.000 hours), no heat development (improved user safety), low power consumption (one single charge provides 70 hours of use) and a modern sensation of colour without corrective blue filter.

RED100 SERIES

- > Gliding stage with “One touch” sample clips or Mechanical stage with sample holder
- > High quality EA objectives
- > LED illumination





RED100



RED101



RED120

	RED100	RED101	RED120
NOSEPIECE			
Triple	●	●	
Quadruple			●
STAGE			
Gliding	●	●	
Mechanical			●
FOCUSING SYSTEM			
Coarse & fine	●	●	●
Coaxial			





RED130



RED131



RED132

RED130	RED131	RED132	
			NOSEPIECE
			Triple
•	•	•	Quadruple
			STAGE
			Gliding
•	•	•	Mechanical
			FOCUSING SYSTEM
			Coarse & fine
•	•	•	Coaxial

SPECIFICATIONS	RED100	RED101	RED120	RED130	RED131	RED132
Optical System						
Finite optical system, 160mm	●	●	●	●	●	●
Observation Tube						
Monocular	●		●	●		
Dual view monocular		●			●	
Binocular Siedentopf type						●
Inclination						
45° inclined, 360° rotating	●		●	●		
30° inclined and vertical, 360° rotating		●			●	
30° inclined, 360° rotating						●
Interpupillary distance						
55-75mm						●
Diopter adjustment						
On the left tube , +/- 5 diopter						●
Eyepieces						
WF10X/18mm with pointer, lockable	●	●	●	●	●	●
Nosepiece						
Reversed triple revolving nosepiece with click stops	●	●				
Reversed quadruple revolving nosepiece with click stops			●	●	●	●
EA Achromatic Objectives (DIN)						
4X/0.10, 10X/0.25, 40X/0.65/S	●	●				
4X/0.10, 10X/0.25, 40X/0.65/S, 100X/1.25/S-Oil			●	●	●	●
Stage						
Gliding stage with “one-touch” sample clips	●	●				
Built-in low position coaxial mechanical stage with sample holder and 77 x 25mm X/Y travel range			●	●	●	●
Stage size						
110mm x 110mm	●	●				
120mm x 120mm			●	●	●	●
Condenser						
Built-in 0.65 N.A. condenser with iris diaphragm	●	●				
Spiral mounted 1.25 N.A. Abbe condenser with iris diaphragm			●	●	●	●
Focus mechanism						
Separated coarse and fine focusing system with tension adjustment	●	●	●			
Coaxial coarse and fine focusing system with tension adjustment				●	●	●
Fine focus precision						
2µm minimum increment	●	●	●	●	●	●
Z-axis movement						
7mm			●	●	●	●
13mm	●	●				
Illumination						
Battery/Cordless LED 20mA, 3.5V, 70mW with intensity control	●	●	●	●	●	●

THE ACCESSORIES | RED100 SERIES



EYEPIECES (PER PIECE)
Huygens eyepiece H5X/14.5mm
Widefield eyepiece WF10X/18mm
Widefield eyepiece WF15X/12mm
Widefield eyepiece WF20X/11mm

MICROMETER EYEPIECES
Micrometer eyepiece WF10X/18mm,100 divisions in 10mm and crosshair

RETICLES
Reticle with 100 divisions in 10mm and crosshair (Ø19mm)
Reticle holder for 18mm eyepiece

ACHROMATIC OBJECTIVES - EA
Achromatic objective EA 4X/0.10
Achromatic objective EA 10X/0.25
Achromatic objective EA 20X/0.40
Achromatic objective EA 40X/0.65/S
Achromatic objective EA 60X/0.85/S
Achromatic objective EA 100X/1.25/S - Oil

ACHROMATIC OBJECTIVES, LOCKABLE
Achromatic objective 4X/0.10
Achromatic objective 10X/0.25
Achromatic objective 40X/0.65/S
Achromatic objective 100X/1.25/S - Oil

SPARE PARTS
Dust cover (size B)
Aluminium box
Immersion oil 5ml
Cleaning kit
Lens tissue paper
Motic slides 76x25mm
Motic coverslips 22x22mm

SPARE BULBS
LED 20mA, 3.5V, 70mW

RED200 SERIES

THE RED200 SERIES IS DESIGNED FOR ADVANCED BIOLOGY STUDENTS, TEACHERS AND LAB TECHNICIANS













The RED200 Series features the comfortable Siedentopf head concept with an interpupillary distance from 55-75mm. To compensate sight defects, the left eyetube allows a diopter adjustment of +/- 5 dpt.

