

# INDUSTRIAL MICROSCOPES





## INDUSTRIAL MICROSCOPES

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## LAB Series

Professional entry-level stereomicroscopes



LAB



## LAB Series

The LAB series can be considered as the entry-level of the OPTIKA professional stereomicroscopes range. The two models have been designed for end users who need professional quality at low cost.

LAB-10

Binocular, selectable magnification

LAB-20

Binocular, zoom magnification

LAB-10



LAB-20



## LAB Series

### Heads

Binocular heads, 360° rotating and 45° inclined.

### Interpupillary distance

Adjustable between 51 and 75 mm.

### Eyepieces

WF10x/20 mm. Dioptric compensation adjustable on both eyepiece tubes.

### Specimen stage

Fitted with a semi-transparent disc for transmitted light with specimen clips.

### Objectives

LAB 10: with double magnification (2x-4x) that can be selected by rotating the lens unit. Working distance 80mm.

LAB 20: continuous zoom 0,7x ...4,5x. (6,43:1 zoom factor).

Working distance: 85 mm.

### Stand

Fixed arm type with focusing mechanism.

### Focusing

Rack and pinion controlled by a pair of knobs placed on both sides of the stand.

### Illumination

Double adjustable illuminator for incident and transmitted light fitted with two high-efficiency LED light sources. The angle of the incident illuminator is adjustable. Voltage: 110/240V ac.

## LAB Series - Technical specifications

Model	Head	Eyepieces	Objectives	Working Distance	Stand	Illumination
LAB-10	Binocular	WF 10x/20mm	2x - 4x selectable by rotating	80 mm	Pillar stand with fixed holder	Double incident and transmitted light. High-efficiency LED light sources with separate brightness controls
LAB-20	Binocular	WF 10x/20mm	0,7x...4,5x zoom	85 mm	Pillar stand with fixed holder	Double incident and transmitted light. High-efficiency LED light sources with separate brightness controls



LAB-10



LAB-20



# LAB Series - Accessories

ST-001.1	Eyepieces (pair) WF5x/22mm
ST-401	Eyepieces (pair) WF10x/20mm
ST-402	Eyepieces (pair) WF15x/15mm
ST-403	Eyepieces (pair) WF20x/10mm
ST-405	Eyepiece micrometric WF10x/20mm
ST-410	Additional lens 0,5x for LAB 20 (w.d. 170 mm)
ST-411	Additional lens 1,5x for LAB 20 (w.d. 42 mm)
ST-415	Eye cups (pair) type 1
ST-029	Dust cover type 12



## 15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



## OPTIKA SRL

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## ALPHA OPTIKA MICROSCOPES HUNGARY

2030 ÉRD, Kaktusz u. 22. - HUNGARY - Tel.: (23) 520-077 Fax: (23) 374-965



## SZM Series

Professional stereozoom microscopes



SZM



## SZM Series

The stereomicroscopes of the SZM series are instruments designed for laboratory and industry applications.

Their optical and mechanical qualities place them at the top of their category and the price/quality ratio is excellent. The stereomicroscopes share the same optical system consisting of binocular and trinocular heads with zoom objectives.

The four models of the SZM series find their proper application wherever professional instruments are required. Several accessories provide an ample choice of configurations and applications.

<b>SZM-1</b>	Binocular with pillar stand, halogen lamp
<b>SZM-1Led</b>	Binocular with pillar stand, LED
<b>SZM-2</b>	Trinocular with pillar stand, halogen lamp
<b>SZM-2Led</b>	Trinocular with pillar stand, LED
<b>SZM-3</b>	Binocular with overhanging stand
<b>SZM-4</b>	Trinocular with overhanging stand





## SZM Series

### Heads

Binocular and trinocular, 360° rotating and 45° inclined.

### Interpupillary distance

Adjustable between 51 and 75 mm.

### Dioptic compensation

On both eyepiece tubes.

### Eyepieces

EWF 10x/20 mm

### Objectives

Parfocal achromatic zoom 0,7x...4,5x (6,428:1 zoom factor).

### Specimen stage:

Models with illumination are fitted with a black/white disc.

Specimen clips and a frosted disc for transmitted light.

### Focusing

Rack and pinion mechanism controlled by a pair of knobs placed on both sides of the stand.

### Stand

Pillar stand: 30 mm and 25 cm high. Base: 26x20x6h cm. Overhanging stand: 42 cm high, 23x23 cm base and 45 cm horizontal arm length.

### Illumination

Double, adjustable incident and transmitted light, fitted with two 12V/15W halogen bulbs. The angle of the incident illumination is adjustable. The two models SZM-1/2Led are equipped with a double high-power LED.



## SZM Series - Technical specifications

Model	Head	Eyepieces	Objectives	Working Distance	Stand	Illumination
SZM-1	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	Incident and transmitted 12V/15W halogen
SZM-1Led	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	Incident: high power single LED Transmitted: LED diffusing disc
SZM-2	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	Incident and transmitted 12V/15W halogen
SZM-2Led	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Pillar stand	Incident: high power single LED Transmitted: LED diffusing disc
SZM-3	Binocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Overhanging stand	---
SZM-4	Trinocular	EWF 10x/20mm	0,7 .... 4,5x Zoom	100 mm	Overhanging stand	---

# SZM Series - Accessories

ST-081	Eyepieces (pair) WF10x/20 mm
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Eyepiece micrometric WF10x/20 mm
ST-085	Additional lens 0,5x (w.d. 165 mm)
ST-091	Additional lens 0,75x (w.d. 117 mm)
ST-086	Additional lens 1,5x (w.d. 47 mm)
ST-087	Additional lens 2x (w.d. 26 mm)
ST-088	Polarising set (filters and rotating stage) *
ST-040	Darkfield condenser *
ST-041	Sample clip
ST-100	Moving stage *
ST-089	Reflex camera adapter for full frame sensor
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-036	Eye cups (pair) type 2
ST-012	White/black object-plate, type 2 dia. 95 mm *
ST-014	Glass stage, type 2, dia. 95 mm *
ST-038	Halogen bulb, 12V/15W
ST-037	Halogen bulb, 12V/15W, with dichroic mirror
ST-033	Dust cover type 13
ST-666	Heating stage, with digital temperature controller
ST-173	APS-C Reflex camera adapter

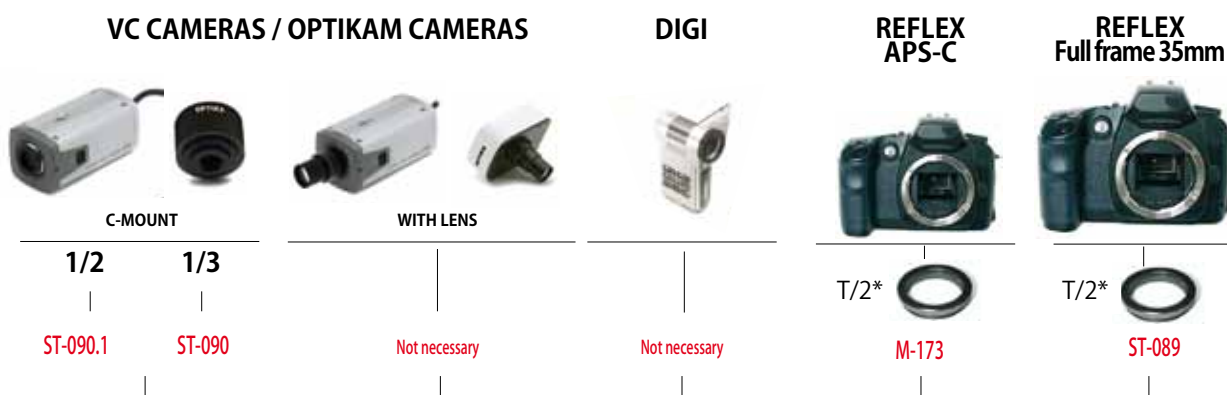
\* For LED version special adapter required



