

## INDUSTRY Series

Metallurgical and measuring microscopes



# INDUSTRY Series

This series has been designed to handle and observe samples of any dimension.

Industrial microscopes incorporate many complex designs that aim to improve resolution and sample contrast.

From models designed for routine analysis up to models dedicated to industrial laboratory and quality control, Optika Microscopes is able to satisfy any demand in this field.

## **XC-100L**

Portable monocular microscope for surface measurements, 100x magnification, incident light pen.

## **XZ-1**

Measuring monozoom microscope 7x...45x, incident & transmitted illumination.

## **XZ-2**

Measuring monozoom videomicroscope 7x...45x, with 8" LCD screen, incident ring LED illumination.

## **B-383MET**

Trinocular metallurgical microscope, IOS MET objectives, X-LED incident & transmitted illumination.

## **B-500MET**

Upright Metallurgical Microscope, IOS MET objectives, X-LED incident & transmitted illumination.

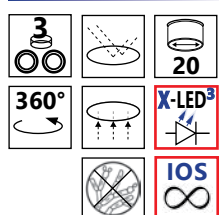
## **B-1000MET**

Upright advanced metallurgical microscope.

## **XDS-3MET**

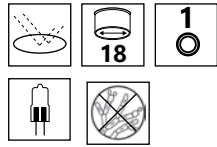
Trinocular Inverted metallurgical microscope, IOS LWD MET Objectives.

### **B-383MET**



# INDUSTRY Series - XC-100L

## XC-100L



### XC-100L

Portable microscope for measurements. Fitted with WF10x/18mm micrometric eyepiece with cross divided into tenths of a millimetre. 10x achromatic objective (total magnification 100x); focusing controlled by a rack and pinion mechanism; adjustable battery powered penlight lighting unit.



# INDUSTRY Series - XZ-1 and XZ-2

### XZ-1

Bench monocular microscope for measuring and viewing surfaces with a zoom objective.

Fitted with WF10x/18mm micrometric eyepiece with cross divided into tenths of a millimetre. 0.7x...4.5x achromatic zoom objective (max. magnification 45).

Focusing controlled by a rack and pinion mechanism.

Double lighting unit for incident and transmitted light fitted with low voltage halogen bulbs (12V/10W). Working distance 90 mm.

### XZ-2

Bench binocular microscope for measuring and viewing surfaces with a zoom objective and TFT LCD screen (8").

0.7x...4.5x achromatic zoom objective.

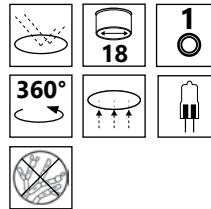
Focusing controlled by a rack and pinion mechanism.

Working distance: 96 mm.

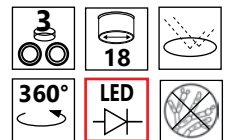
LED ring light generator with brightness control.

CCD colour camera (380 TVlines). 8" TFT LCD screen with electronic graduated measuring cross.

## XZ-1



## XZ-2



# INDUSTRY Series - B-383MET

## B-383MET - Upright metallurgical microscope

**Head:** Trinocular, 30° inclined, 360° rotating. Interpupillary adjustment 48-75 mm.

**Eyepieces:** WF10X/20mm.

**Nosepiece:** 5-position reversed revolving nosepiece. Ball bearing rotation.

**Objectives:** PLAN IOS MET (no cover slide) 4x/0.10, 10x/0.25, 20x/0.40, 50x/0.75.

**Focusing system:** Coaxial coarse and fine.

**Stage:** Double layer mechanical sliding stage, dimensions 216x150mm, moving range 78x54mm.

Belt-drive in X direction. Glass insert for sample support.

**Condenser:** Abbe condenser, sliding-in, N.A. 1.25 with centering system.

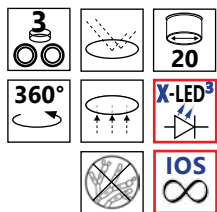
**Illumination:** Transmitted light: X-LED<sup>3</sup>, with manual brightness control.

