

A word about us...

Radical Instruments are leading Indian manufacturers of reliable quality and competitively priced Microscopes, Projectors, Optical Instruments, Microtomes and Educational Laboratory Equipment for the last four decades.

We are committed to manufacture & supply quality products, through continual process of improvement, to meet customers' implied and stated needs for achieving their total satisfaction.

Since its inception, the company has built up its reputation by dint of hard work and skill of its Engineers, Technicians and Workers. Each one of them have the technical capabilities and expertise to assist the customers in defining long term & short term optical needs.

An extensive range of microscopes is available virtually for every Microscopic application in the field of Education, Biology, Medicine, Metallurgy, Electronics, different Industries etc.

Our strong technical knowledge makes us intensively aware of your needs, be it in product performance, technical information or prompt delivery. The considerable practical experience gained by us is easily accessible to customers because all sales enquiries and technical advice is handled by senior staff members, who have a sound technical background.

We are having technical collaboration with world renowned companies for their Optical Measuring Instruments, Cameras and Softwares on exclusive basis in India.

In conclusion we would like to convey a word of sincere thanks to our most valued clientele all over the world, who have been patronizing our products and services with unflinching confidence.

*Radical Instruments
Radical Scientific Equipments Pvt. Ltd.*



C-29

STUDENT BIOLOGICAL MICROSCOPES

RDM-2 DISSECTING MICROSCOPE

Having a stable round shaped base with joint revolving arm for moving the magnifying lens over the full area of the stage. The microscope can be focussed by a smooth rack pinion system and light adjustment through a reflecting mirror. Supplied with 10x and 20x eye-pieces. Stage size 85 x 75 mm.



RDM-2

RDM-4 SENIOR DISSECTING MICROSCOPE

Equipped with heavy round base body, provision for moving magnifying lens over full area of the stage which is easily replaceable by a special bull eye lens of 83 mm dia to increase the field of vision. Supplied with 10x and 20x eyepiece, a Bull Eye Lens and handrests. Object stage size 100 x 100mm with glass plate.



RDM-4

RM-1 PHOENIX MICROSCOPE

It is a light weight & handy. Easy to carry around and is simple to use. Vertical Monocular Body Height 275mm, Mechanical Tube Length 160mm, Fixed Square Stage 75x85mm, Rack and Pinion motion for focussing, Plane & Concave Mirror of 38mm. Achromatic Objectives : 10x, Huy., Eyepieces : 10x or 15x, Magnification : 100x or 150x.



RM-1

RM-1A SCHOOL MICROSCOPE

Designed to meet the need of science-teaching at school level, heavy body, horse shoe base, focussed by rack and pinion. Total height 285mm, Monocular Tube inclinable upto 90° and mechanical Tube length 160mm. Fixed Square stage size 100x100mm with stage clips. Supplied with 10x objective, 10x and 15x eyepieces. Magnification 100x and 150x.



RM-1A

RM-1B SCHOOL MICROSCOPE

Designed to meet the need of science-teaching at school level, heavy body, horse shoe base, triple revolving nosepiece focussed by rack and pinion. Total height 285mm, Monocular Tube inclinable upto 90° and Mechanical Tube Length 160mm. Fixed Square stage size 100x100mm with stage clips.

Ach. Objectives : 4x, 10x, & 40x
Huy. Eye pieces : 10x and 15x
Magnification : 40x to 600x



RM-1B

RM-1C SCHOOL MICROSCOPE

All specifications are as per Model RM-1B but with the addition of an **inclined Eyepiece Tube** for comfortable and convenient observation.



RM-1C

STUDENT BIOLOGICAL MICROSCOPES



RM-2

RM-2 STUDENT MICROSCOPE

With triple revolving nosepiece, tube length 160mm with coarse and fine motion knobs, **fitted with iris diaphragm** and stopper for slide safety. All parts are made of aluminium die-casting and oven painted. Packed in Thermocol packing with vinyl cover, duster, cleaning brush and operating manual.

Ach. Objectives : 10x and 40x
Huy, Eye pieces : WF 10x and H15x
Magnification : 100x to 600x



RM-2A

RM-2A STUDENT MICROSCOPE

With triple revolving nosepiece, tube length 160mm with coarse & fine motion knobs, **fitted with fixed condenser** N.A. 1.2, with iris diaphragm, filter holder and stopper for slide safety. All parts are made of aluminium die-casting and oven painted. Packed in Thermocol packing with vinyl cover, duster, cleaning brush and operating manual.

Ach. Objectives : 10x and 40x
Huy, Eye pieces : WF 10x and H15x
Magnification : 100x to 600x



RM-2B

RM-2B STUDENT MICROSCOPE

With triple revolving nosepiece, tube length 160mm with coarse & fine motion knobs, **fitted with sub-stage condenser** N.A. 1.2, with **iris diaphragm and filter holder, having rack & pinion movement** and stopper for slide safety. All parts are made of aluminium die-casting and oven painted. Packed in Thermocol packing with vinyl cover, duster, cleaning brush and operating manual.

Ach. Objectives : 10x and 40x
Huy, Eye pieces : WF 10x and H 15x
Magnification : 100x to 600x



RM-3

RM-3 MEDICAL MICROSCOPE

With quadruple revolving nosepiece, precise graduated slow motion reading to 0.002mm and separate coarse motion knobs, graduated mechanical stage, tube length 160mm fixed eyepiece tube, rack and pinion motion for abbe condenser N.A. 1.25 with iris diaphragm and filter holder. Packed in Thermocol Packing with filter, vinyl cover and operating manual.

Ach. Objectives : 10x, 40x, SL & 100x SL (Oil).
Eye pieces : WF 10x and H 16x



OT

OT Observation Tube

Inclined Observation Tube at 45 degrees available for above Microscope. Models RM-2, RM-2A, RM-2B and RM-3



ACCESSORIES FOR STUDENT BIOLOGICAL MICROSCOPES

RL-1 SUB-STAGE MICROSCOPE LAMP

Work able on direct 220/110 Volts AC/DC mains. Bulb 15 watts with off/on switch. Interchangeable with base reflector. Bakelite body with blue filter (Recommended for student and medical microscopes).



RL-1A Sub-stage LED cordless illuminator . Specification as per RL-1.

- (a) Eyepiece WF 10x or WF 15x
 - (b) Eyepiece H 6x, H 10x or H 15x
 - (c) Spare Ach. Objectives 4x or 5x
 - (d) Spare Ach. Objective 10x
 - (e) Spare Ach. Objective 40x SL
 - (f) Ach. Objective 100x SL
 - (g) Semi-Plan Objective 100x SL
 - (h) Semi-Plan Objective Set 4x, 10x, 40x and 100x
 - (i) DIN Size Semi-Plan Objective Set 4x, 10x & 100x
 - (j) Observation Tube, inclined at 45° for RM-2, RM-2A, RM-2B and RM-3-OT
 - (k) Spare Halogen Bulb 6V-20W
 - (l) Spare Bulbs 15 Watts/220V
 - (m) Wooden Storing Cabinet with Lock & Key (Student/Laboratory Microscopes)
 - (n) Replaceable, graduated drawtube
 - (o) Detachable Mechanical Stage
 - (p) Coaxial Mechanical Stage
- RA-9** Reflector : 50mm, diameter having plane and concave sides with Gimble for Student/Medical Microscope



LABORATORY MICROSCOPES



RM-600

RM-600 RADICAL MONOCULAR LABORATORY MICROSCOPE

Monocular observation head inclined at 45°, rotatable through 360°, optical tube length 160mm, quadruple nosepiece having positive click stops, precise graduated slow motion knobs and separate coarse motion knobs, fixed square stage 115x115mm with stage clips, condenser unit having rack pinion movement with Iris diaphragm filter holder and adjustable 50mm Plano-Concave mirror. Packed in thermocol box with vinyl cover, duster, cleaning brush, filter etc.

Ach. Objectives : 4x-10x and 40x SL
 Huy. Eyepiece : 10x and 16x
 Magnification : 25x to 640x



RM-600B

RM-600B RADICAL BINOCULAR LABORATORY MICROSCOPE

Binocular observation head inclined at 45°, rotatable through 360°, optical tube length 160mm, quadruple nosepiece having positive click stops, precise graduated slow motion knobs and separate coarse motion knobs, fixed square stage 115x115mm with detachable graduated mechanical stage, condenser unit having rack-pinion movement with Iris diaphragm and filter holder.

Adjustable 50mm Plano-Concave mirror interchangeable with sub-stage illuminator 220/110V-15W. Packed in thermocol box with vinyl cover, duster, cleaning brush, filter etc.

Ach. Objectives : 4x-10x and 40x SL
 Huy. Eyepieces : 10x and 16x (Paired)
 Magnification : 25x to 640x.



Co-axial Mechanical Stage



Built-in light base 20W halogen

ACCESSORIES FOR LABORATORY MICROSCOPES

Model RM-600/600B

- Detachable Mechanical Stage.
- Coaxial Mechanical Stage.
- Sub-Stage Lamp 15W/110/220V.
- Sub-Stage Lamp 15W Halogen with variable control transformer.
- Built-in light base 20W Halogen.
- Ach. Objective 100X SL oil Immersion.
- Eyepiece WF 10X, WF 15X, 45X, H10X or H16X.