## 15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.

## CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



**SZM**  
Trinocular versions

\*T/2 is not supplied by OPTIKA

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## SZR Series

Laboratory stereozoom microscopes



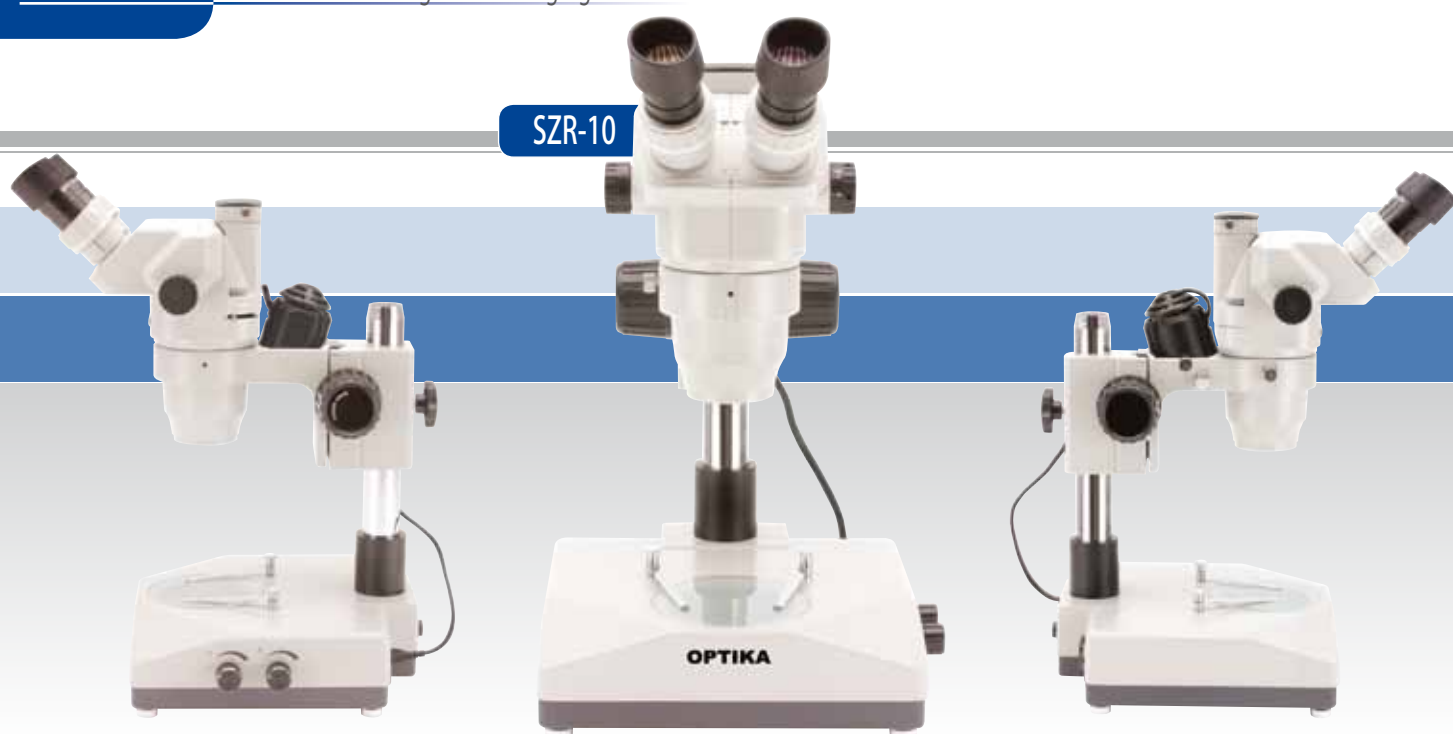
SZR

## SZR Series

The SZR stereomicroscope series is specifically designed for research workers. Its functional features and its optical and mechanical qualities make it a reference point in the scientific research instruments market. It is composed by 14 models designed with different technical solutions to meet the specific applications. The binocular and trinocular heads provided with zoom optics represent the heart of the SZR series. These are backed by numerous types of bases and stands suitable for any type of use. A wide range of accessories considerably increases the potential of these instruments.

SZR-1	Binocular, simple stand
SZR-2	Trinocular, simple stand
SZR-3	Binocular, simple stand with incident illumination
SZR-4	Trinocular, simple stand with incident illumination
SZR-5	Binocular, stand with incident or transmitted illumination
SZR-6	Trinocular, stand with incident or transmitted illumination
SZR-7	Binocular, stand with incident and transmitted illumination
SZR-8	Trinocular, stand with incident and transmitted illumination
SZR-9	Binocular, pillar stand with incident and transmitted illumination
SZR-10	Trinocular, pillar stand with incident and transmitted illumination
SZR-11	Binocular with simple overhanging stand
SZR-12	Trinocular with simple overhanging stand
SZR-13	Binocular with hinged overhanging stand
SZR-14	Trinocular with hinged overhanging stand

SZR-10





# SZR Series

## Heads

Binocular or trinocular, 360° rotating and 45° inclined.

## Interpupillary distance

Adjustable between 52 and 75 mm.

## Dioptric compensation

On both eyepiece tubes.

## Eyepieces

EWF10x/22mm, high-point.

## Working distance

110 mm.

## Objectives

Parfocal achromatic zoom 0,67x...4,5x with continuously variable magnification (max. 45x in the standard configuration, can be increased to 180x by using additional accessories).

## Specimen stage:

Except overhanging models, the instruments are fitted with a black/white disc for contrast and specimen clamps.

Models with transmitted illumination also fitted with frosted glass disc.

## Focusing

By means of rack and pinion system, controlled by a pair of knobs.

## Illumination

12V/15W halogen bulbs with light intensity adjustments. SZR-9 and SZR-10 models are the only ones with built-in illumination system. All others models with illumination have a system based on external power supply unit.

## Stands

The series have 5 kinds of stands for every requirement.

Simple for vision without transmitted illumination; simple + trans-illuminator base for incident and transmitted illumination; with incorporated illumination system in the base; the last ones with overhanging stands (simple or hinged), that allow very large objects to be viewed and to be handled or worked.

## Photo/video applications

For microphotography with SLR 35mm type or digital type cameras, a model fitted with a trinocular head and the following optional accessories are required for taking pictures:

- SLR 35mm cameras: SZ-PH (photo tube, adapter for T/2 ring and 4x photo eyepiece). Purchase of the T/2 ring suitable to the type of SLR camera used is also indispensable.

- DIGI digital camera set: SZ-PHD tube adapter. The optical adapter is included in DIGI set. For video microscopy, a model fitted with a trinocular head and the following optional accessories are required for shooting with a CCD video camera: SZ-CTV CCD camera adapter and VC03 high-resolution CCD colour video camera. VC03 is supplied complete with built-in transformer, monitor connection cable, SCART adapter for TV connection and instruction manual.