**Power supply:** External power supply: Input 100-240Vac 50-60Hz / Output 6Vdc 1A.

**Metallurgical Attachment:** High-power white X-LED<sup>3</sup>; field and aperture diaphragms.

**Filters:** Blue, polarizer & analyzer.

## B-383MET



# INDUSTRY Series - B-500MET

## B-500MET - Upright metallurgical microscope

**Head:** Trinocular, 30° inclined, 360° rotating.

**Eyepieces:** WF10X/22mm.

**Nosepiece:** 5-positions, reversed.

**Objectives:** PLAN IOS MET (no cover slide) IOS 5x/0.15, 10x/0.3, 20x/0.45, 50x/0.55, 100x/0.9 (dry).

**Magnifications:** 50x, 100x, 200x, 500x, 1000x.

**Focusing system:** Coaxial coarse and fine.

**Stage:** Double layer with mechanical sliding stage, 175x145 mm, moving range 76x52 mm.

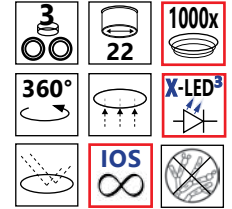
**Condenser:** 0,7 N.A. swing-out type, with iris diaphragm, centrable and focusable.

**Illumination:** OPTIKA X-LED<sup>3</sup> system. Brightness is adjustable.

**Metallurgical Attachment:** High-power white X-LED<sup>3</sup> system with brightness control; field and aperture diaphragms (centrable). Simple sliding darkfield system.

**Filters:** Blue, polarizer & analyzer.

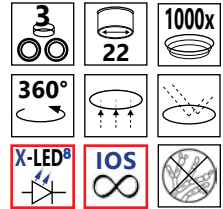
## B-500MET



# B-1000MET Model



## B-1000MET



### B-1000MET

Type:

**UPRIGHT ADVANCED METALLURGICAL MICROSCOPE**

Description:

Microscope for advanced and research applications. Dye-cast frame, with high stability and ergonomy, for transmitted and incident light observation.



Version for material analysis (with brightfield and darkfield Epi-Illumination).  
Transmitted illumination X-LED<sup>8</sup> (8W power).  
Special attachment with built-in 100W halogen lamp.

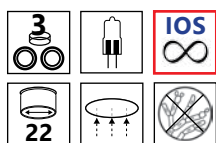
# B-1000MET Model - Configuration chart

BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:



# INDUSTRY Series - XDS-3MET

## XDS-3MET



### XDS-3MET - Inverted metallurgical microscope

**Head:** Trinocular, 45° inclined.

**Eyepieces:** WF10X/22mm.

**Nosepiece:** 5-positions.

**Objectives:** LWD PLAN IOS MET (no cover slide): 5x/0.15, 10x/0.3, 20x/0.45, 50x/0.55.

**Magnifications:** 50x, 100x, 200x, 500x.

**Focusing system:** Coaxial coarse and fine.

**Stage:** 250x230mm; mechanical stage with lowered ergonomic coaxial controls.

X-Y range: 120x80mm.

**Diaphragms:** Field and aperture diaphragms (centrable).

**Illumination:** 12V/50W halogen bulb in external case. Centrable bulb and brightness control.

**Filters:** Blue, polarizer & analyzer.





# INDUSTRY Series - Technical specifications

Model	Head	Eyepiece	Objectives	Working Distance	Stand	Illumination
<b>XC-100L</b>	Monocular	WF10x/18mm micrometric	10x	7,7 mm	Portable stand	Incident illumination: xenon penlight
<b>XZ-1</b>	Monocular	WF10x/18mm	0,7x....4,5x zoom	90 mm	Pillar stand	Incident illumination: halogen bulbs 12V/10W Transmitted illumination: halogen bulbs 12V/10W
<b>XZ-2</b>	Binocular	WF10x/18mm	0,7x.... 4,5x zoom	96 mm	Pillar stand with 8" TFT LCD screen	Incident illumination: LED ring light with brightness control



