



METALLURGICAL MICROSCOPE

METALLURGICAL MICROSCOPE TYPE RV3 USB :

For the first time in India, this is the only Inverted Metallurgical microscope which has a **built in CCD camera** & equipped with a **USB Port** to plug it directly to your computer for **Instant photography & Image analysis**.

One more **Video out port** to connect it to a TV monitor. Microstructure image with outstanding clarity & resolution is simultaneously seen in the binocular head, Computer monitor & or TV. Separate computer interfacing attachment (at item 5) is not required for this microscope.

Stand	Very sturdy & rigid, designed for Industrial use. Built in power supply for the Halogen lamp
Mechanical Stage	140 x 170 mm with graduations. Easy movement & adjustment of specimen.
Illumination	Incident light with 12V 50W tungstan halogen lamp Light house provided with iris diaphragm & slot for filters, Continuously adjustable illumination.
Nose piece	Quadruple revolving, with positive click stop.
Coarse focusing	By rack and pinion
Fine focusing	Least count 0.002 mm
Binocular head	Inclined at 45 degrees.with Interpupillary and diaptor setting adjustments
Objectives	Achromatic 4x, 10x, 20x, 40x, 60x
Eyepieces	Huygenian 5x, 10x wide field,15x
Magnification	Minimum 20x to Maximum 900x



Magnification Table :

Eyepiece	Objective	Magnification	Eyepiece	Objective	Magnification	Eyepiece	Objective	Magnification
5	4	20	10WF	4	40	15	4	60
5	10	50	10WF	10	100	15	10	150
5	20	100	10WF	20	200	15	20	300
5	40	200	10WF	40	400	15	40	600
5	60	300	10WF	60	600	15	60	900

Operating voltage 220V A/C, 50HZ. Net weight 13 Kgs

Instrument Size 400 L x 340 B x 330 H mm Gross weight 18 Kgs

VERTEX ENGINEERS & ASSOCIATES

R.H. 116, SECTOR 2B, NEAR DATTA MEGHE ENGINEERING COLLEGE, AIROLI, NAVI MUMBAI 400 708

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METALLURGICAL MICROSCOPE

METALLURGICAL MICROSCOPE TYPE VMM4 :

This is a very sturdy Inverted metallurgical Microscope designed for Industrial use. The Inverted design eliminates the need for specimen mounting. Only one side of the specimen needs to be polished & no leveling is needed.

Can be interfaced with Computer for Image analysis work.

Stand	Very sturdy & rigid, designed for Industrial use.
Mechanical Stage	140 x 170 mm with graduations. Easy movement & adjustment of specimen.
Illumination	Incident light with 12V 50W tungstan halogen lamp Light house provided with iris diaphragm & slot for filters Continuously adjustable illumination.
Nose piece	Quadruple revolving nose piece with positive click stop.
Coarse focusing	By rack and pinion
Fine focusing	Least Count 0.002 mm
Binocular head	Inclined at 45 degrees.with Interpupillary & diopter setting
Objectives	Achromatic 4x, 10x, 20x, 40x, 60x
Eyepieces	Huygenian 5x, 10x wide field , 15x
Magnification	Minimum 20x to Maximum 1500x



Magnification Table

Eyepiece	Objective	Magnification	Eyepiece	Objective	Magnification	Eyepiece	Objective	Magnification
5	4	20	10WF	4	40	15	4	60
5	10	50	10WF	10	100	15	10	150
5	20	100	10WF	20	200	15	20	300
5	40	200	10WF	40	400	15	40	600
5	60	300	10WF	60	600	15	60	900

Operating voltage	220V A/C, 50HZ.	Net weight	12 Kgs
Instrument Size	400 L x 200 B x 330 H mm	Gross weight	17 Kgs

METALLURGICAL MICROSCOPE TYPE INBT2 :

This is a very sturdy Inverted metallurgical Microscope designed for Industrial use. The Inverted design eliminates the need for specimen mounting. Only one side of the specimen needs to be polished & no leveling is needed.

Can be easily interfaced with Computer for Image analysis work.