## SZR Series - Models



### SZR-2

Trinocular  
Simple stand with rack and pinion system



### SZR-6

Trinocular  
Stand with rack and pinion system  
Incid. or transm., halogen 12V/15W,  
external power supply



### SZR-10

Trinocular  
Pillar stand  
Incid. or transm., halogen 12V/15W,  
external power supply

## SZR Series - Models

### SZR-12

Trinocular  
Simple overhanging



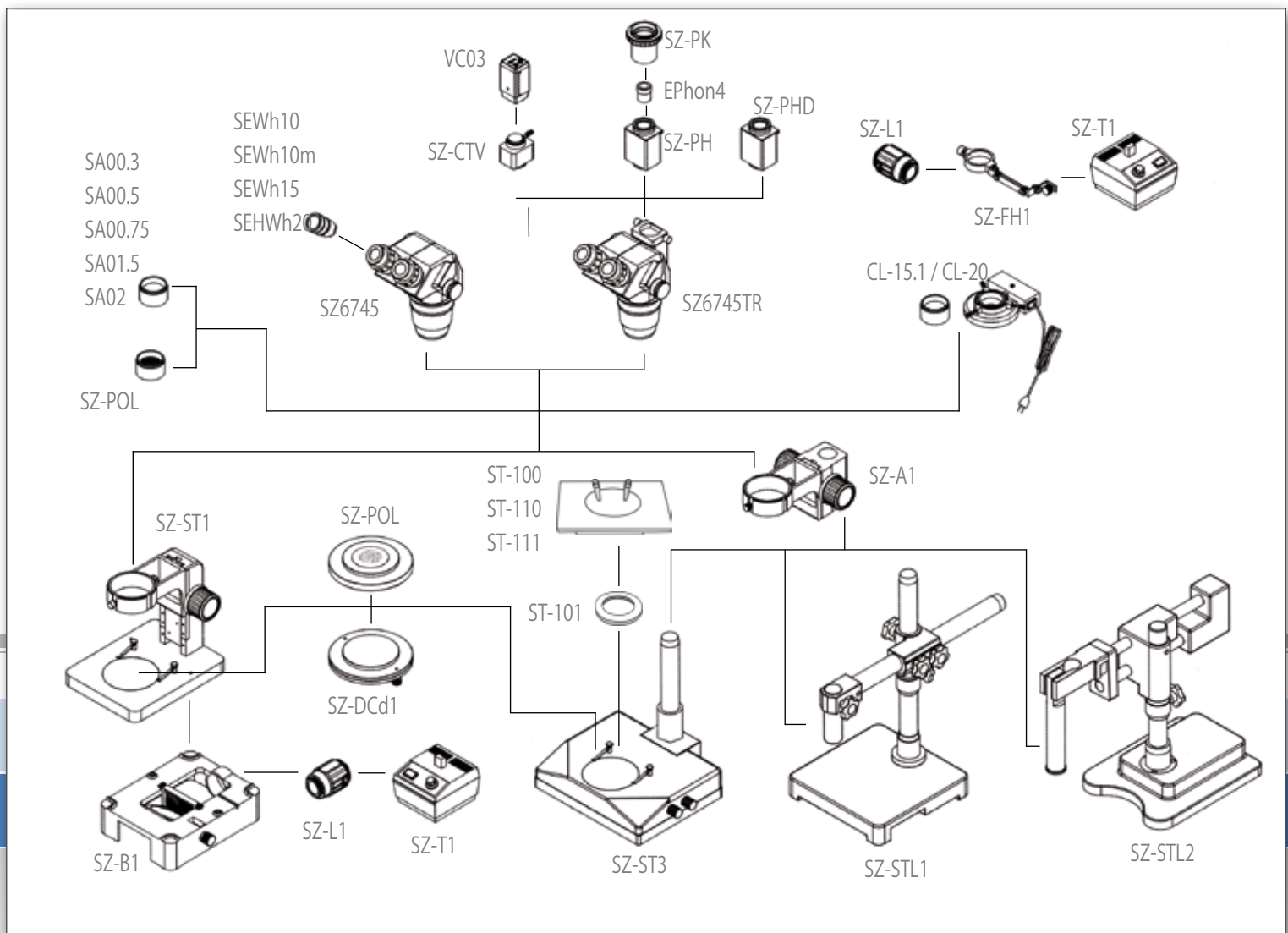
### SZR-14

Trinocular  
Hinged overhanging



## SZR Series- Optional accessories and spare components

A wide range of optional accessories is available in order to extend the possibilities offered by the SZR series instruments: additional optics, accessories for all photography/video applications, including the possibility of using DIGI digital camera set, darkfield & polarizing light.



## SZR Series - Technical specifications

Model	Head	Eyepieces	Objective	Working distance	Stand	Illumination
SZR-1	Binocular	EWF10x/22	0,67....4,5x	110mm	Simple stand with rack and pinion system	-----
SZR-2	Trinocular	EWF10x/22	0,67....4,5x	110mm	Simple stand with rack and pinion system	-----
SZR-3	Binocular	EWF10x/22	0,67....4,5x	110mm	Simple stand with rack and pinion system	Incident halogen 12V/15W, external power supply
SZR-4	Trinocular	EWF10x/22	0,67....4,5x	110mm	Simple stand with rack and pinion system	Incident halogen 12V/15W, external power supply
SZR-5	Binocular	EWF10x/22	0,67....4,5x	110mm	Stand with rack and pinion system	Incid. or transm., halogen 12V/15W, external power supply
SZR-6	Trinocular	EWF10x/22	0,67....4,5x	110mm	Stand with rack and pinion system	Incid. or transm., halogen 12V/15W, external power supply
SZR-7	Binocular	EWF10x/22	0,67....4,5x	110mm	Stand with rack and pinion system	Incid. and transm., halogen 12V/15W, external power supply
SZR-8	Trinocular	EWF10x/22	0,67....4,5x	110mm	Stand with rack and pinion system	Incid. and transm., halogen 12V/15W, external power supply
SZR-9	Binocular	EWF10x/22	0,67....4,5x	110mm	Pillar stand	Incid. and transm., halogen 12V/15W, internal power supply
SZR-10	Trinocular	EWF10x/22	0,67....4,5x	110mm	Pillar stand	Incid. and transm., halogen 12V/15W, internal power supply
SZR-11	Binocular	EWF10x/22	0,67....4,5x	110mm	Simple overhanging	-----
SZR-12	Trinocular	EWF10x/22	0,67....4,5x	110mm	Simple overhanging	-----
SZR-13	Binocular	EWF10x/22	0,67....4,5x	110mm	Hinged overhanging	-----
SZR-14	Trinocular	EWF10x/22	0,67....4,5x	110mm	Hinged overhanging	-----



# SZR Series - Accessories

SZ6745	Zoom binocular head, with eyepieces
SZ6745TR	Zoom trinocular head, with eyepieces
SZ-ST1	Simple base
SZ-B1	Slide projection base
SZ-ST3	Pillar stand
SZ-STL1	Simple overhanging stand, without head holder
SZ-STL2	Hinged overhanging stand, without head holder
SZ-A1	Focusing system
SZ-DCd1	Darkfield condenser
SZ-POL	Polarising set (filters and rotating stage)
SZ-L1	Halogen bulb 12V/15W
SZ-FH1	Arm for illuminator SZ-L1
SZ-T1	Transformer for SZ-L1
SZ-PH	Reflex camera adapter
SZ-PHD	Adapter for digital cameras DIGI series
SZ-CTV	CCD camera adapter
SEWh15	Eyepieces (pair) WF15x/16mm
SEHWh20	Eyepieces (pair) WF20x/12mm
SEWh10m	Eyepiece micrometric WF10x/22mm
SAO0.3	Additional lens 0,3x (w.d. 287mm)

SAO0.5	Additional lens 0,5x (w.d. 185mm)
SAO0.75	Additional lens 0,7x (w.d. 120mm)
SAO1.5	Additional lens 1,5x (w.d. 49mm)
SAO2	Additional lens 2x (w.d. 28mm)
ST-100	Hand moving stage
ST-101	Ring adapter for mounting ST-100 on SZR series
ST-036	Eye cups (pair) type 2
ST-042	White/black object-plate, type 3, dia. 100 mm
ST-043	Glass stage, type 3, dia. 100 mm
ST-038	Halogen bulb, 12V/15W
ST-037	Halogen bulb, 12V/15W, with dichroic mirror
ST-039	Dust cover type 14
ST-666	Heating stage, with digital temperature controller
M-173	APS-C Reflex camera adapter



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## CAMERA ADAPTER CHART FOR TRINOCULAR MODELS



**SZR**  
Trinocular versions

\*T/2 is not supplied by OPTIKA

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**MODULAR**

LAB-2BH / LAB-3TH / SZM-B / SZM-T / SZN-B / SZN-T / SZP-6

SZP-8 / SZP-10 / ST-150 / ST-151 / ST-152 / ST-153

SZ-STL1H / SZ-STL2H / SZ-STL3Led / SZ-STL3 / SZ-STL4

SZ-STL8 / ST-155 / ST-156

## MODULAR Series

Modular stereozoom microscopes for industry



MODULAR



# MODULAR Series - Heads

The MODULAR series has been designed to match professional needs in industrial field.