ADVANCED RESEARCH MICROSCOPES

RMH - 4 Series

RMH Series of Research Microscopes are most advanced for education, training, analytical and research work in colleges, laboratories, hospitals and research institutes.

It has a flat structure of body & base for stability and sturdiness and is fitted with standard quadruple revolving nose-piece, having threads of international standard. Stage size 140 x 120 mm, low co-axial controls for easy slide manipulation on both the axis, with graduation and verniers, range of movement 80 x 50 mm. The condenser unit is having rack and pinion movement with Abbe condenser N.A. 1.25, Iris-diaphragm and filter holder.

The Electronic built-in base illumination system is fitted with a Halogen lamp of 6V 20W operated on 220 volts or 110 volts. Average life of the bulb is 2000 hours. Built-in transformer is controlled by variable solid state electronic knob. Plano-concave reflector attachment can be easily replaced with sub-stage illuminator assembly.

The series are available in three different inclined observation heads, fitted with large prisms for extra clarity and contrast. These are interchangeable with Monocular, Binocular and Trinocular heads inclined at 45° and rotatable through 360°.

Supplied complete with standard optical combination, accessories & operating manual in a thermocol box or in a plywood storing cabinet.

The following optical combination are available with RMH series :

- Achromatic Objectives, parfocalised and pre-centred with each microscope.
- Standard Semi-Plan Objectives, colour corrected for flat-field images & having hard coated lenses for high transmission contrast.
- DIN size Semi-Plan Hard Coated Objectives, anti-reflection for reduced light loss and flat field, objectives offer maximum resolution and high colour fidelity.



RMH-4

RMH-4 MONOCULAR RESEARCH MICROSCOPE

Having following optical combination :

Ach. Objectives : 4x, 10x, 40x SL and 100x SL (oil)
 Eyepieces : WF 10x & H15x
 (a) Achromatic Objectives 4x, 10x, 40x, 100x
 (b) Standard Semi-Plan Objectives
 (c) DIN Semi-Plan Objectives



RMH-4B

RMH-4B BINOCULAR RESEARCH MICROSCOPE

Having following optical combination :

Ach. Objectives : 4x, 10x, 40x SL and 100x SL (oil)
 Eyepieces : WF 10x & H15x
 (a) Achromatic Objectives 4x, 10x, 40x, 100x
 (b) Standard Semi-Plan Objectives
 (c) DIN Semi-Plan Objectives

RMH-4T TRINOCULAR RESEARCH MICROSCOPE

Having following optical combination :

Ach. Objectives : 4x, 10x, 40x SL & 100x SL (oil)
 Eyepieces : WF 10x & H15x
 (a) Achromatic Objectives 4x, 10x, 40x, 100x
 (b) Standard Semi-Plan Objectives
 (c) DIN Semi-Plan Objectives



RMH-4T

CO-AXIAL RESEARCH MICROSCOPES



RXL-4 Series

RXL Series of Research Microscopes are latest and most advanced for analytical and research work in Colleges, Laboratories, Hospitals and Research Institution. Microscopes are equipped with Co-axial focussing system and halogen illumination for bright and sharp images. A robust arm with focussing knobs on both sides based on a 4-stage gear reduction system travelling on Ball-guides, the CO-AXIAL FOCUSING SYSTEM provides the highest degree of working convenience. Large base with built-in hand rest contours provides stability to the instrument, having built-in base 6V-20W Halogen operates on 220 volts or 110 volts. Light source with on/off switch and the light intensity regulator.

A large stage (145 X 125 mm) fitted with Mechanical stage having low drive Co-axial knobs for X-Y movement in horizontal plan and a movable Sub-stage Condenser NA 1.25 with iris diaphragm and filter holder. A low-friction and par-focal standard quadruple nosepieces. Turret on a dust proof carrier provides a lifelong smooth rotation. The built-in click stop, brings each objective to a perfect alignment for common field centre. High degree performance and resolution is provided through observation heads inclined at 45°.

The Monocular, Binocular and Trinocular versions are available with a 360° rotatable, locked on the stand. The Microscope system gives maximum resolution and color fidelity when used with DIN size hard coated Achromatic Objectives and Wide Field Eye-pieces.



RXL-4

RXL-4 MONOCULAR RESEARCH MICROSCOPE

Having following DIN size Optical combination:

Ach. Objectives : 4x, 10x, 40x and 100x Oil Immersion.

Eye-pieces : WF 10x and H15x.

- (i) Achromatic Objectives.
- (ii) Hard Coated Semi Plan Objectives for anti reflection.



RXL-4B

RXL-4B BINOCULAR RESEARCH MICROSCOPE

Having following DIN size Optical combination :

Ach. Objectives : 4x, 10x, 40x and 100x Oil Immersion.

Eye-pieces : WF 10x and H15x (Paired).

- (i) Achromatic Objectives.
- (ii) Hard Coated Semi Plan Objectives for anti reflection.



RXL-4T

RXL-4T TRINOCULAR RESEARCH MICROSCOPE

Having following DIN size Optical combination :

Ach. Objectives : 4x, 10x, 40x and 100x Oil Immersion.

Eye-pieces : WF 10x & H 15x (Paired).

- (i) Achromatic Objectives.
- (ii) Hard Coated Semi Plan Objectives for anti reflection.



ADVANCED CO-AXIAL RESEARCH MICROSCOPES

RXLr-Series

RXLr Series Microscopes are designed with outstanding technological expertise of RADICAL, which extends the capabilities for education and research work. The quality assurance throughout the manufacturing process ensures demanding performance standards which are matched with exceptional economy in cost. Extra clarity and contrast is provided through our new high performance color corrected infinity optical system. Optical components in the viewing head and objectives are protected with an anti mould system to ensure proper performance in unusually hot and humid environment.

Optical System : Infinite corrected available in achromatic, semi-plan and plan objectives High Eyepoint eyepieces with an optional WF 10x/22 and built-in diopter adjustment provides easy parfocality adjustment. Siedentopf-type eyepiece tube inclined at comfortable 30 degrees. Interpupillary distance of 55-75mm with dioptric adjustment.

Unique new design and comfort : Ergonomically designed with comfortable low positioned co-axial coarse & fine focussing controls and an adjustable tension control to maximise individual comfort and convenience. Built-in focus stop allows for rapid image focussing while protecting specimens and objectives. The stand is painted with scratch and chemical resistant epoxy paint.

RXLr-3B ADVANCED RESEARCH BINOCULAR MICROSCOPE

- Sidentopf Binocular Head
- WF 10x/20 Eyepiece inward Quintuple Nosepiece
- Infinity corrected achromatic objectives 4x, 10x, 40x, & 100x oil
- Low Coaxial Mechanical Stage 135mmx153mm
- N.A. 1.25 Abbe Condenser
- Collector with field diaphragm
- Koehler illumination, 6Volts 30 Watts
- Blue, Yellow and Green Filters
- Supplied complete in a thermocol box



RXLr-3B

RXLr-3T ADVANCED RESEARCH TRINOCULAR MICROSCOPE

- Sidentopf Trinocular Head
- WF 10x/20 Eyepiece inward Quintuple Nosepiece
- Infinity corrected achromatic objectives 4x, 10x, 40x, & 100x oil
- Low Coaxial Mechanical Stage 135mmx153mm
- N.A. 1.25 Abbe Condenser
- Collector with field diaphragm
- Koehler illumination, 6 Volts 30 Watts
- Blue, Yellow and Green Filters
- Supplied complete in a thermocol box



RXLr-3T

RFM-1 EPI-FLUORESCENT MICROSCOPE

An ideal Microscope for research in biology, tumology, cytology, immunology and Haematology. It is suited for fluorescent Microscopy used in venereal disease examination and immune less diagnosis. At the same time it is also used for analysis of sedimentary rocks, inspection of impurities in semiconductors, environmental protection and micro chemistry.

Specifications:

B (Blue), G(Green), Exciting Light Filter System O ordinary light system. Digitally controlled inductance power supply RFI Infinite Fluorescence-plan objectives 4x, 10x, 40x, & 100x oil. Super high pressure spherical mercury vapor lamp 100W. Screen to resist ultra-violet light. Supplied complete in a thermocol box. **Optional** four filters B(Blue), G(Green), V(Violet), UV(Ultraviolet)



RFM-1

ADVANCED CO-AXIAL RESEARCH MICROSCOPES



RXLr-4 Series



RXLr-4



RXLr-4 POL



Coolscope

RXLr-4 Research Microscopes are designed with outstanding technological expertise of Radical which extends the capabilities for education and research work. The quality assurance through out the manufacturing process endurance demanding performance standards. The microscopy is robust, easy to operate and equipped with research grade optics. By using anti-mold paint and sealing anti-mold agents inside the microscope is designed for use even in hot and humid environments. The optical system provides significantly enhance image clarity in variety of observation methods from brightfield to reflected light fluorescent. It is available in different variants along with many practical accessories which can be used for educations, hospitals and research laboratories. Optical System delivers outstanding clarity at any magnifications because chromatic aberrations and curvature of field are both corrected over the entire field of view when the field number is 20mm.