Model	Head	Eyepieces	Objectives	Nosepiece	Stage	Focusing	Condenser	Illumination
<b>B-383MET</b>	Trinocular	WF10x/20mm	PLAN IOS MET 4x, 10x, 20x, 50x	Quintuple reversed	Double layer mechanical sliding stage, dimensions 216x150mm, moving range 78x54mm. Belt-drive in X direction. Glass insert for sample support.	Coaxial coarse and fine system, with limit stop	Abbe condenser, sliding-in, N.A. 1.25 with centering system.	<b>Transmitted light:</b> X-LED <sup>3</sup> , with manual brightness control. <b>Metallurgical Attachment:</b> High-power white X-LED <sup>3</sup> system with brightness control.
<b>B-500MET</b>	Trinocular	WF10x/22mm	PLAN IOS MET (no cover slide) 5x, 10x, 20x, 50x, 100x (dry)	Quintuple reversed	Double layer with mechanical sliding stage, 175x145 mm, moving range 76x52 mm. Glass insert for sample support.	Coaxial coarse and fine system, with limit stop	Brightfield condenser: 0,7 N.A. swing-out type, with iris diaphragm, centrable and focusable	<b>Transmitted illumination:</b> X-LED <sup>3</sup> illumination system. <b>Metallurgical Attachment:</b> High-power white X-LED <sup>3</sup> system with brightness control.
<b>B-1000MET</b>	See the configuration chart for your own configuration							
<b>XDS-3MET</b>	Trinocular	WF10x/22mm	LWD PLAN IOS MET (no cover slide) 5x, 10x, 20x, 50x	Quintuple reversed	250X230mm; mechanical stage with lowered ergonomic coaxial controls. X-Y range: 120x80 mm	Coaxial coarse and fine system, with limit stop	-----	12V/50W halogen bulb in external case. Centrable bulb and brightness control.

# INDUSTRY Series - Accessories

## **XC-100L - Measuring microscope**

- M-899 Pen illuminator.
- M-004 Eyepiece with micrometer WF10x/18mm.
- M-114 CCD camera adapter 0,45x.
- M-116 CCD camera adapter 0,50x.
- M-173 Photo adapter for APS-C and Full Frame Reflex cameras.

## **XZ-1 - Measuring monozoom microscope**

- M-001 Eyepiece H5x.
- M-003 Eyepiece WF16x/12mm.
- M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.
- ST-012 White/black object-plate, type 2 dia. 95 mm.
- ST-014 Glass stage, type 2, dia. 95 mm.
- ST-028 Halogen bulb 12V/10W.
- M-013 Halogen bulb 12V/10W, with dichroic mirror.
- ST-029 Dust cover type 12.
- M-114 CCD camera adapter 0,45x.
- M-116 CCD camera adapter 0,50x.
- M-173 Photo adapter for APS-C and Full Frame Reflex cameras.

## **XZ-2 - Measuring monozoom videomicroscope**

- M-001 Eyepiece H5x.
- M-003 Eyepiece WF16x/12mm.
- M-004 Eyepiece with micrometer WF10x/18mm.
- M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.
- M-114 CCD camera adapter 0,45x.
- M-116 CCD camera adapter 0,50x.
- M-173 Photo adapter for APS-C and Full Frame Reflex cameras.

## **B-383MET - Upright metallurgical microscope**

- M-160 Eyepiece WF10x/20mm.
- M-161 Eyepiece WF15x.
- M-162 Eyepiece WF20x.
- M-163 Micrometer eyepiece WF10x/20mm.
- M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.
- M-144 Objective 4x/0,10 E-PLAN IOS.
- M-145 Objective 10x/0,25 E-PLAN IOS.
- M-146 Objective 20x/0,40 E-PLAN IOS.
- M-147 Objective 40x/0,65 E-PLAN IOS.
- M-149 Objective 60x/0,80 E-PLAN IOS.
- M-148 Objective 100x/1,25 E-PLAN IOS (Oil).
- M-337 Objective PLAN IOS MET 4x/0.10.
- M-338 Objective PLAN IOS MET 10x/0.25.
- M-339 Objective PLAN IOS MET 20x/0.40.
- M-335 Objective PLAN IOS MET 50x/0.75.
- M-173 Photo adapter for APS-C and Full Frame Reflex cameras.
- M-114 CCD camera adapter 0,45x.
- M-116 CCD camera adapter 0,50x.
- M-069 Solar battery pack.