With a wide range of stereozoom heads and special stands, it allows to build your own model on the basis of your needs.

## LAB-2BH Binocular stereozoom head

- 45° inclined, 360° rotatable;
- WF10x/20mm widefield eyepieces;
- Interpupillary distance: 51-75 mm;
- Dioptric adjustment: +/-5 dp;
- 1x...4x zoom objective;
- Zoom ratio: 4:1;
- Working distance: 85 mm.



LAB-2BH

### CAMERA ADAPTER CHART FOR TRINOCULAR MODELS

VC CAMERAS / OPTIKAM CAMERAS		DIGI	REFLEX APS-C	REFLEX Full frame 35mm
C-MOUNT	WITH LENS			
1/2	1/3		T/2*	T/2*
ST-175	ST-174	DIRECT	M-173	ST-173

- Add ST-170 or ST-171 for SZP heads



Trinocular stereo heads

\*T/2 is not supplied by OPTIKA





## MODULAR Series - Heads

### LAB-3TH Trinocular stereozoom head

45° inclined, 360° rotatable;  
 WF10x/20mm widefield eyepieces;  
 Interpupillary distance: 51-75 mm;  
 Dioptic adjustment: +/-5 dp;  
 1x...4x zoom objective;  
 Zoom ratio: 4:1;  
 Working distance: 85 mm.

LAB-3TH



## MODULAR Series - Accessories

### Eyepieces

ST-001	Eyeieces (pair) WF5x/22mm
ST-002	Eyeieces (pair) WF10x/20mm
ST-003	Eyeieces (pair) WF15x/15mm
ST-004	Eyeieces (pair) WF20x/13mm
ST-005	Eyeiece micrometric WF10x

### Additional lenses

ST-023	Additional lens 0,5x for LAB-2BH and LAB-3TH (w.d. 170 mm)
ST-024	Additional lens 1,5x for LAB-2BH and LAB-3TH (w.d. 42 mm)

### Photo & Video adapters

ST-089	SLR Reflex camera adapter
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
M-173	APS-C Reflex camera adapter



## MODULAR Series - Heads



**SZM-B**

### SZM-B Binocular stereozoom head

45° inclined, 360° rotatable;  
 WF10x/20mm high-point widefield eyepieces;  
 Interpupillary distance: 51-75 mm;  
 Dioptic adjustment: +/-5 dp;  
 0,7x...4,5x zoom objective;  
 Zoom ratio: 6,43:1;  
 Working distance: 100 mm.



**SZM-T**

### SZM-T Trinocular stereozoom head

45° inclined, 360° rotatable;  
 WF10x/20mm high-point widefield eyepieces;  
 Interpupillary distance: 51-75 mm;  
 Dioptic adjustment: +/-5 dp;  
 0,7x...4,5x zoom objective;  
 Zoom ratio: 6,43:1;  
 Working distance: 100 mm.

## MODULAR Series - Accessories

### Eyepieces

ST-081	Eyepieces (pair) WF10x/20 mm
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Eyepiece micrometric WF10x/20 mm

### Additional lenses

ST-085	Additional lens 0,5x (w.d. 165 mm)
ST-091	Additional lens 0,75x (w.d. 117 mm)
ST-086	Additional lens 1,5x (w.d. 47 mm)
ST-087	Additional lens 2x (w.d. 26 mm)

### Photo & Video adapters

ST-089	SLR Reflex camera adapter
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter



## MODULAR Series - Heads

### SZN-B Binocular stereozoom head

45° inclined, 360° rotatable;  
 WF10x/22mm high-point widefield eyepieces;  
 Interpupillary distance: 55-75 mm;  
 Dioptic adjustment: +/-5 dp;  
 0,67x....4,5x zoom objective;  
 Zoom ratio: 6,72;  
 Working distance: 110 mm.



SZN-B

### SZN-T Trinocular stereozoom head

45° inclined, 360° rotatable;  
 WF10x/22mm high-point widefield eyepieces;  
 Interpupillary distance: 55-75 mm;  
 Dioptic adjustment: +/-5 dp;  
 0,67x....4,5x zoom objective;  
 Zoom ratio: 6,72;  
 Working distance: 110 mm.



SZN-T



## MODULAR Series - Accessories

#### Eyepieces

ST-141	Eyepieces (pair) WF10x/22mm
ST-142	Eyepieces (pair) WF15x/16mm
ST-143	Eyepieces (pair) WF20x/12mm
ST-144	Eyepieces (pair) WF25x/9mm
ST-145	Eyepiece micrometric WF10x/22mm

#### Additional lenses

SAO0.3	Additional lens 0,3x (w.d. 287 mm)
SAO0.5	Additional lens 0,5x (w.d. 185mm)
SAO0.75	Additional lens 0,7x (w.d. 120mm)
SAO1.5	Additional lens 1,5x (w.d. 49mm)
SSAO2	Additional lens 2x (w.d. 28mm)

#### Photo & Video adapters

ST-146	SLR Reflex camera adapter for full frame sensor
ST-147	CCD camera adapter (for 1/3" sensors)
ST-147.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter

## MODULAR Series - Heads

### SZP-6 Binocular parallel stereozoom head

30° inclined, 360° rotatable;  
WF10x/22mm high-point widefield eyepieces;  
Interpupillary distance: 52-75 mm;  
Dioptric adjustment: +/-5 diopters;  
Objective: 1x;  
0,8x...5x zoom objective;  
Zoom ratio: 6:1;  
Working distance: 80 mm.

SZP-6



ST-170



ST-172

### SZP-8 Binocular parallel stereozoom head

30° inclined, 360° rotatable;  
WF10x/22mm high-point widefield eyepieces;  
Interpupillary distance: 52-75 mm;  
Dioptric adjustment: +/-5 diopters;  
Objective: 1x;  
0,8x...6,4x zoom objective;  
Zoom ratio: 8:1;  
Working distance: 80 mm.

SZP-10 + ST-171



### SZP-10 Binocular parallel stereozoom head

30° inclined, 360° rotatable;  
WF10x/22mm high-point widefield eyepieces;  
Interpupillary distance: 52-75 mm;  
Dioptric adjustment: +/-5 diopters;  
Objective: 1x;  
0,8x...8x zoom objective;  
Zoom ratio: 10:1;  
Working distance: 80 mm.

SZP-ERGO

Ergonomic head version



### Also available models SZP-6ERGO, SZP-8ERGO, SZP-10ERGO

Binocular ERGO 0°-35° inclined, 360° rotatable  
Dioptric adjustment on both eyepieces +/- 5 diopters.

## MODULAR Series - Accessories

#### Eyepieces

ST-161	Eyepieces (pair) WF15x/15 mm
ST-162	Eyepieces (pair) WF20x/12 mm
ST-163	Eyepiece micrometric WF10x/22 mm

#### Objectives

ST-165	Objective 0,3x (w.d. 280 mm)
ST-166	Objective 0,5x (w.d. 165 mm)
ST-167	Objective 2x (w.d. 32,5 mm)

#### Photo & Video attachments and adapters

ST-170	Photo/Video beam splitter - 1 port
ST-171	Photo/Video beam splitter - 2 ports
ST-172	Iris diaphragm
ST-173	Asp-c Reflex camera adapter
ST-174	CCD camera adapter (for 1/3" sensors)
ST-175	CCD camera adapter (for 1/2" sensors)

\* Stand not included



## MODULAR Series - Stands

ST-150



**ST-150** Large plain stand with head holder and focusing mechanism. Pillar type. Base: 320x280mm. Pillar: Ø32x360mm.

ST-151



**ST-151** Large plain stand with head holder and focusing mechanism. LED trans-illuminator with intensity control. Pillar type. Base: 320x280mm. Pillar: Ø32x360mm.