RXLr-4 POL Polarizing Microscope is a principal piece of equipment used by the geologists to observe the optical properties of minerals. It has indispensable applications for Petrography, Crystallography, Geology, Mineralogy, Ceramics, Toxicology, Chemical Microscopy or detecting defects in semiconductors or finding stress points in metal, glass and textiles, etc. It permits orthoscopically or conoscopically to examine and identify the structures and Characteristic of material with highly resolved distinctive images under various magnifications. Compact ball-bearing rotating stage, 140mm diameter, graduated with vernier, lock and stage specimen clips. Compensator : Gyps 1l (1st order red compensating plate, 560 nanometers) Mica 1/4l (145 nanometers) & Quartz Wedge (I-IV order). Koehler's illuminator with pre-centred 30W tungsten halogen source and integral electric transformer with intensity control is concealed inside the base. Input voltage 220 or 110 Volts. Supplied complete in a box with following optical combination.

Objectives : PF 4x / 0.10, PF 10x / 0.25 and PF 40x / 0.65 SL RFI
Eyepieces : HKW 10X (Paired) and WF 10x Cross.

RXLr-4POLT Polarizing Microscope : It has the same features as that of RXLr-4POL with additional incident illumination of either 12V/50W or 12V/100W.

RXLr-4 Series with **RFI** Optical System and high resolution routine & cool cameras from **JENOPTIK - Germany** provides the best price/performance ratio for different microscopy techniques to give true colors for documentation and research applications. These imaging system are controlled by an extensive and user friendly software capture pro.

	Coolscope 3CT	Coolscope-3	Coolscope-5	Coolscope-7
Microscope	RXLr-4 with RFI Infinity Plan 4x, 10x, 20x, 40x and 100x oil			
Sensor Type	1/2" CMOS	1/2" CCD	2/3" CCD	1/2.5" CCD
Pixels	3.15 mp	3.3 mp	5.0 mp	7.1 mp
A/D Conversion	10 bit	12 bit	12 bit	12 bit
Dynamic Range	58 db	61 db	61 db	58 db
Max. Exposure	3 Sec.	180 Sec.	180 Sec.	5 Sec.
Max. Frame Rate	35 fps	18 fps	21 fps	20 fps
Cooling	No	Peltier	Peltier	No
Digital Interface	Firewire	Firewire	Firewire	Firewire
Optical Interface	0.5x C-MOUNT	0.5X C-MOUNT	0.7X C-MOUNT	0.5X C-MOUNT
Capture Software	Progres Capture Pro for Windows & Mac			
Computer Requirements	<input type="checkbox"/> Windows 2000/XP/Vista <input type="checkbox"/> MacApple Macintosh OS X 10.4 or higher <input type="checkbox"/> 3 GHZ CPU 1 GB RAM, 64 MB Graphics <input type="checkbox"/> IEEE 1394 Firewire			



ACCESSORIES FOR MICROSCOPES

RA-1 CAMERA LUCIDA (PRISM TYPE) : This instrument is a simplified version for tracing the image of microscopic specimens on a plain paper. It fits on the eyepiece tube of all standard microscopes. Supplied in a velvet box. (For RM-Series)



RA-1

RA-2 CAMERA LUCIDA (MIRROR TYPE) : The instrument is equipped with a fine quality beam splitting glass prism which causes the image of the object to appear as if super imposed upon the plain paper so that the drawing can be traced thereupon. The instrument is supplied in a velvet box. (For RM-Series)



RA-2

RA-3 DOUBLE DEMONSTRATION EYEPIECE : This instrument is equipped with high quality optical components. It ensures perfect vision to both the observer and sub-observer. It's conveniently located fine pointer covers the entire field, being visible to both the viewers for easier demonstration. Supplied in a velvet box. (For RM-Series)



RA-3

RA-4 PHASE CONTRAST ATTACHMENT (Turret Type) : All advanced Research Microscopes can be supplied with **achromatic** phase contrast attachment having following combination. (RMH & RXL Series)
Phase objectives : 10x, 20x, 40x and 100x oil and a Telescopic Eyepiece Complete with Phase Turret condenser having assembly at different angular positions.



RA-4

RA-4A PHASE CONTRAST ATTACHMENT (Turret Type) : All advanced Research Microscopes can be supplied with **PLAN achromatic** phase contrast attachment having following combination. (RMH & RXL Series)
Phase objectives : 10x, 20x, 40x and 100x oil and a Telescopic Eyepiece Complete with Phase Turret condenser having assembly at different angular positions.

RA-4B PHASE ATTACHMENT (Regular) : A simple Phase Contrast consisting of Phase Slits, green filter, a Telescope eyepiece & **THREE** Phase Contrast objectives PH10x, PH20x, and PH 40x.



RA-4C PHASE ATTACHMENT (Regular) : A simple Phase Contrast consisting of Phase Slits, green filter, a Telescope eyepiece & **TWO** Phase Contrast objectives PH10x and PH 40x.

RA-5 DARK-FIELD ATTACHMENT : As per JIS standard. Consists of dark-field condenser and 100x oil immersion with built-in iris diaphragm.



RA-4C

RA-5A DARK-FIELD ATTACHMENT : As per DIN standard. Consists of dark-field condenser and 100x oil immersion with built-in iris diaphragm.

RA-6 ABBE CONDENSER N.A. 1.25 (for RM & RMH Series)

RA-7 Micrometer Eyepiece H 10x - (graticule 10 mm/100 parts)

RA-8 Micrometer Eyepiece WF 10x-10/100 Adjustable Focussing

RA-8A Simple Polarising Attachment (for RM-Series) A simple set consist of Analysis and Polarising to be used in microscope for inspection under polarised light.



RA-5

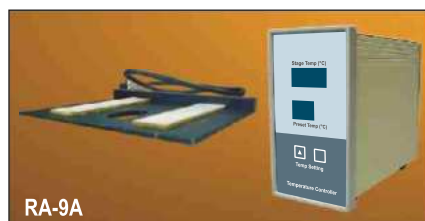
RA-8B Advanced Polarising Attachment (for RMH & RXL Series) A set consist of Rotatable Analysis and Polariser to be fitted in the microscope for examination of specimen under polarised light.

ACCESSORIES FOR MICROSCOPES



RA-9 Simple Bio-Therm Heating Stage

This can be attachment with most of the Biological Microscopes. Stage Size 90mm x 75 mm, having built-in thermometer and temperature controller. Temperature range 30°C to 60°C. Supplied with a variable control transformer.



RA-9A Digital Bio-Therm Heating Stage

Advanced Digital Model of heating stage for Research Biological Microscopes. Input : 110V/60Hz or 220V/50Hz, AC. Power : 50W, Temperature Controlling Range 20°C (> room temperature) to 50°C, temperature setting division 1°C, Temperature displaying division 0.1°C, Various between stage setting & displaying temperature : $\pm 1^\circ\text{C}$. Supplied with 2 LED digital display screens and two touching buttons for adjusting temperature, ON/OFF switch at the rear. Built-in heater and heat sensor with the size of 150mm x 130mm x 5.8mm.



RA-10 (a) Pointer Eyepiece H 10x or 15x (b) Pointer Eyepiece H 5x

(c) Pointer Eyepiece WF 10x

RA-11 (a) Huygenian Eyepiece 10x or 15x each (b) Huygenian Eyepiece 5x

RA-12 (a) Wide Field Eyepiece 10x or WF 15x each (b) HKW WF 10x or 15x Eyepiece each

RA-13 Wide Field Eyepiece WF 20x each

RAS-14 MedicalPro 2.0 Software

RA-15 Periplan Eyepiece P 6x or P 7x

RA-17 Micrometer Slide 10mm/100 parts

RA-18 Micrometer Slide 1mm/100 parts

RA-19 Straight Tube for Photomicrography (RMH-Series)

RA-21 Drawing Attachment for Binocular/Monocular Microscopes (RMH & RXL Series)

RA-22 Dual Viewing Head Attachment (Two Observation Head) (RMH & RXL Series)

RA-23 Multihead Viewing Attachment (Three Observation Head) (RXL-Series)

RA-24 Filters - Available in blue, day light blue, green, yellow etc. each.

RA-25 Wooden Storing Cabinet with lock & key for RMH Series.

RA-26 Wooden Storing Cabinet with lock & key for RXL Series.

RA-27 Aluminium Storing Cabinet with lock & key available for each Microscope.

RL-1 Sub-Stage Microscope Lamp : Workable on direct 220 volts AC/DC mains. Bulb 15 watts, with off/on switch. Bakelite metal body with blue filter (for RM Series).

RL-1A Sub-stage LED cordless illuminator with chargeable battery for RM-2 Series.

RL-2 Universal Microscope Lamp : Designed on Koehler's principle with moveable condenser, iris-diaphragm, two filters and solid state light control transformer. The lamp is fitted on a round table stand.

RL-3 Microscope Lamp : With moveable condenser iris-diaphragm, two filters, fitted on a round table stand. Supplied with variable light control transformer.