Stand	Very sturdy & rigid, designed for Industrial use.
Mechanical Stage	140 x 170 mm with graduations. Easy movement for adjustment of specimen.
Illumination	Incident light with 12V 50W halogen lamp Light house provided with iris diaphragm & filters Continuously adjustable illumination.
Nose piece	Triple revolving nose piece
Coarse focusing	By rack and pinion



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METALLURGICAL MICROSCOPE

Fine focusing	Least Count 0.002 mm
Binocular head	Inclined at 45 degrees.with Interpupillary & diopter setting
Objectives	Achromatic 4x, 10x, 20x, 40x, 60x
Eyepieces	Huygenian 5x, 10x wide field , 15x
Magnification	Minimum 20x to Maximum 1500x

Magnification Table

Eyeiece	Objective	Magnification	Eyeiece	Objective	Magnification	Eyeiece	Objective	Magnification
5	4	20	10WF	4	40	15	4	60
5	10	50	10WF	10	100	15	10	150
5	20	100	10WF	20	200	15	20	300
5	40	200	10WF	40	400	15	40	600
5	60	300	10WF	60	600	15	60	900

Operating voltage	220V A/C, 50HZ.	Net weight	7.5 Kg
Instrument Size	280 L x 160 B x 270 H mm	Gross weight	15 kg

METALLURGICAL MICROSCOPE TYPE ESM1 T

In addition to Normal Visual Metallurgical applications this microscope is equipped with a Trinocular head. A CCD Camera can be attached & Interfaced with your computer for Instant photography & Image analysis	
Stand	Sturdy & rigid, designed for Industrial use. with built in power supply for the Halogen lamp.
Mechanical Stage	120 x 140 mm with graduations. Easy Movement & adjustment of specimen.
Illumination	Incident light with 6V 20W tungstan halogen lamp Light house provided with iris diaphragm & slot for filters, Continuously adjustable illumination.
Nose piece	Triple revolving nose piece with positive click stop.
Coarse focusing	By rack and pinion
Fine focusing	Least count 0.002 mm
Trinocular head	Inclined at 45 degrees.Rotatable 360 degrees.Provided with interpupillary distance & diaptor setting adjustment. CCD or 35mm camera can be attached to the tube
Objectives	Achromatic 4x, 10x, 40x ,60 x
Eyepieces	Huygenian 5x, 10x WF, 15x
Magnification	Minimum 20x to Maximum 1500x



Magnification Table

Eyeiece	Objective	Magnification	Eyeiece	Objective	Magnification	Eyeiece	Objective	Magnification
5	4	20	10WF	4	40	15	4	60
5	10	50	10WF	10	100	15	10	150
5	40	200	10WF	40	400	15	40	600
5	60	300	10WF	60	600	15	60	900

Operating voltage	220V A/C, 50HZ.	Net weight	7 Kgs
Instrument Size	210 L x 190 B x 520 H mm	Gross weight	9 Kgs

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METALLURGICAL MICROSCOPE

Accessories for the microscope :

Computer Interface cum CCTV attachment

(Using your Own Computer, Printer & or TV)

Microscope Type **ESM1T, VMM4, VMM6 & INBT2** can be Interfaced to your own computer to give instant photographs of the Microstructure image. This attachment enables you to take sharp & clear Microstructure photographs & their printouts instantly. The Image can be viewed on computer monitor. The image can be saved on computer hard disk & you can maintain a permanent record of your inspected samples .The saved photographs can be sent to your vendors or clients by Email. In absence of the computer it can be seen on TV This attachment is very much necessary If Image analyzer software is to be used

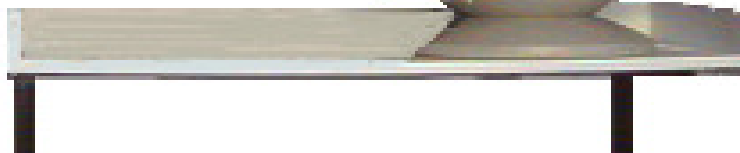
CCD Camera



Computer
Color monitor



TV



Mouse

Keyboard

Printer

Computer

Printer

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Following material to be Provided by you

- 1 **Computer** Pentium III / IV ,Minimum 450Mhz or higher,Hard disk 10 GB, RAM 64 MB
CD ROM Drive, Windows 98 SE / 2000
- 2 **Printer** Color ink jet printer 610C / 640 C of HP or equivalent.
- 3 **TV** Samsung 14" Color TV or equivalent model with Video in socket

Following material to be supplied by us as Computer interface attachment

- 1 **CCD Camera** AVC 550 (PAL) Japan make or equivalent latest available.

Pick up element	1/3" CCD Image sensor	BLC function	Auto detect
Number of pixel	512(H)x582(V) PAL	White balance	Auto
Resolution	380 TV lines	Video balance	1 Vpp, 750
Min.Illumination	5 Lux/F2.0	Power source	DC 12V
S/N Ratio	More than 45db (AGC off)	Current consumption	150 ma
Electronic shutter	1/60(1/50) to 1/100000 auto		
- 2 **Regulated power supply for the CCD Camera , camera to computer cord**
- 3 **Camera to Microscope Opto-Mechanical coupler.**
- 5 **Frame grabber card** (to be fitted inside your Computer on the PCI slot) with its Installation manual and Original CD of the Capture program software.

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