ST-152



**ST-152** Large plain stand with head holder and focusing mechanism. Fixed arm type. Base: 320x280mm. Fixed arm: 360mm.

ST-153



**ST-153** Large plain stand with head holder and focusing mechanism. LED trans-illuminator with intensity control. Fixed arm type. Base: 320x280mm. Fixed arm: 360mm.

SZ-STL1H



**SZ-STL1H** Simple overhanging stand with head holder. Base dimensions: 230x230mm. Pillar: Ø32x380mm. Horizontal arm: 430mm.  
\* **Head not included**

SZ-STL2H



**SZ-STL2H** Hinged overhanging stand with head holder. Base dimensions: 260x210mm. Pillar: Ø32x380mm. Horizontal arm: 550mm.  
\* **Head not included**



# MODULAR Series - Stands



**SZ-STL8**

**SZ-STL8** Modern stand with small base. With 2 incident X-LED illuminators on flexible arms, and high brightness LED disc trans-illuminator (100mm Ø).



**ST-155**

**ST-155** Modern stand with large base. LED trans-illuminator and LED incident illuminator, both with intensity control. **\*Head not included.**

**ST-156** Modern stand with large base. LED trans-illuminator and LED incident illuminator, both with intensity control. Coaxial coarse and fine focusing system. **\* Head not included.**



**SZ-STL4**



**SZ-STL3Led**

**SZ-STL3Led** Industrial stand, with table clamp and double X-LED illuminators on flexible arms. **\* Head not included.**



**SZ-STL3**

## OPTIKA SRL

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## M.A.D. IBERICA APARATOS CIENTIFICOS

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## ALPHA OPTIKA MICROSCOPES HUNGARY

2030 ÉRD, Kaktusz u. 22. - HUNGARY - Tel.: (23) 520-077 Fax: (23) 374-965

## SZM-SMD Series

Stereozoom microscope for SMD inspection

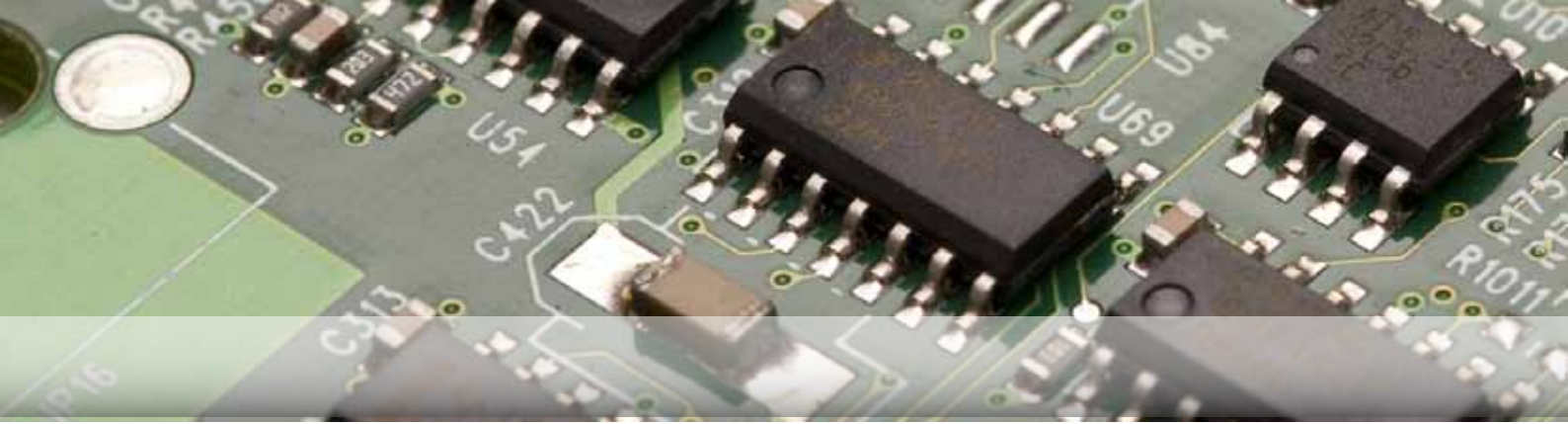


**SZM-SMD**

**OPTIKA**

U.S. Patent  
No. D 011,411

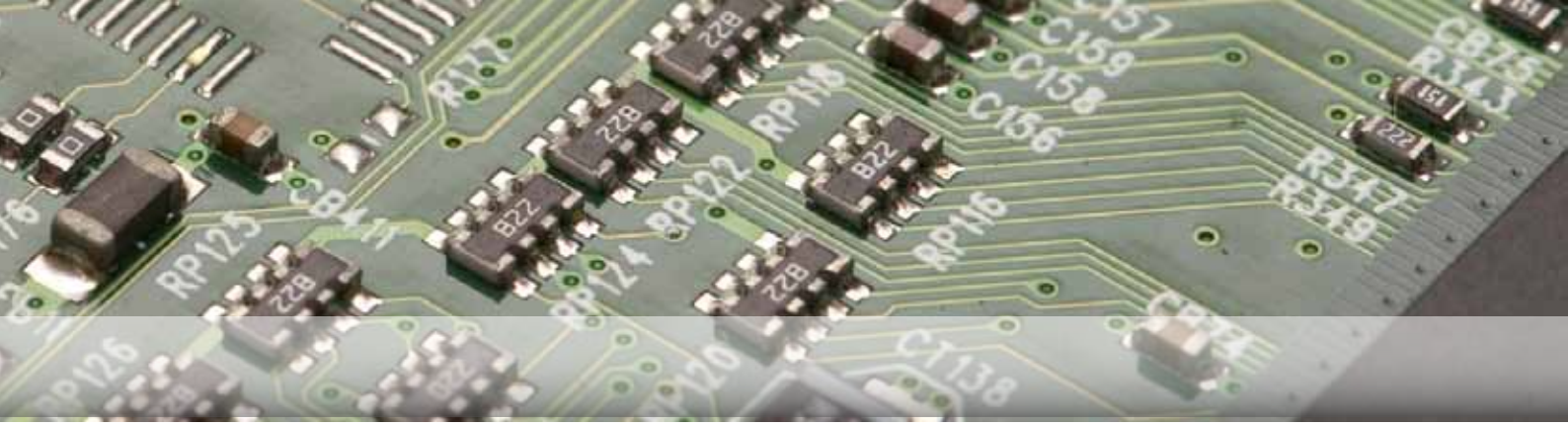




## SZM-SMD Series

The SZM-SMD has been designed specifically for the inspection of solder connections, rework and repair of electronic circuits and for mounting small electronic components. One-touch sliding movement allows the user to quickly change from vertical to oblique viewing.





## SZM-SMD Series - Technical specifications

### Heads

Trinocular, 45° inclined, 360° rotating. Microscope for SMD inspection.

### Eyepieces

WF10X/20mm, high-point.

### Objectives

Zoom 0,7x...4,5x.

### Magnification

7x...45x

### Illumination

Optional.

### SMD attachment:

Rotatable 360°. vertical working distance 103mm.

Oblique working distance 103mm.

With inclination adjusting mechanism.



# SZM-SMD Series - Accessories

## Eyepieces

ST-081	Eyeieces (pair) WF10x/20 mm
ST-082	Eyeieces (pair) WF15x/15 mm
ST-083	Eyeieces (pair) WF20x/10 mm
ST-084	Eyeiece micrometric WF10x/20 mm

## Photo & Video adapters

ST-089	SLR Reflex camera adapter for Full Frame
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
M-173	APS-C Reflex camera adapter



### 15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



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## ALPHA OPTIKA MICROSCOPES HUNGARY

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## ACCESSORIES

Illumination and sample positioning



ACCESSORIES



## ACCESSORIES

### CL-30

#### 2-arm LED illuminator

Light sources: LED (x2);

With 2W high efficiency LEDs.

Chromaticity coordinates (x,y): 0.320, 0.320;

Luminous flux: 80 lm each arm;

Emission angle: 35°;

Power supply: 12Vdc, 1500 mA;

Without brightness control.

### CL-31

#### 2-arm LED illuminator

Light sources: LED (x2);

With 2W high efficiency LEDs.