INVERTED TISSUE CULTURE MICROSCOPES

RTC-Series

RTC-6 INVERTED TISSUE CULTURE MICROSCOPE

Binocular Inverted Tissue Culture Microscope with quadruple revolving nosepiece, equipped with Binocular Observation Head and best quality optical components having full prismatic optical path, large co-axial mechanical stage of size 165mm x 180mm, co-axial coarse & fine focussing knobs with adjustable tension control ring, variable intensity controlled built in base solid-state transformer, fitted with 6V 20 watts halogen bulb and illumination based on Keohler's system. Supplied with following optical combination in a storing box.

Ach. Objectives : 4x, 10x, LWD, 20x & LWD 40x.

Eye Pieces : WF 10x (Paired)



RTC-6

RTC-99 TRINOCULAR INVERTED TISSUE CULTURE MICROSCOPE

Inverted Tissue Culture Microscope with quadruple revolving nosepiece, equipped with Trinocular Observation Head and best quality optical components having full prismatic optical path, large Coaxial Mechanical stage of size 165mm x 180mm, co-axial coarse & fine focussing knobs with adjustable tension control ring, variable intensity controlled built in base solid-state transformer, fitted with 6V 20 watt Halogen bulb and illumination based on Keohler's system. Supplied with the following optical combination in a storing box.

Ach. Objectives : 4x, 10x, LWD
20x & LWD 40x.

Eye Pieces : WF 10x (Paired)



RTC-99

RTC-8 BINOCULAR INVERTED MICROSCOPE WITH PHASE ATTACHMENT

Binocular Microscope with quadruple revolving nosepiece, equipped with Radical Binocular Head and best quality optical components having full prismatic optical path, large Coaxial Mechanical stage of size 165mm x 180mm, co-axial coarse & fine focussing knobs with adjustable tension control ring, variable intensity controlled built in base solid-state transformer, fitted with 6V 20 watt Halogen bulb, illumination, based on Keohler's system, LWD phase contrast equipment having following optical combination with arrangements, in a storing box.

Objectives : 4x, PH 10x, PH 20x and PH 40x

Eye Pieces : WF 10x (Paired) & Telescopic Eye-Piece.



RTC-8A

RTC-8A TRINOCULAR INVERTED TISSUE CULTURE MICROSCOPE WITH PHASE ATTACHMENT

All specifications are as per Model RTC-8 but fitted with a Trinocular Observation Head.

OPTIONAL ACCESSORIES : Wide field eye-piece 15x and 20x. Co-axial Mechanical Stages, Monocular Tube, Trinocular Head, Projection Screen, Dark Field Condenser, Phase Contrast Attachment, Biothermy Stage, Photomicrography Equipment & CCTV Attachment etc.

ADVANCED INVERTED TISSUE CULTURE MICROSCOPES



RTC - Series

RTC-7 Advanced Inverted Tissue Culture Microscope is designed for the examination of tissue cultures and liquid residues in special laboratory vessels. The microscope allows studying the specimen in transmitted light under bright field and phase contrast. It finds vast application in Cancer Research, Sirology, Urology, Histology, Sexology, Virology, Parasitology, Microbiology, and also in areas of Air and Water Pollution. This advanced designed instrument is having all the features required by modern biological scientists. It can also be used for phase contrast microscopy to impart normally colourless transparent specimen with enough contrast to permit clear examination of living bacteria, cells, tissues, etc. The microscope is having a robust, rigid vibration resistant design that greatly reduces vibrations and improves operation. Trinocular head is intended for microscopic imaging through video cameras & film cameras. Microscope illumination system incorporates a long working distance condenser for observation of specimens in culture vessels of up to 70mm long. With the condenser in swing out position the stage can accommodate extra long vessels up to 150mm. Moving of vessels located on the stage can be done manually or using the attachment substage with coaxial X-Y controls. To accommodate a variety of vessels, including extralong flasks and high profile bottles, the stage can be extended by means of an extension plate.



RTC-7

RTC-7 BIOLOGICAL INVERTED TISSUE CULTURE MICROSCOPE

Standard Magnification Range	: 40x to 600x
Binocular Inclination angle	: 30 degrees
Observation Head Magnification	: 1.0x
Plan Achromatic Objectives	: 4x/0.1, PH 10x/0.25, PH 20x/0.40, PH 40x/0.60
Wide Field Eyepieces / Field Number	: 10x/22mm, 15x/12mm
Nosepiece	: Quintuple nosepiece
Fixed Mechanical Stage	: 160 x 250mm
With extension plate & coaxial	: 300 x 250mm
Stage Movement	: 85 x 120mm
Illumination	: 6V, 30V, Halogen bulb with light intensity control
Built-in power supply Power Voltage	: 110-220V
Weight	: 10 Kgs.
Overall dimensions	: 390 x 570 x 500 mm
Standard Accessories	: Spare Bulb, Fuse, Two Filter, Glass Plate, Aperture Plates, Operating Manual, etc.
Optional Accessories	: Epi-Fluorescence Attachment, Trinocular Head, Biothermy Heating Stage, Swingout Condenser, CCTV Attachment, Digital Cameras, Software, etc.



ILLUMINATOR

RTC-7A BIOLOGICAL INVERTED TISSUE CULTURE MICROSCOPE WITH FLOURESCENT ATTACHMENT



STEREOSCOPIC MICROSCOPES

RSM-Series

RSM-1 STUDENT STEREO BINOCULAR MICROSCOPE

Comprising of light weight sturdy base, straight Binocular Head having interpupillary adjustment, focussing by rack pinion complete in a thermocol box.

Ach. Objective	: 2x or 3x (fixed)
W.F. Eyepieces	: 10x or 15x (one pair)
Magnification	: 20x or 30x or 45x



RSM-1

RSM-1A As above but with transillumination base suitable for artificial transmitted light with detachable elbow hand rest.

RSM-2 INCLINED STEREO BINOCULAR MICROSCOPE

Inclined at 45° with Interpupillary adjustment from 55° to 75° for eyes with diopter adjustment in right eyepiece tubes, single magnification, focussing by rack and pinion. Designed for Educational and Industrial purpose. Complete in a cardboard box.

Objectives	: 2x or 3x or 4x
Eyepieces	: WF 10x
Working Distance	: 50 to 80 mm.



RSM-2A

RSM-2A INCLINED STEREOSCOPIC BINOCULAR MICROSCOPE

Binocular head inclined at 45° with interpupillary adjustment from 55° to 75° for eyes with diopter adjustment in right eyepiece tube, fine focussing by rack and pinion motion with sliding objectives. Specially designed for Research, Educational and Industrial purposes. Supplied with the following optics complete in a box.

Sliding Objectives	: 2x and 4x
Eyepieces	: WF 10x or WF 15x



RSM-2B

RSM-2B As per above Model RSM-2A but with transillumination base suitable for artificial and transmitted light arrangement and elbow hand rest.

RSM-2C As per above Model RSM-2A but with stable base provided with built-in illumination both for incident (EPI) light and sub-stage (transmitted) light for individual or simultaneous use, for 6V-20W halogen lamp.



RSM-2C

RSM-3 INCLINED INDUSTRIAL STEREO MICROSCOPE

Specially designed for industrial applications. It is equipped with transillumination base, having a standard Plano concave reflector for use both in artificial and natural light alongwith interchangeable milky or transparent round glass 100m. dia. Mounted on a pole type stand with rack and pinion motion, it permits examination of objects fairly large in size. Low magnification objectives 1x or 2x, is provided for longer working distance and more field coverage. Working distance 150mm, Field of View 15mm. in 10x magnification. Supplied with the following optics combinates, dust cover and cleaning cloth in a box.

Objectives	Eye pieces	Magnification
1x or 2x (fixed)	WF 10x paired	10x or 20x



RSM-3

STEREOSCOPIC MICROSCOPES



RSM-4 Series



RSM-4

A significant advantage of Stereoscopic Microscope is that by using two optical systems, an erect image of the object can be seen in three dimensions. Magnifications upto 80x are possible by using additional eyepieces. Stereo Microscopes are used in every field of Electronics, Watch Industry, Tool Industry, Food Industry, Dissection of Organisms, Medical Science, Inspection & Research purposes.

Standard Specifications

The Binocular Head is inclined at 45°, rotated through 360°, can be locked in any position by using thumb screws. The interpupillary distance can be adjusted between 55 to 75 mm and working distance is 65 mm in 40x magnification. Diopter compensation can be made by using the left eyepiece ocular tube. The Microscope has a set of two standard achromatic objectives 2x and 4x.

Low & high powered objectives are selected by rotating the nosepiece through 90°, having parfocal magnification. Extra Widefield eyepieces WF 10x are provided.

Standard Magnification 20x and 40x gives flatfield, erect three dimensional, crisp and sharp images. Focus adjustments can be made by means of paired knobs located on each side of the stand. A glass stage-plate with two stage clips is provided with the microscope.



RSM-4A

RSM-4 Transmitted & incident lights are built in the stand. The lamps can be switched on separately or together, 6V-20Watt Halogen bulbs.

RSM-4A The stand is suitable for use in natural light or with external illuminators, but fitted on plain base (without any illumination).



RSM-4F

RSM-4A Transmitted and Incident lights are built in the stand. Long life and low temperature Fluorescent lamps are provided for continuous observation.

RSM-4F Large stage is equipped for convenience of work. Long life and low temperature Fluorescent lamp is provided for incident light.