## **B-500MET - Upright metallurgical microscope**

- M-680 Ergo binocular head 30°-60°.
- M-780 Eyepiece EWF10x/22mm.
- M-601 Eyepiece WF15x/16mm.
- M-781 Eyepiece micrometer EWF10x/22mm.
- M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.
- M-693.1 Objective IOS LWD MET PLAN 5x/0,15.
- M-694.1 Objective IOS LWD MET PLAN 10x/0,3.
- M-695.1 Objective IOS LWD MET PLAN 20x/0,45.
- M-696.1 Objective IOS LWD MET PLAN 50x/0,55).
- M-698.2 Objective IOS MET PLAN 100x/0,90.
- M-613 Polarising set (filters only).

- M-615 Lambda filter for polarising set.
- M-614 Rotating table for polarising set.
- M-619 Photo adapter for REFLEX camera with FULL FRAME sensor.
- M-699 Universal adapter for OPTIKAM & DIGI cameras (only models with eyepiece adapter, 23mm).
- M-620 CCD camera adapter (for 1/3" sensors).
- M-620.1 CCD camera adapter (for 1/2" sensors).
- M-622 Halogen bulb 12V/50W (only for XDS-3MET).
- M-034 Dust cover type 5.
- M-975 Blue filter, 45 mm diameter.
- M-977 Green filter, 45 mm diameter.
- M-979 Yellow filter, 45 mm diameter.
- M-989 Frosted glass filter, 45 mm diameter.
- M-690 Eyecup (pair).
- M-114 CCD camera adapter 0,45x.
- M-116 CCD camera adapter 0,50x.
- M-173 Photo adapter for APS-C and Full Frame Reflex cameras.

## **XDS-3MET - Inverted metallurgical microscope**

- M-625 Eyepiece EWF10x/22mm.
- M-601 Eyepiece WF15x/16mm.
- M-602 Eyepiece micrometer EWF10x/22mm.
- M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.
- M-735 Objective IOS LWD MET PLAN 5x/0,15.
- M-736 Objective IOS LWD MET PLAN 10x/0,3.
- M-737 Objective IOS LWD MET PLAN 20x/0,45.
- M-738 Objective IOS LWD MET PLAN 50x/0,55.
- M-746 Objective IOS LWD MET PLAN 100x/0,80.
- M-619 Photo adapter for REFLEX camera with FULL FRAME sensor.
- M-699 Universal adapter for OPTIKAM & DIGI cameras (only models with eyepiece adapter, 23mm).
- M-789 CCD camera adapter (for 1/3" sensors).
- M-789.1 CCD camera adapter (for 1/2" sensors)
- M-622 Halogen bulb 12V/50W (only for XDS-3MET).
- M-036 Dust cover type 7.
- M-114 CCD camera adapter 0,45x.
- M-116 CCD camera adapter 0,50x.
- M-173 Photo adapter for APS-C and Full Frame Reflex cameras.
- M-788 Photo adapter for REFLEX camera with FULL FRAME sensor.

## **B-1000MET - Metallurgical microscope**

- M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.
- M-613 Polarizing set (filters only).
- M-615 Lambda filter for polarizing set.
- M-617.1N Phase contrast set with IOS PLAN objectives 40x.
- M-781 WF10x/22mm micrometer eyepiece (10mm, 0.1mm div.).
- CL-35 Halogen Lamp 24V 100W (only for metallurgical attachment M-1035).
- M-690 Eyecup (pair).
- M-619 Photo tube adapter for full frame SLR camera.
- M-173 Photo adapter for APS-C and Full Frame Reflex cameras.
- M-699 Universal adapter for OPTIKAM & DIGI cameras (only models with eyepiece adapter, 23mm).
- M-620 CCD camera adapter (for 1/3" sensors).
- M-620.1 CCD camera adapter (for 1/2" sensors).
- 15008 OPTIKA immersion oil 10ml.
- M-114 CCD camera adapter 0,45x.
- M-116 CCD camera adapter 0,50x.
- 15104 Lens cleaner, 50ml



### **How to connect the cameras to our microscopes.**

Please refer to the Adapter reference list on Digital section.

## Headquarters and Manufacturing Facilities

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