The advanced level of the RED200 Series is also underlined by the large and heavy microscope body which ensures better stability, especially when adapting a camera. The large coaxial focusing controls are easily accessible; the fine focus drive has a minimum increment of 2µm for smooth and precise focusing “through” the sample. The cord-hanger at the back of the microscope helps in case of transport or storage, just wind up the cable.

The RED200 Series also displays an improved level of optical performance. Motic’s Semi-Plan (SP) objectives deliver a supreme contrast with crisp and clear images over a large field of view (20mm). All microscopes come with a set of 4X, 10X, 40X and 100X/Oil objectives to cover the regular magnification range. No need to say that 40X and 100X-Oil objectives come with an integrated spring mechanism, preventing damage to the front lens and specimen in case of unexperienced users.

To transform your microscope into a presentation station for teaching purposes, a trinocular microscope version is recommended. The RED223 and RED233 packages already include an 0.5X c-mount for the simple adaption of a digital camera.

RED200 SERIES

- > High precision Coaxial focusing controls
- > New Semi-Plan objectives
- > Koehler illumination
- > Intensity control adjustment





RED211



RED220

	RED211	RED220
CONDENSER		
Focusable	●	●
Focusable and centrable		
ILLUMINATION		
3W LED	●	●
Koehler 3W LED		





RED223



RED230



RED233

RED223	RED230	RED233	
			CONDENSER
●			Focusable
	●	●	Focusable and centrable
			ILLUMINATION
●			3W LED
	●	●	Koehler 3W LED

SPECIFICATIONS	RED211	RED220	RED223	RED230	RED233
Optical System					
Finite optical system, 160mm	●	●	●	●	●
Observation Tube					
Monocular	●				
Binocular Siedentopf type		●		●	
Trinocular Siedentopf type (0,5X c-mount adapter included)			●		●
Inclination					
30° inclined, 360° rotating	●	●	●	●	●
Interpupillary distance					
55-75mm		●	●	●	●
Diopter adjustment					
On the left tube , +/- 5 diopter		●	●	●	●
Eyepieces					
WF10X/20mm	●	●	●	●	●
Nosepiece					
Reversed quadruple revolving nosepiece with click stops	●	●	●	●	●
Achromatic Semi-Plan objectives - SP					
4X/0.10, 10X/0.25, 40X/0.65/S, 100X/1.25/S-Oil	●	●	●	●	●
Stage					
Built-in low position coaxial mechanical stage with sample holder and 77 x 50mm X/Y travel range	●	●	●	●	●
Stage size					
140mm x 135mm	●	●	●	●	●
Condenser					
Spiral mounted 1.25 N.A. Abbe condenser with iris diaphragm	●	●	●		
Focusable and centerable 1.25 N.A. Abbe condenser with iris diaphragm				●	●
Focus mechanism					
Coaxial coarse and fine focusing system with tension adjustment	●	●	●	●	●
Fine focus precision					
2µm minimum increment	●	●	●	●	●
Z-axis movement					
13mm	●	●	●		
19mm				●	●
Illumination					
LED 3W with intensity control	●	●	●		
LED 3W Koehler illumination with intensity control				●	●

THE ACCESSORIES | RED200 SERIES



EYEPIECES (PER PIECE)
Huygens eyepiece H5X/14.5mm
Widefield eyepiece WF10X/20mm
Widefield eyepiece WF15X/12mm
Widefield eyepiece WF20X/11mm

MICROMETER EYEPIECES
Micrometer eyepiece WF10X/20mm,100 divisions in 10mm and crosshair

RETICLES
Reticle with 100 divisions in 10mm and crosshair (Ø21mm)
Reticle holder for 20mm eyepiece

ACHROMATIC SEMI-PLAN OBJECTIVES - SP
Achromatic Semi-Plan objective SP 4X/0.10 (WD=17mm)
Achromatic Semi-Plan objective SP 10X/0.25 (WD=6.4mm)
Achromatic Semi-Plan objective SP 20X/0.40 (WD=0.73mm)
Achromatic Semi-Plan objective SP 40X/0.65/S (WD=0.45mm)
Achromatic Semi-Plan objective SP 60X/0.85/S (WD=0.1mm)
Achromatic Semi-Plan objective SP 100X/1.25/S-Oil (WD=0.14mm)

PLAN ACHROMATIC OBJECTIVES - PL
Plan achromatic objective PL 4X/0.10 (WD=17mm)
Plan achromatic objective PL 10X/0.25 (WD=1.5mm)
Plan achromatic objective PL 20X/0.40 (WD=0.55mm)
Plan achromatic objective PL 40X/0.65/S (WD=0.4mm)
Plan achromatic objective PL 60X/0.85/S (WD=0.1mm)
Plan achromatic objective PL 100X/1.25/S - Oil (WD=0.15mm)