RSM-4U

RSM-4U It is having a multipurpose universal heavy base-stand. The vertical and horizontal movements of the arm makes it convenient for observation of extra large size material from a desired angle.

OPTIONAL ACCESSORIES

Different kinds of optional stands, stages and attachments are available, designed to suit a variety of specific applications. Spare Eyepieces WF 10x, WF 15x and WF 20x, Ring Fluorescent Light, Wooden Storing Cabinet, Darkfield Attachment, choice of two optional objective combinations 1x-2x or 1.5x-3x are also available.

STEREO ZOOM MICROSCOPES



RSM-Series

RADICAL STEREO ZOOM MICROSCOPES : The special character of Zoom Microscope is that one can observe the object in three dimensions in the field of view. It is ideally suited for industries as well as biological research where high precision, maximum working distance and field coverage required. The flat field parfocal zoom objectives provide continuously variable magnification up to 200x depending upon the eyepieces and auxiliary lenses used.

It is extensively used by customers who are engaged in various fields such as electronics, watch industry, tool industry, food industry, pharmaceutical industry, precision machinery industry, fibre industry, assembling plant, inspection, engraving, mineralogy, dissection of organism, medical science etc.

RSM-8 BINOCULAR STEREO ZOOM MICROSCOPE

Standard Features :

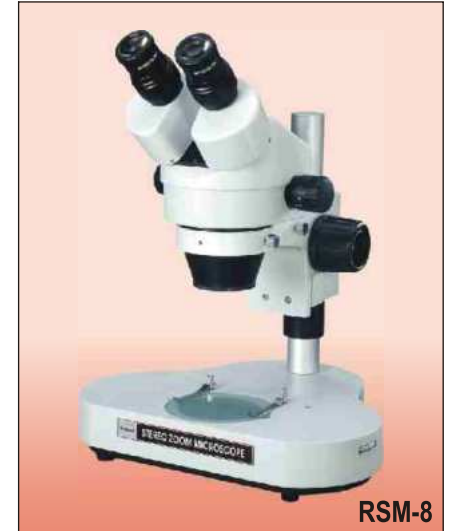
- * Binocular tube with an inclination of 45° for greater ease of observation.
- * Microscope Zooming ration 1:5.
- * Extra wide field eyepieces 10x (Paired).
- * Magnification 10x to 50x. (Standard)
- * Rack-Pinion focussing stroke 50mm.
- * Crisp, erect images with high resolution and excellent stereoscopic effect.
- * Standard Working distance 80mm, regardless of magnification.
- * Interpupillary distance from 54 to 75mm.
- * Dioptic adjustment with a range of ± 5 diopters is possible with both Oculars.
- * Binocular body can be rotated a full 360° and locked in any position desired.
- * Once brought in focus, image remains clear and sharp throughout the whole zoom range.
- * Dual Illumination system having incident and transmitted illuminators, for individual use or both at a time controlled through solid state built-in transformer 6 Volts 20 Watts for halogen Bulbs.
- * Packed in plywood Storing cabinet with operation manual, vinyl cover etc.

RSM-8A Stand is suitable for use in natural light or with optional external illuminators.

RSM-88 Transmitted & Incident lights are built in the stand. Long life and low temperature fluorescent lamps are provided for continuous observation.

RSM-8F Large stage is equipped for convenience of work. A long life and low temperature 10W Fluorescent lamp is provided for built in incident light.

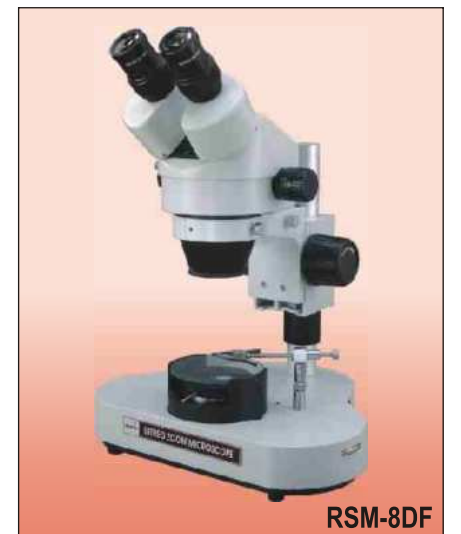
RSM-8DF **JEWEL MICROSCOPE** is used to distinguish between genuine and imitation gems, to inspect surface inclusions, to judge production of origin and to inspect polishing. The Microscope is provided with transmitted and incident light system, darkfield attachment and a gem clamp.



RSM-8



RSM-8F

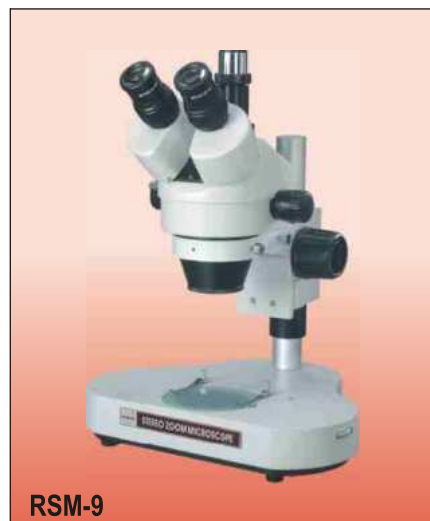


RSM-8DF

STEREO ZOOM MICROSCOPES



RSM-Series



RSM-9

RSM-9 TRINOCULAR STEREO ZOOM MICROSCOPE

Standard Features :

- * Trinocular tube with inclination of 45° for greater ease of observation.
- * Microscope Zooming ratio 1:5.
- * Extra wide field eyepieces 10x (Paired) and photo eyepiece WF 10x.
- * Magnification 10x to 50x. (Standard).
- * Rack-Pinion focussing, stroke 50mm.
- * Crisp, erect images with high resolution and excellent stereoscopic effect.
- * Standard working distance 80mm, regardless of magnification.
- * Interpupillary distance from 54 to 75mm.
- * Dioptic adjustment with a range of ± 5 diopters is possible with both side tubes.
- * Trinocular body can be rotated a full 360° and locked in any position desired.
- * Once brought in focus, image remains clear and sharp throughout the whole zoom range.
- * Dual illumination system having incident and transmitted illuminators, for individual use or both at a time controlled through solid state built-in transformer 6 Volts 20 Watts for halogen Bulbs.
- * Packed in plywood storing cabinet with operation manual, vinyl cover etc.



RSM-9F

RSM-9A Stand is suitable for use in natural light or with optional external illuminators.

RSM-99 Transmitted & Incident lights are built in the stand. The long life and low temperature fluorescent lamps are provided for continuous observation.

RSM-9F Large stage is equipped for convenience of work. A long life and low temperature 10W fluorescent lamp is provided for the built in incident light.



RSM-9DF

RSM-9DF **JEWEL MICROSCOPE** is used to distinguish between genuine and imitation gems, to inspect surface inclusions, to judge production of origin and to inspect polishing. The Microscope is provided with transmitted and incident light system, darkfield attachment and a gem clamp.



ACCESSORIES FOR STEREO/STEREO ZOOM MICROSCOPES

FI-1 FIBRE OPTIC ILLUMINATOR (SINGLE LIGHT GUIDE) : Consisting of power supply unit having 150W, halogen illuminator, transformer and blower system for working on 220/240V, A.C. Supplied complete with imported flexible single fibre optic light guide having focussing condenser lens in front.

FI-2 FIBRE OPTIC ILLUMINATION (DOUBLE LIGHT GUIDE) : Consisting of power supply unit having 250W, halogen illuminator, transformer and blower system for working on 220/240V, A.C. Supplied complete with imported flexible double fibre optic light guide having two condenser lens for providing simultaneously illumination from both the sides.

SI-7 INCIDENT HALOGEN ILLUMINATOR : A standard spot light halogen illumination specially designed for Stereoscopic Microscopes. Equipped with Super Bright 6V-20W halogen lamp and a set of condensers and blue filter to provide a bright spot of white light on the transformer top which provides adjustment of height and angle of the illuminator. The solid State variable light control transformer provides uniform and continuous variation of light intensity.

SI-8 DARK FIELD ATTACHMENT FOR EMBRYOLOGY : The attachment consists of Dark Field system & a adopter for placing the Petri Dishes containing embryos for investigation and micro studies. It provides excellent contrast with Dark Field illumination effect with Stereo Zoom Microscopes.

ZM-1 Spare Eyepiece : WF Eyepiece 10x or 15x or 20x (Paired).

ZM-2 Auxiliary objectives 0.5x or 2x suitable for the above microscopes, to get variation in magnifications.

ZM-4 UNIVERSAL STAND : Designed especially for convenient examination of large parts or specimens, provides flexibility for vertical, horizontal and angular positioning of microscope head.

ZM-5 HIGH INTENSITY FLUORESCENT RING ILLUMINATOR : An excellent scope, equipped with special circular fluorescent bulb and supplied complete with power supply.

ZM-6 SPARE CIRCULAR FLUORESCENT BULB : 10W High intensity circular tube.

ZM-8 EYEPIECE WITH GRATICULES : The Eyepieces with Micrometer Discs are offered to enable all types of measurements with the zoom microscopes. Grass line, Micrometer, Graph, acentric circles etc. are available each.