Chromaticity coordinates (x,y): 0.320, 0.320;

Luminous flux: 80 lm each arm;

Emission angle: 35°;

Power supply: 12Vdc, 1500 mA;

With brightness control.

### CL-41

Light sources: LED (x2);

With 3,5W high efficiency X-LED.

Chromaticity coordinates (x,y): 0.320, 0.320);

Luminous flux: 400 lm each arm;

Emission angle: 25°;

Power supply: 12Vdc, 1500 mA;

With brightness control.



## ACCESSORIES

CL-01

### Cold light generator

100W cold light generator, extra-high efficiency 12V halogen dichroic lamp. Brightness adjustment on remote control panel.

CL-11

### Double-arm optic fiber guide

Length 500 mm, diameter 13 mm. Fitted with two fixed condensers (lenses) at the ends of the arms.

CL-12

### Ring optic fiber guide

Length 700 mm, diameter 16 mm. The circular end is suitable for all series, by using the three locking screws. Diameter of the fixing ring: 55mm.

CL-15.1

### LED ring light illuminator

Led ring light illuminator. Suitable for all series. Intensity light control. Diameter of the fixing ring 60mm.

CL-20

### Ring light illuminator

Fluorescence ring light illuminator, 8W. Suitable for all series. Diameter of the fixing ring: 60mm.



# ACCESSORIES

## ST-100

### Moving stage

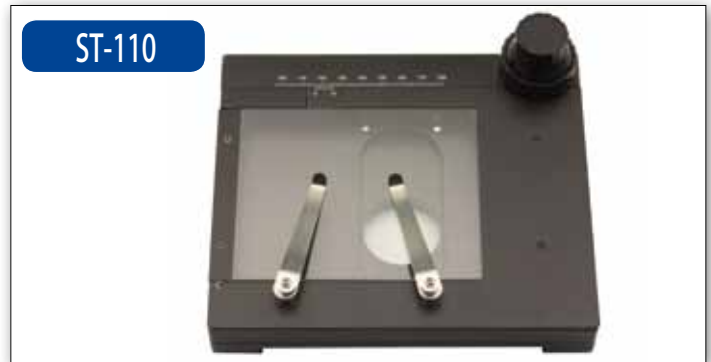
Manual positioning stage.  
Dimensions: 185x145mm.  
Range: 56mm (X) x 35mm (Y)



## ST-110

### Moving stage, with knobs

Manual positioning stage, using knobs for X-Y movements.  
Dimensions: 180x155mm.  
Range: 75mm (X) x 54mm (Y).



## ST-111

### Moving stage, with micrometer screws

Manual positioning stage, using micrometer screws.  
Dimensions: 185x145mm.  
Range: 25mm (X) x 25mm (Y).  
Micrometer screws resolution: 0.01mm



## M-666

### Heating stage

Temperature range: 20°C (room temperature) – 50°C  
Temperature setting resolution: 1°C  
Temperature measuring resolution: 0.1°C  
Display: LED display for set temperature  
LED display for measured temperature  
Power supply: Input: 110/220Vac 50/60Hz. Power: 50W

## ST-666

### Heating stage for stereomicroscopes

Temperature range: 20°C (room temperature) – 50°C  
Temperature setting resolution: 1°C  
Temperature measuring resolution: 0.1°C  
Display: LED display for set temperature  
LED display for measured temperature  
Power supply: Input: 110/220Vac 50/60Hz. Power: 50W



## OPTIKA SRL

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## ALPHA OPTIKA MICROSCOPES HUNGARY

2030 ÉRD, Kaktusz u. 22. - HUNGARY - Tel.: (23) 520-077 Fax: (23) 374-965



## OPTIGEM Series

Gemological stereomicroscopes



OPTIGEM



## OPTIGEM Series

<b>SZM-GEM-1</b>	Gemological stereozoom, binocular head
<b>SZM-GEM-2</b>	Gemological stereozoom, trinocular head
<b>OPTIGEM-3</b>	Gemological stereozoom, binocular head
<b>OPTIGEM-4</b>	Gemological stereozoom, trinocular head
<b>OPTIGEM-1</b>	Gemological stereozoom, binocular head
<b>OPTIGEM-2</b>	Gemological stereozoom, trinocular head

### SZM-GEM -1/2 models

These two models are typical gemological microscopes with fixed stand.

A special ultrabright LED-based electronic condenser, with intensity control, and perfectly colour-matched to sunlight, allows to switch from bright to dark field.

The condenser uses a new optical configuration for a perfect dark field usability range.





## OPTIGEM Series - Technical specifications

### Heads

SZM-GEM-1: Binocular rotating 360° and 45° inclined.

SZM-GEM-2: Trinocular rotating 360° and 45° inclined.

Diopter adjustment on both eyepieces.

Interpupillary adjustment 51-75 mm.

### Eyepieces

Widefield eyepieces WF10x/20mm with field number 20.

### Objectives

Parfocal achromatic objective 1x. Working distance: 100 mm.

Zoom range: 0,7x - 4,5x. Zoom factor: 6,428:1.

### Specimen stage:

Specimen clamps. Adjustable gemology clip.

### Focusing

By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope.

### Microscope stand

Pillar stand height 25 cm. Base: 26x20x6h cm. Weight: 6 Kg.

### Illumination

Incident illumination: dichroic halogen lamp (12V/15W) with angle and brightness adjustment.

Transmitted illumination: pure white (6300K) LED system for observation in brightfield (with diffusive LED disc) and darkfield (with side-emitting LED ring).

Through a selector it's possible to choose between 3 modes: brightfield only, darkfield only, or both brightfield and darkfield.

Provided with a lever for the insertion of a black background in order to improve the darkfield observation.

Voltage: 110/240Vac, 50/60Hz, 1A ; Fuses: T1A 250V

Max. required power: 30W



## OPTIGEM Series

### OPTIGEM - 3/4 models

These models are classic gemological microscopes with tilting stand.

The darkfield condenser uses a typical optical configuration, based on an halogen illumination system and a classic reflecting system.

A flexible arm with a fluorescent tube simulates north facing daylight for accurate color grading.







## OPTIGEM Series - Technical specifications

### Heads

OPTIGEM-3: Binocular rotating 360° and 45° inclined.

OPTIGEM-4: Trinocular rotating 360° and 45° inclined.

Diopter adjustment on both eyepieces.

Interpupillary adjustment 55-75 mm.

### Eyepieces

Widefield eyepieces WF10x/22 with field number 22.

### Objectives

Parfocal achromatic objective 1x. Working distance: 110 mm.

Zoom range: 0,67x - 4,5x. Zoom factor: 6,71:1.

### Specimen stage:

Adjustable gemology clip. Base 360° rotating.

### Focusing

By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope.

### Microscope stand

Rack-and-pinion stand (it can be inclined 45°).

Base: 305x260x70h mm.

Weight: 7 Kg.

### Illumination

**Incident illumination:** flexible arm with fluorescent tube 7W 6400K (pure white). Independent ON/OFF switch.

**Transmitted illumination:** system for observation with brightfield and dark-field, based on 30W halogen illumination and a dedicated reflecting system. Brightness adjustment.

Iris diaphragm and removable black background for contrast enhancement with darkfield.

Input: 240Vac, 50Hz;

Max. required power: 45W.



# OPTIGEM Series

## OPTIGEM -1/2 models

The OPTIGEM-1 and OPTIGEM-2 are revolutionary 2-in-1 gemology instruments that can be used both as a vertical and as a horizontal microscopes, at the turn of a knob and without disassembling any part.

A special ultrabright LED-based electronic condenser, with intensity control, and perfectly colour-matched to sunlight, allows to switch from bright to dark field. The condenser uses a new optical configuration for a perfect dark field usability range. An additional flexible arm and velvet-field slider allow for extra contrast, for crisp and vibrant images even in a brightly lit environment.