POLARIZING SET
Polarizing set B.209NT
Rotating table

PHOTO AND C-MOUNT CAMERA ADAPTERS
0.35X C-mount camera adapter for 1/3" chip sensors
0.5X C-mount camera adapter for 1/3" and 1/2" chip sensors
0.65X C-mount camera adapter for 2/3" chip sensors
1X C-mount camera adapter (no lens)
Photo adapter (requires one of the photo eyepieces below)
2.5X photo eyepiece (to be used with Photo adapter)
4X photo eyepiece (to be used with Photo adapter)

SPARE PARTS
Eyecups (pair)
Dust cover (size C)
Immersion oil 5ml
Aluminium box
Cord hanger (pair)
Cleaning kit
Lens tissue paper
Motic slides 76x25mm
Motic coverslips 22x22mm

SPARE BULBS
LED light assembly 3W

RED30 SERIES

A STEREO MICROSCOPE SERIES OF SUPERB PERFORMANCE; IDEAL FOR FIRST STEPS INTO THE WORLD OF MICROSCOPY













Stereo microscopes have got the best preconditions for an easy access to microscopy. No need for sample preparation, just take a flower from the school garden or an insect from the window bench. Low magnifications allow the student to understand the next smaller dimension step, an upright image helps in orientation.

Motic's RED30S implements a 2-step magnification changer for both sample overview and detail information. A more convenient approach is presented by the 1:3 zoom optics of the RED39Z. Both stereos come with incident and transmitted LED illumination for bright, white and even illumination. All advantages of LED illumination can be found here: bright light, long lifetime, no heat development for the safety of user and living samples.

The transmitted light is implemented in a large microscope base with a minimum height: an easy and convenient manipulation of the sample is possible as the hands may rest on the table top. The microscope base is completely sealed to protect the illuminator from liquids that might be spilled. Fresh water samples can easily be evaluated without any risk. In case of checking a glass slide, Motic's "one-touch" sample clips help to fix the specimen.

The incident light is dedicated to non-transparent samples like minerals, fossils or plants. As incident and transmitted light can be regulated independently, illumination can be optimized for each specific sample. The cordless concept of the LED illumination with rechargeable batteries is ideal for field work activities; the large carrying handle as well as the light construction of the instrument suits even younger students.

Motics RED-Line stereo microscopes have combined reliable mechanics, superb optics and a user-friendly LED illumination. A fine combination that will deliver impressive image results for an enjoyable start into science.

RED30 SERIES

> User-friendly design
> Integrated LED illumination
> Carrying handle for easy transportation





RED30S



RED39Z

	RED30S	RED39Z
OBSERVATION TUBE		
Binocular 45° inclined	●	
Binocular 45° inclined, 180° rotating		●
OBJECTIVE SYSTEM		
Turret magnification changer (2X, 4X)	●	
3:1 zoom ratio (1X~3X)		●







SPECIFICATIONS	RED30S	RED39Z
Optical System		
Greenough	●	●
Observation Tube		
Binocular head	●	●
Inclination		
45° inclined	●	
45° inclined, 180° rotating		●
Interpupillary distance		
52-69mm	●	
51-77mm		●
Diopter adjustment		
On left tube , +/- 5 diopter	●	
On both tubes , +/- 5 diopter		●
Objectives system		
Turret changer with LED incident illumination	●	
Zoom, ratio 3:1		●
Objectives magnification		
2X - 4X	●	
1X ~ 3X		●
Working distance		
50mm	●	
60mm		●
Stand		
Fixed arm type stand	●	●
Base		
225 x 179mm	●	●
Column/Arm		
200mm high	●	
202mm high		●
Head holder		
Fixed	●	
For Ø66mm stereo head with LED incident illumination		●
Focus mechanism		
Coarse focusing system with tension adjustment	●	●
Focusing stroke		
46mm		●
47mm	●	
Incident illumination		
Battery/Cordless LED 3.5V / 100mW with intensity control	●	●
Transmitted illumination		
Battery/Cordless LED 3.5V / 100mW with intensity control	●	●

THE ACCESSORIES | RED30 SERIES



EYEPIECES (PER PIECE)
Widefield eyepiece WF5X/22mm
Widefield eyepiece WF10X/20mm
Widefield eyepiece WF15X/13mm
Widefield eyepiece WF20X/10mm
Widefield eyepiece WF30X/8mm