ZM-9 POLARIZING ATTACHMENT : Available for Stereo Zoom Microscopes for examination of Geological specimens under polarized light.

ZM-10 GLIDING STAGE : It can be attached with different Stereo Zoom Microscopes for quick scanning/movement of the specimen in X-Y direction. Size 120x140x30mm. Scanning Area X axis 90mm and Y axis 60mm.



FI-2



ZM-4



ZM-10



ZM-5

DIGITIZED MICRO-IMAGE EXPERT/DIGITAL MICROSCOPES



Digital - Series



RXL-Digi

- RXL-Digi DIGITAL RESEARCH PATHOLOGICAL MICROSCOPE**
- Chromatism Reduction/ICS Infinite Correction Optical System
 - Binocular 30° inclined, IPD 52-75mm, Anti mould design
 - Widefield WF10x/18mm, WF16x/12mm, High eyepoint eyepiece
 - CRCS Semi-Plan 4x, 10x, 40x (Spring) and 100x (Spring, Oil)
 - Built-in 1/3" Colour Digital CCD High Resolution Camera
 - Reversed quadruple revolving nosepiece with positive click stops
 - Low Co-axial Mechanical Stage 142mm x 132mm alongwith movement 70mx50mm
 - Tension adjustable co-axial coarse and fine movement 70x50mm.
 - Centrabale Abbe Condenser N.A. 1.25 with diaphragm & filter holder
 - Koehler with halogen lamp 12V-20W and continuous adjustment
 - 220/110 Volts variable voltage with BIS and CE standards



RSM-Digi

- RSM-Digi DIGITAL STEREO ZOOM MICROSCOPE**
- Par Focal Flat Field Continuous Zoom
 - Binocular 45° inclined IPD 52-75mm with anti mould
 - Focusable WF 10X/22mm, WF15X/16mm, High point design
 - Flat Field 1:4 Zoom with continuous zoom
 - Built-in 1/3" Color CCD High Resolution Camera
 - 10x to 60x with WF 10x and WF 15x
 - 100mm with pay load of 2 Kgs. approx.
 - 720x576 pixels (PAL), 720x480 pixels (NTSC)
 - Rack and Pinion with tension knobs on rigid stand
 - ≥ 0.8 Lux F 1.25600 ° K
 - 220V/110V with CE Standards

- RDMS-100 DIGITAL LIQUID CRYSTAL MICROSCOPE**
- Standard Function**
1. 3.14 MEGA pixels. Show in real time, function for photo taking and video capture.
 2. Reticle customize, Convenient to orientation and go on simple measurement to observe, can choose the line type and color.
 3. 8.4 TFT LCD display.
 4. Built-in min. 8 MB MMC memory card;
 5. Support high-capacity memory card; SD/MMC, the maximum 512 MB.
 6. Photo playback, 4x digital zooming.
 7. AV output, Show in step;
 8. Time mark in step;
 9. Video recording and video re-playing function.
 10. Multi-function LED illuminating system.

- RDMS-131 Digital Liquid Crystal Microscope**
RDMS-132 Digital Liquid Crystal Microscope
RDMS-133 Digital Liquid Crystal Microscope



RDMS-100



PROJECTION MICROSCOPES

PRM-Series

- PRM-11 STUDENT PROJECTION MICROSCOPE**
- The Projection of Micro Slides can be observed by a group of students on a round screen, diameter 100mm. The Microscope is equipped with triple revolving nosepiece, coarse and fine motion knobs. Built-in base transformer with solid-state variable light control arrangements. Bulb Halogen 6V-20 watts.
- Complete in carrying case.
- Ach. Objectives : 10x and 45x
 Huy. Eyepieces : 10x and 15x



PRM-11

- PRM-11A SENIOR PROJECTION MICROSCOPE**
- All specifications as above, but fitted with a 150mm round projection screen and graduated mechanical stage.
- Ach. Objectives : 5x, 10x & 45x
 Huy. Eyepiece : 10x and 15x

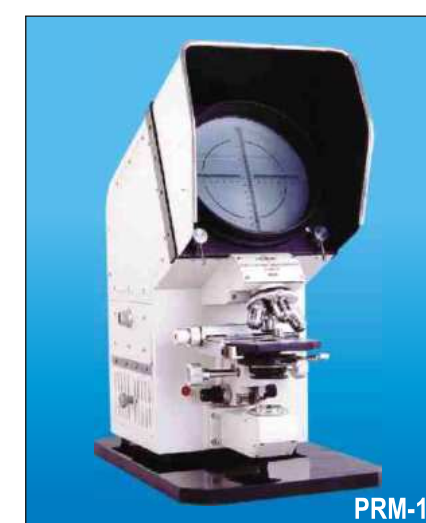
- PRM-12 RADICAL PROJECTION MICROSCOPE**
- A dual purpose instrument having Halogen projection bulb workable on 220 volts A.C. Mains, equipped with an efficient cooling fan inside, 150mm diameter built-in fine grain glass screen, which is removable to take image on the wall or screen giving a magnification upto 400x. Supplied complete with Vinyl Cover, in a card board box.



PRM-12

- PRM-12A RADICAL PROJECTION MICROSCOPE**
- All specification as per Model PRM-12 but with three objectives 5x-10x & 20x

- PRM-15 RADICAL PROJECTION MICROSCOPE**
- It is an advanced versatile projection equipment for measurement of specimen, equipped with bright Halogen Lamp 12 volts, 100 watts solid state variable light control arrangement workable on 220 V A.C. mains, inter-locked with electronic fuse system. Quadruple revolving nosepiece, approximate 200 mm dia. graduated screen rotatable through 360, built in Fresnel lens, loop and arrow arrangement and co-axial mechanical stage, magnification from 125x to 1000x with following optical fuse & dust cover in a sturdy card board box.
- Objectives : 5x, 10x, 20x and 40x



PRM-15

PROJECTION MICROSCOPES



PRM-Series



PRM-18

PRM-18 RADICAL SENIOR PROJECTION MICROSCOPE (WITH BINOCULAR HEAD)

A most advanced and latest model of projection microscope, permitting accurate measurement of microstructures, incorporating Binocular Head with switch cover system, facilitating observation of the specimen through Binocular Head as well as on the screen. The instrument is equipped with quadruple revolving nose-piece, approximate 200 mm dia graduated screen rotatable on ball bearing system through 360°, best quality built-in solid state variable light control transformer, electronic fuse system, loop & arrow arrangements and built-in compensating eyepieces connected with magnification correction knob to provide magnification from 125x to 1000x. Supplied with Stage Micrometer, Halogen Lamp, Fuse & Maintenance Kit. with following optical combination in a card board box.

Eyepieces : WF 10x paired
Objectives : 5x, 10x, 20x and 40x

PRM-18T Same as per Model PRM-18 but with Trinocular Head



RPL-4

RPL-4 POLARISING PROJECTION MICROSCOPES

A latest model of Projection Microscope for observation, demonstration and precise measurements of geological specimen under polarised light, equipped with graduated 200 mm screen rotatable through 360°, low voltage 100 watts Halogen bulb, Solid State Variable Light Control Transformer and Electronic Fuse. Supplied complete with dust cover, micrometer slide, spare bulb and fuse in card board box with following optical combination.

Objectives : P4x, P10x, P20x and P40x

- (i) Achromatic Objectives.
- (ii) Standard Achromatic Hard Coated Objectives for anti reflection

PROJECTION MICROSCOPE ACCESSORIES

PM-1	Revolving Microscope Platform.	PM-2	Polarising Attachment.
PM-3	Achromatic Flat Field Objective 60x.	PM-4	Wall Projection Facility Attachment.
PM-5	Fibre/Yarn Comparator Attachment.	PM-6	Trinocular Observation Head.
PM-7	Rotar Knob Screen Attachment.	PM-8	Spare Projection Bulb 12V-100W.
PM-9	Micrometer Slide 1/100 parts.	PM-10	Wooden Storing Cabinet with Lock.
RPM-9	Photomicrographic Equipment.	CCTV-2	Imaging System - Colour.



UPRIGHT METALLURGICAL MICROSCOPES

Metallurgical - Series

RMM-5 PORTABLE METALLURGICAL MICROSCOPE WITH CHARGEABLE BATTERY

RMM-6 LABORATORY METALLURGICAL MICROSCOPE

Monocular inclinable body having coarse and graduated fine motion knobs, Incident light through epi-illuminator with iris diaphragm and slot for filters, equipped with triple revolving nose-piece, special graduated detachable mechanical stage for x-y movement of specimen, solid state variable light control transformer 20 watt for Halogen Bulb. Supplied with a daylight blue filter in mount, a spare bulb, vinyl cover, complete in a plywood storing cabinet with following optical combination :

Ach. Objectives : M 10x and M 40x

Huy. Eyepieces : 10x and 15x

- (i) With achromatic objectives.
- (ii) With Achromatic objectives assembled from imported hard coated lenses for anti-reflection.