A modular optional accessories, that include: gemology clip, an iris aperture diaphragm, a polarization analysis kit, an optical unit to switch the dark field from a "sharp" (gem exhibition) to a "soft" (diamond analysis) mode translating cell holder with vacuum pick-up and quartz immersion cells complete and enhance the instrument usability. All the accessories can be stacked, in any order, both when the microscope is being used as a horizontal unit and when it is in its vertical configuration.

The microscope body can be rotated through a full 360°, yet keeping the base sturdily fixed on the table, to show gems to a customer, or to share opinions with a colleague.

OPTIGEM-2



### Heads

OPTIGEM-1: Binocular rotating 360° and 45° inclined.

OPTIGEM-2: Trinocular rotating 360° and 45° inclined.

Diopter adjustment on both eyepieces.

Interpupillary adjustment 51-75 mm.

### Eyepieces

Widefield eyepieces WF10x/22 with field number 22.

### Objectives

Parfocal achromatic objective 1x. Working distance: 110 mm.

Zoom range: 0,7x - 4,5x. Zoom factor: 6,428:1.

### Specimen stage:

Adjustable gemology clip. Base 360° rotating. Pair of rods for assembling optional accessories.

### Focusing

By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope.

### Microscope stand

Rack-and-pinion stand (it can be inclined through full 90° for horizontal observation, and rotated 360°). Base: 27x21x6h cm. Weight: 6 Kg.



# OPTIGEM Series - Technical specifications

Model	Head	Eyepieces	Objectives	Stand	Illumination
<b>SZM-GEM-1</b>	Binocular	WF10x/20mm	0,7 .... 4,5x Zoom	Pillar stand	<b>Incident illumination:</b> dichroic halogen lamp 12V/15W <b>Transmitted illumination:</b> Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
<b>SZM-GEM-2</b>	Trinocular	WF10x/20mm	0,7 .... 4,5x Zoom	Pillar stand	<b>Incident illumination:</b> dichroic halogen lamp 12V/15W <b>Transmitted illumination:</b> Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
<b>OPTIGEM-1</b>	Binocular	WF10x/22mm	0,7 .... 4,5x Zoom	Gemological stand	<b>Incident illumination:</b> LED flexible arm with brightness adjustment. <b>Transmitted illumination:</b> Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
<b>OPTIGEM-2</b>	Trinocular	WF10x/22mm	0,7 .... 4,5x Zoom	Gemological stand	<b>Incident illumination:</b> LED flexible arm with brightness adjustment. <b>Transmitted illumination:</b> Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
<b>OPTIGEM-3</b>	Binocular	WF10x/22mm	0,67 .... 4,5x Zoom	Gemological stand	<b>Incident illumination:</b> flexible arm with fluorescent tube 7W(pure white) <b>Transmitted illumination:</b> 30W halogen bulb and a dedicated reflecting system for observation with brightfield and darkfield.
<b>OPTIGEM-4</b>	Trinocular	WF10x/22mm	0,67 .... 4,5x Zoom	Gemological stand	<b>Incident illumination:</b> flexible arm with fluorescent tube 7W(pure white) <b>Transmitted illumination:</b> 30W halogen bulb and a dedicated reflecting system for observation with brightfield and darkfield



## Illumination

**Incident illumination:** LED flexible arm with brightness adjustment.

**Transmitted illumination:** LED system for observation in brightfield (with diffusive LED disc)

and darkfield (with side-emitting LED ring). Through a selector it's possible to choose between 3 modes: brightfield only, darkfield only, or both brightfield and darkfield. Provided with a lever for the insertion of a black background in order to improve the darkfield observation. LED temperature color: 6300K (pure white).

External power supply provided. Input: 110/240Vac, 50/60Hz; Output: 12V 1A. Max. required power: 15W.

# OPTIGEM Series - Accessories

## Accessories for SZM-GEM - 1/2:

ST-230	Polarizing analysis kit
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Micrometric eyepiece WF10x/20 mm
ST-086	Additional lens 1,5x
ST-087	Additional lens 2x
ST-089	Reflex camera adapter for Full Frame
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter

## Accessories for OPTIGEM - 3/4:

ST-231	Polarizing analysis kit
ST-142	Eyepieces (pair) WF15x/16mm
ST-143	Eyepieces (pair) WF20x/12mm
ST-144	Eyepieces (pair) WF25x/9mm
ST-145	Micrometric eyepiece WF10x/22mm
SAO1.5	Additional lens 1,5x
SAO2	Additional lens 2x
ST-146	SLR Reflex camera adapter for full frame sensor
ST-147	CCD camera adapter (for 1/3" sensors)
ST-147.1	CCD camera adapter (for 1/2" sensors)
M621	Halogen Bulb 6V/30W
ST-173	APS-C Reflex camera adapter

## Accessories for OPTIGEM - 1/2:

ST-201	Iris aperture diaphragm for darkfield
ST-207	Iris aperture diaphragm for standard illuminator
ST-202	Polarizing analysis kit
ST-203	Glass immersion cell
ST-204	Translating cell holder
ST-205	Vacuum pick-up
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Micrometric eyepiece WF10x/20 mm
ST-086	Additional lens 1,5x
ST-087	Additional lens 2x
ST-089	Reflex camera adapter for Full Frame
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter



### 15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



## OPTIKA SRL

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## ALPHA OPTIKA MICROSCOPES HUNGARY

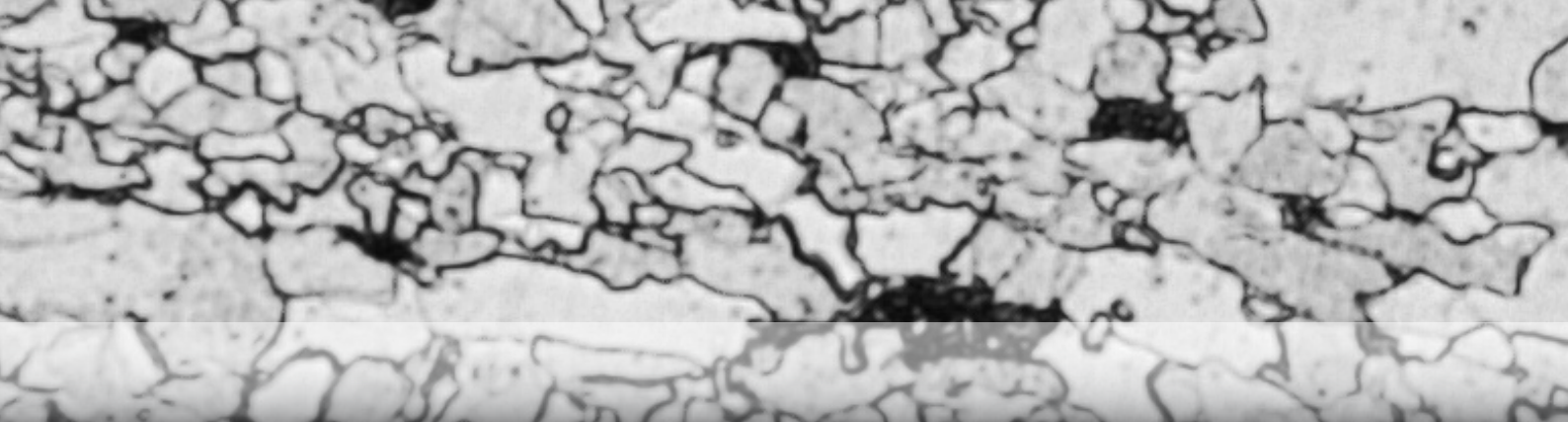
2030 ÉRD, Kaktusz u. 22. - HUNGARY - Tel.: (23) 520-077 Fax: (23) 374-965

## INDUSTRY Series

Metallurgical and measuring microscopes



INDUSTRY



## INDUSTRY Series

<b>XC-100L</b>	Monocular portable microscope for measurement
<b>XZ-1</b>	Monocular microscope for measurement with pillar stand
<b>XZ-2</b>	Binocular microscope with pillar stand and 8" TFT LCD screen
<b>B-353MET</b>	Trinocular upright metallurgical microscope
<b>B-600MET</b>	Advanced trinocular upright metallurgical microscope
<b>XDS-3MET</b>	Inverted metallurgical microscope