MICROMETER EYEPIECES
Micrometer eyepiece WF10X/20mm,140 divisions in 14mm and crosshair
Micrometer eyepiece WF10X/20mm, 70 divisions in 14mm
Micrometer eyepiece WF10X/20mm, 360° protractor with 1° divisions and crosshair
Micrometer eyepiece WF10X/20mm, 100 divisions in 10mm

RETICLES
Reticle with 140 divisions in 14mm and crosshair (Ø23mm)
Reticle with 70 divisions in 14mm (Ø23mm)
Reticle with 360° protractor with 1° divisions and crosshair (Ø23mm)
Reticle with 100 divisions in 10mm (Ø23mm)

SPARE PARTS
White stage plate, Ø 50mm
Black stage plate, Ø 50mm
Frosted stage plate, Ø 50mm
Dust cover (size B)
Eyecups (pair)
Cord hanger (pair)
Aluminium box
Cleaning kit
Lens tissue paper

SPARE BULBS
LED Assembly top light for RED30S
LED Assembly top light for RED39Z
LED Assembly bottom light

MOTICAM SERIES

EXCELLENT LIVE IMAGES FOR TEACHING AND CLASSROOM WORK



TABLET SOLUTIONS

MONITOR YOUR PROGRESS WITH THESE TOUCH SCREEN TABLET CAMERAS AND CONVERT YOUR MICROSCOPE INTO A STANDALONE DIGITAL MICROSCOPE SYSTEM; WITHOUT THE NEED OF A COMPUTER



Tablet Solutions will help microscope users visualize, edit and share the microscope images, enabling computer-free digital microscopy.

The Moticam Tablet Cameras consist of a customized Android tablet connected to a microscopy imaging camera. The android tablet is easily detachable and replaceable and is completely separate from the camera, providing maximum flexibility.

In just one click you will be able to capture high-quality images, measure and edit them as well as record HD videos. All it takes is a touch of your finger!









The individual situation in a classroom may be unique. To share positive image results nevertheless is a common teaching task. The combination of a RED-Line microscope with a member of the Moticam Series enables to display and to share excellent live images for presentations and discussions. The camera package also includes the easy-to-use Motic Images Plus software which allows to save still images and to record videos, as well as many other edition options. Living samples thus can be evaluated in an appropriate way.

For a group work approach in classrooms, we have two options with Wi-Fi data transfer that may suit perfectly. The Moticam X, which allows the access of multiple tablets or computers, so one microscope as imaging source is sufficient to feed up to 6 student devices with images for homework; or the Moticam X2 which is the advanced version. The difference is that the Moticam X2 has its own battery, and it allows you to integrate it to your own network either via Wi-Fi or via Ethernet cable, allowing more users to be connected. Capture, edit and share your images with our free App MotiConnect.

Adapting a Moticam to your microscope is quite easy: the eyepiece adapters allow to use even a monocular model as an image source. Trinocular RED-Line microscopes already come with the necessary c-mount adapter for the photo port.

Discover the possibilities and benefits of connecting a Moticam camera onto your RED-Line microscope. Multiply your teaching options, improve teaching efficiency!

Our Moticam selection suitable for you



Standard Live Resolution | Wi-Fi streaming | High Definition

Looking for more?

Ask for our complete Moticam range of cameras

RED50X WI-FI DIGITAL MICROSCOPE

BASIC MICROSCOPE WITH INTEGRATED WI-FI CAMERA OF 1.3MP, WILL MAKE YOUR LESSONS INTERACTIVE AND ENJOYABLE

Optical System	Finite optical system, 160mm
Observation Tube	Monocular with built in digital X type Wi-Fi camera
Inclination	30° inclined, 360° rotating
Camera sensor	CMOS 1/3" - 1.3MP - 1280 x 1024 pixels
Output	Wi-Fi transmission up to 1.3MP
Eyepieces	WF10X/18mm
Nosepiece	Reversed triple revolving nosepiece with click stops
Objective classification	Achromatic objectives, DIN
Objectives	4X/0.10, 10X/0.25, 40X/0.65/S - Lockable
Objective mounting thread	W 4/5"x1/36" (RMS standard)
Stage	Gliding stage with "one-touch" sample holder
Stage size	Ø105mm
Condenser	Built in 0.65 N.A. with disc diaphragm
Focus mechanism	Coarse focusing system
Z-axis movement	8mm
Illumination	LED 20mA, 3.5V, 70mW with intensity control
Power supply	Charger 100V/240V (CE) and rechargeable batteries