RMM-5

RMM-6

RXM-7 MONOCULAR METALLURGICAL MICROSCOPE

Rigid and stable body fitted with monocular observation tube, inclined at 45° Bright field, incident light through epi-illuminator with centring provision, iris diaphragm and a slot for dropping filters. It is having precise quadruple revolving nosepiece with positive click stop co-axial mechanical stage of x-y movement of specimens upto thickness 65mm. Built-in base transformer. Halogen Bulb 6V 20W controlled by a variable intensity control knob. Supplied with daylight, blue, operating manual and vinyl cover in a sturdy plywood storing cabinet, with following optical combination.

Ach. Objectives : M 5x, M 10x and M 40x (SL)

Huy. Eyepieces : H 6x and WF 10x

- (i) With achromatic objectives.
- (ii) With achromatic objectives assembled from imported hard coated lens for anti-reflection.



RXM-7

RXM-7B BINOCULAR METALLURGICAL MICROSCOPE

Rigid and stable body fitted with Binocular observation tube, inclined at 45° Bright field incident light through epi-illuminator with centring provision, iris diaphragm and slot for dropping filters. It is having precise quadruple revolving nosepiece with positive click stops. Co-axial mechanical stage for x-y movement of specimens upto thickness 65mm. Built-in base transformer. Halogen Bulb 6V 20W controlled by variable intensity control knob. Supplied with day light blue and green filters in plastic mounts, operating manual and vinyl cover in a sturdy plywood storing cabinet with following optical combination.

Ach. Objectives : M 5x, M 10x and M 40x

Huy. Eyepieces : H 6x and WF 10x

- (i) With achromatic objectives.
- (ii) With achromatic objectives assembled from imported hard coated lens for anti-reflection.



RXM-7B

UPRIGHT METALLURGICAL MICROSCOPES



Metallurgical - Series



RXM-7T

RXM-7T TRINOCULAR METALLURGICAL MICROSCOPE

Bright field, inclined light through epi-illuminator with centring provision, iris diaphragm and slot for filters. It is having precise quadruple revolving nose-piece with positive click stops, co-axial mechanical stage for x-y movement to permit specimens upto thickness 65mm. Built-in base transformer, Halogen Bulb 6V 20W controlled by a variable intensity control knob. Supplied with daylight blue and green filters in plastic mounts, a spare bulb & vinyl cover in a sturdy plywood storing cabinet with the following optical combination.

Ach. Objectives : M 5x, M 10x and M 40x (SL)
Huy. Eyepieces : H 6x and WF 10x (Paired) & P 7x

- (i) With achromatic objectives.
- (ii) With achromatic objectives assembled from imported hard coated lens for anti-reflection.



RMM-8T

RMM-8T UNIVERSAL TRINOCULAR METALLURGICAL MICROSCOPE

Produces clear, sharp and brightfield images of prepared metal samples and other specimens. Standard magnification is 40x to 600x, which can be further increased up to 2000x with optional objectives and eyepieces. DIN Size coated optics are offered as standard equipment.

Trinocular observation head consists of adjustment for interpupillary distance, dioptic focussing and a lever for diverting light from Binocular Head to Photo-Tube. A common built-in transformer provides two illumination systems, 6V-20W, for vertical & transmitted light. Koehler's type vertical illuminator provides ample reflected light for all visual, photo & camera requirements, at all magnifications, is fitted with filter slot, aperture & field diaphragms. Transmitted light illuminator is provided with sub-stage condenser for background lighting of holes, pits and translucent objects. Coaxial coarse & fine focus control knobs move the stage and low-positioned co-axial mechanical stage knobs are adjacently placed for convenient control.

Standard Optical combination :

Achromatic Flatfield DIN Objectives - M4x, M10x and M40x.
Widefield Eyepieces - WF 10x and WF 15x (Paired) and P7x Eyepiece.

RMM-55 MONOCULAR METALLURGICAL MICROSCOPE

RMM-55B BINOCULAR METALLURGICAL MICROSCOPE

RMM-55T TRINOCULAR METALLURGICAL MICROSCOPE

IM-1 Heavy Base with co-axial mechanical stage for x-y movement for above.



RMM-55



INVERTED METALLURGICAL MICROSCOPES

Metallurgical - Series

RMM-77 INVERTED METALLURGICAL MICROSCOPE

A latest Binocular inverted Metallurgical Microscope equipped with vertical illuminator having centring provision, field and aperture, diaphragm and slot for dropping filters, built-in base, variable solid state transformer, large sturdy stage with co-axial arrangement for x-y axis movements, coarse and fine graduated focussing knobs. Supplied with two coloured filters in metal mount, Rexine cover, wooden base stand with drawer and following optical combination.

Eyepieces : WF 10x (Paired)
Objectives : M 5x, M 10x, M 20x and M 40x (SL)



RMM-77

RMM-88 INVERTED METALLURGICAL MICROSCOPE (BINOCULAR)

It has been engineered to meet the requirements of the modern metallurgical laboratory. The optics system has been designed with great care to guarantee full contrast images, completely free from glare. Objectives are corrected, flat field achromats and having coating for anti-reflection.

A special mechanical stage, size 150x160 mm with low drive co-axial control of the inverted design. The transformer 12V, 50 watt is built in the base of Microscope.

Magnification : 40x to 1200x Dry.
Objectives : M 4x - M 10x - M 40x and M 50x (Dry)
Eye Pieces : WF 10x and WF 20x

Supplied complete in a storing cabinet with stage clips, 3 stage insert plates, green and blue filters, spare bulb, vinyl cover and operating manual.



RMM-88

RMM-1 INVERTED METALLURGICAL MICROSCOPE

It is latest in design, compact, easy to operate and most convenient for photomicrography. The Mechanical Stage 150x160mm in size offers 30x30mm cross motion & provided with low co-axial controls. Stage height is adjustable by handle in a range of 30mm, fine focussing is adjustable in a range of 2mm. Bright Field illuminator 6V-20W with filter slot, field and aperture diaphragms. Built-in rotatable analyser and lamp polariser for dark field observation. Binocular Observation Head adjustable for eyepiece separation. Photo-mechanism consists of built-in optical path selector and built-in deviating mirror to direct light into Camera 4x Phototube for 35mm Camera is included. Supplied in a wooden storing cabinet with stage clips, 3 stage insert plates, green and blue filters, spare bulbs, photo recticles, operating manual & following optical combinations :-

Ach. Flat Field : M 4x, M 10x, M 20x and M 40x (SL)
Objectives : M 4x, M 10x, M 20x and M 40x (SL)
Eyepieces : WF 10x (Paired Set)



RMM-1

INVERTED METALLURGICAL MICROSCOPES



Metallurgical - Series

Inverted Metallurgical Microscope has been engineered to meet the various requirements of modern metallurgical laboratories. A special feature of the inverted design is a flat unobstructed stage surface which places no limitation on the size and height of the specimen. Quality assurance throughout manufacturing process ensures that the compliance with demanding performance is matched.

Simply place the specimen, face on the stage, switch on the illuminator, adjust the required objective into position and you are ready to observe or photograph. All components of the illuminating system are completely built-in and remain permanently aligned. A built-in camera mechanism is incorporated as standard equipment. Parfocal objectives keep the images in focus only by a slight adjustment of the fine focus control. To photograph with the camera attachment, merely turn a knob and release the camera shutter. Optical system of the microscope has been designed with great care to guarantee full-contrast images, completely free from glare. Comprehensive anti-fungus treatment is applied to every area which might affect clarity of observation images.

RMM-3 INVERTED METALLURGICAL MICROSCOPE

Binocular Head : Siedentopf head designed with interpupillary and dioptic adjustment from 55mm to 75mm.

Objectives : Plan Achromatic DIN size flat field metallurgical corrected and anti-mould fungus objectives. M4x (N.A. 0.12), M 10x (N.A. 0.25), M 20x (N.A. 0.40) and M 40x (N.A. 0.65).

Eyepieces : Widefield DIN eyepieces HKW 10x and WF 15x with eye guards. Micrometer Eyepiece WF 10x.

Magnification : Standard dry magnification for visual observation from 40x to 600x.

Mechanical Stage: Built-in graduated stage, size 180x160mm, having 75x50mm orthogonal movements on precision ball bearing guides, provided with low-positioned coaxial controls, vernier reading to 0.1 mm. four Aperture plates of 12mm, 16mm, 25mm and graduated 65mm are provided.

Focussing : Stage height is adjustable through co-axial low positioned coarse and fine focus controls, graduated to two microns per division, are fitted with tension adjustment and safety auto stop. The movements are on precision ball bearing hardened steel tracks for smooth long life.

Illuminator : Koehler's illuminator 6V-30W halogen through built-in base transformer, complete with field and aperture diaphragms, four filter turret and bulb-centering mechanism are provided.

Polarizing Filters : Built-in slots for analyzer and polarizer to work in polarizing light/under dark field illumination.

Photo Mechanism : Built-in optical path selector. 5x Photo eyepiece is provided with the microscope.

Size & Weight : Dimensions : 540 mm x 315 mm x 280 mm. Net Weight : 14 Kgs. Gross Weight : 19 Kgs.

Standard Accessories : Large specimen clamps, 4 Stage insert plates 12 mm, 16mm, 25mm and graduated 65mm, Vinyl Dust Cover, Stage micrometer 0.01 mm, Spare Bulb, Fuse, Operating Instructions etc.



RMM-3

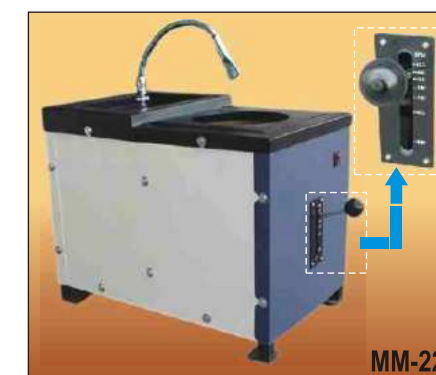


ACCESSORIES FOR METALLURGICAL MICROSCOPES

- MM-1 Micrometer Eyepiece (WF)
- Micrometer Eyepiece (WF) with adjustable focussing
- MM-2 Grain Size Eyepiece WF 10x
- Grain Size Eyepiece WF 10x with adjustable focussing
- Grain Size Turret Eyepiece
- MM-3 Filar Micrometer Eyepiece 10x
- MM-4 Object Micrometer Slide 10/100
- MM-5 Object Micrometer Slide 1/100
- MM-6 Metallurgical Filters in Mount
- MM-7 Eyepiece H 5x or H 10x or 15x each
- MM-8 Eyepiece WF 10x or WF 15x each
- MM-9 Eyepiece WF 20x each
- MM-10 Achromatic Semi-Plan Objective M 4x
- Achromatic Semi-Plan Objective M 10x
- MM-11 Achromatic Semi-Plan Objective M 20x
- MM-12 Achromatic Semi-Plan Objective M 40x
- MM-13 Achromatic Semi-Plan Objective M 60x
- MM-14 Achromatic Semi-Plan Objective M 100x Oil
- Plan Objective M 100x Dry
- MM-15 Projection Screen 150mm
- MM-16 Halogen Bulb 6V-20 Watts
- MM-17 Halogen Bulb 12V 50 Watts
- MM-18 Levelling Hand Press for Specimen Slide
- MM-19/20 Polarising Attachment/Darkfield Attachment
- MM-21 Microstructures of Metallic Materials (Set of 23)
- MM-22 Polishing Machine (Single Disc)
- MM-100 MicroCAM 4.0 Software
- MM-100 MicroCAM 4.1 Software



MM-2



MM-22



OPTIONAL ACCESSORIES FOR MODEL RMM-3 MICROSCOPE

Austenite Grain Size Eyepiece :

This eyepiece is used with the 10x objective, fitted with a rotating turret having eight standard ASTM and JIS grain size charts, which can be rotated to cover the entire field.

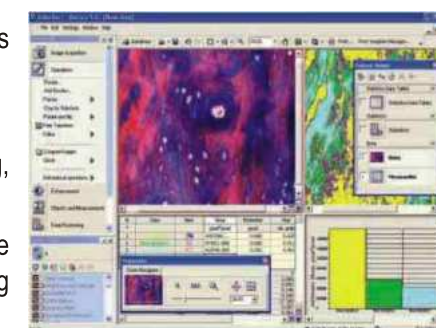
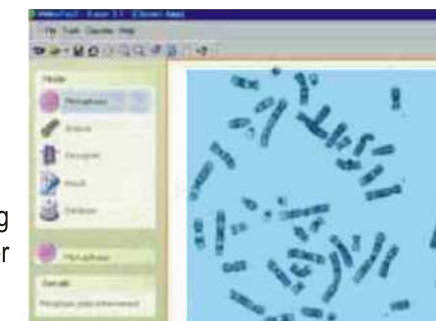
Filar Micrometer Eyepiece :

This eyepiece is used in linear measurement of micro size, plating thickness etc. Direct reading to 0.001 mm with the use of M 10x objective.

Image Analysis Software :

Covering Grain Size measurement - ASTM E-112, Phase Analysis, Plating, Coating, De-carb measurement, Particle size / shape count, Nodularity etc.

Camera Attachments, Adapter for CCD Camera, C-mount, Video Eyepiece 0.65x, 100x objective Oil and Dry, CCTV System, Stage Micrometer, Counting Reticles, spare Objectives and Eyepieces etc.



POLARIZING MICROSCOPES



RPL-Series

The polarizing microscope, also known as the petrological microscope or petrographic microscope, is the principal piece of equipment used by geologist to observe the optical properties of minerals.

Its application is indispensable in petrography, crystallography, mineralogy, geology, chemical microscopy etc.

In industries as well as in University Laboratories, it permits orthoscopic or conosopic examination to identify the structures & characteristics of materials with highly resolved and distinct images of various magnifications. A difference between Polarizing Microscope & Ore Microscope is that, in Polarizing Microscope only transparent slides can be observed, whereas in Ore Microscope, optical properties of opaque geological slides (minerals) can also be observed.



RPL-1

RPL-1 LABORATORY POLARIZING MICROSCOPE

Stable and robust, assembled from Aluminium metal parts. Heavy metal base stand of cast iron for body stability. Total height 285 mm.

Quadruple revolving nosepiece with positive centering and click stops.

Compact ball-bearing rotating stage, 140 mm. diameter, graduated with vernier, lock and stage specimen clips.

Separate knobs are provided for coarse and fine focussing adjustments. Coarse adjustment can be made through rack-pinion and fine movement by screw-lever mechanism having a graduated knob on the right slide.

Built-in slide out analyzer, λ -Gypsum Plate, $\lambda/4$ -Mica Plate and focussable Bertrand lens. All slides are locked into the tube and can be inserted in the optical path as per requirement.

Fully rotatable Polarizer on strain free abbe-condenser N.A. 1.25 with iris-diaphragm.

Achromatic, Semi-plan objectives P 4x, P10x and P 40x SL.

Widefield eyepiece WF 10x and WF 10x with Cross.

Packing : In full mould Styrofoam / Thermocol Container, Complete with accessories.

RPL-4 POLARIZING PROJECTION MICROSCOPE

A latest model of Projection Microscope for observation, demonstration and precise measurements of geological specimen under polarized light, equipped with 200mm round graduated screen is made from fine grain glass, rotatable in 360° on ball bearings & has a fresnel lens behind it for brilliant and uniform illumination throughout the screen area. The coaxial built-in Mechanical Stage is attached for comfortable & convenient manipulation of specimen slides. Focussing is done by vertical movement of stage, coarse adjustment by rack-pinion and fine movement by screw lever mechanism, driven by graduated knob. Low voltage 100 watts Halogen bulb, Solid State Variable Light Control Transformer and Electronic Fuse. Supplied complete with dust cover, micrometer slide, spare bulb and fuse in card board box with following optical combination.



RPL-4



POLARIZING MICROSCOPES

RPL-Series

Polarizing Microscope is a principal piece of equipment used by the geologists to observe the optical properties of minerals. It has indispensable applications for Petrography, Crystallography, Geology or finding stress points in metal, glass and textiles, etc. It permits orthoscopically or conoscopically to examine and identify the structures of material with highly resolved distinctive images under various magnifications.

RPL-3 MONOCULAR POLARIZING MICROSCOPE

Focussing : By vertical movement of stage, coarse adjustment by rack-pinion knobs & fine movement by screw-lever mechanism driven by graduated knobs.

Compact ball-bearing centerable rotating stage, 140 mm diameter, graduated with vernier, lock & stage specimen clips.

Compensator : λ -Gypsum Plate (1st order red compensating plate, 560 nanometers) and $\lambda/4$ -Mica Plate (145 nanometers).

Built-in focussable Bertrand lens with center adjustable. Built-in analyzer removable from optical path. Analyzer can be rotated 90° with a vernier reading to 6'. Fully rotatable swing-out Polarizer and an abbe-condenser.

Illuminator : Koehler's illuminator with pre-centred 20W tungsten halogen source and integral electric transformer with intensity control is concealed inside the base. Input voltage 220 or 110 Volts.

Semi Plan Objectives : P4x/0.10, P10x/0.25 and P40x/0.65 SL.

Eyepieces : WF 10x, and H 10x cross.



RPL-3

RPL-3B BINOCULAR POLARIZING MICROSCOPE

Technical specifications are same as per Model RPL-3, but supplied with adjustable Binocular Observation Head & following optical combination.

DIN Semi Plan Objectives : P4x/0.10, P10x/0.25 and P40x/0.65 SL.

Eyepieces : WF10x (Paired) & H 10x cross.



RPL-3B

RPL-3T TRINOCULAR POLARIZING MICROSCOPE

Technical specifications are same as per Model RPL-3, but supplied with adjustable Trinocular Observation Head & following optical combination.

DIN Semi Plan Objectives : P4x/0.10, P10x/0.25 and P40x/0.65 SL.

Eyepieces : WF10x, (Paired) & H10x cross.



RPL-3T

Accessories :

Vinyl Cover, Duster, Cleaning Brush, Filter, Spare Bulb & Fuse and Operating Instruction Manual.

Packing : In full mould Styrofoam / Thermocol Container / Storing Box.

Optional Accessories :

Objectives P 20x and P 60x, Micrometer Eyepiece WF 10x, Micro-photographic Equipment, Wooden Storing Cabinet, Detachable Mechanical Stage, Aluminium Storing Cabinet with lock and key etc.