## INDUSTRY Series - XC-100L

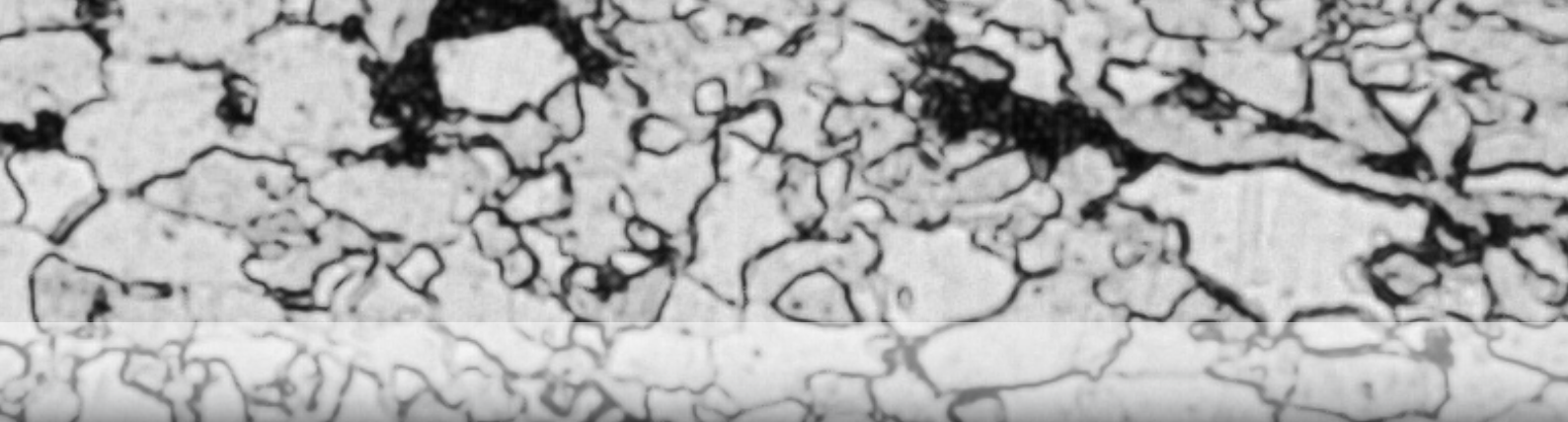
### XC-100L

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. 0.7...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.

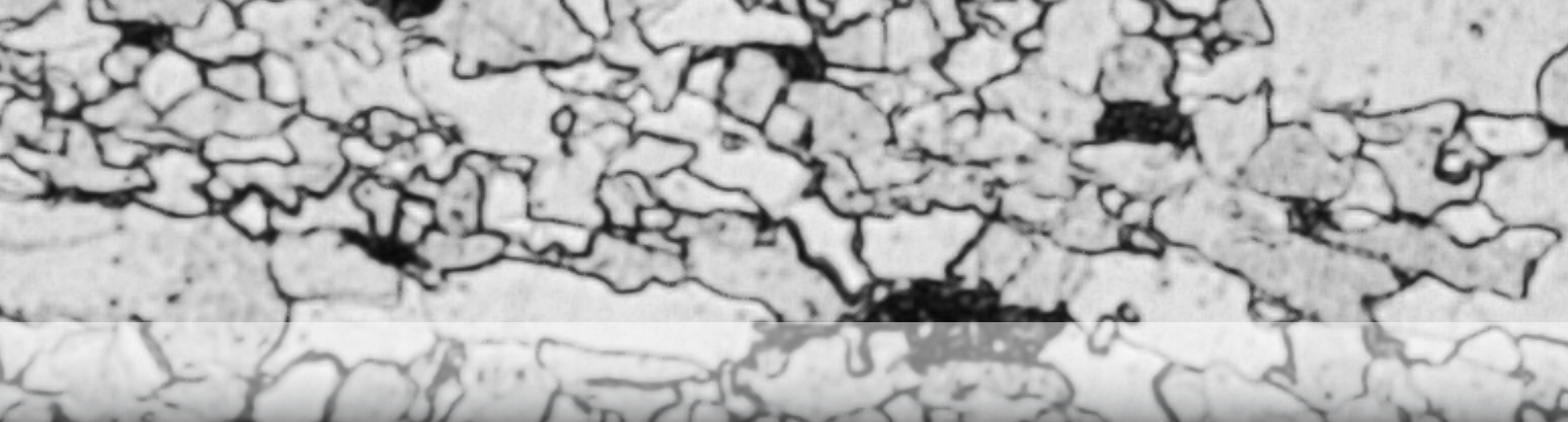
Working distance: 96 mm.

LED ring light generator with brightness control.

CCD colour camera (380 TVlines).

8" TFT LCD screen with electronic graduated measuring cross.





## INDUSTRY Series - B-353MET

### B-353MET

Head:  
Eyepieces:  
Nosepiece:  
Objectives:  
Magnifications:

#### Upright metallurgical microscope

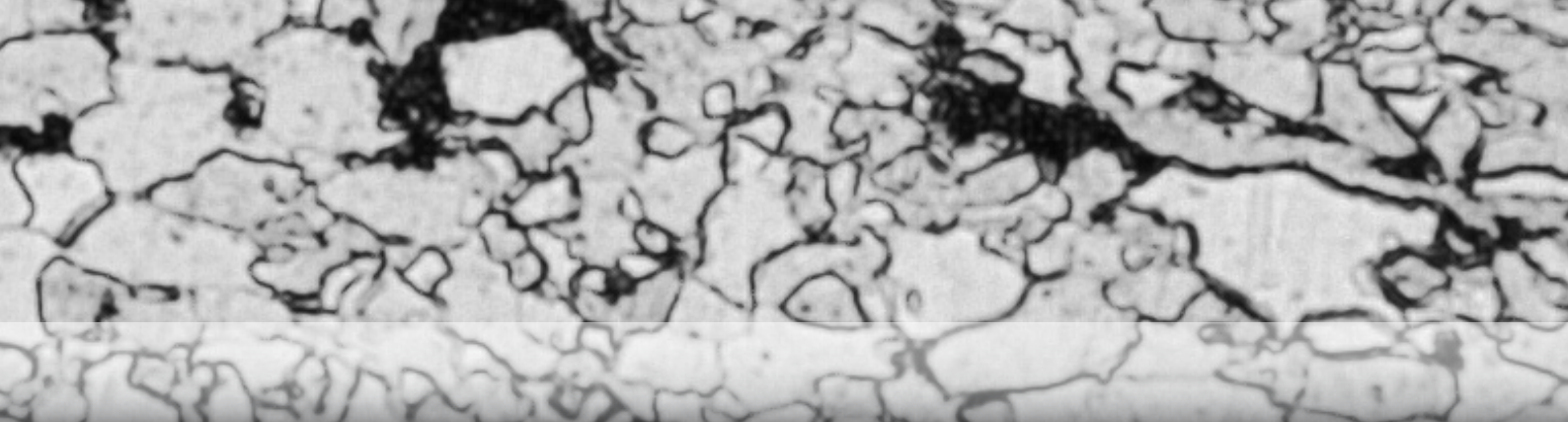
Trinocular, 30° inclined, 360° rotating.  
WF10X/20mm.  
5-positions, reversed.  
PLAN IOS 4x/0.10, 10x/0.25, 20x/0.40, 50x/0.75 (no cover slide).  
40x, 100x, 200x, 500x.

Focusing system:  
Stage:  
Condenser:  
Illumination:  
Metallurgical  
Attachment:  
Filters:

Coaxial coarse and fine.  
Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm.  
1.25 N.A., with iris diaphragm, focusable.  
High-power white X-LED™ with brightness control.  
High-power white LED™; field and aperture diaphragm.  
Blue, yellow, frosted, polarizer & analyzer.







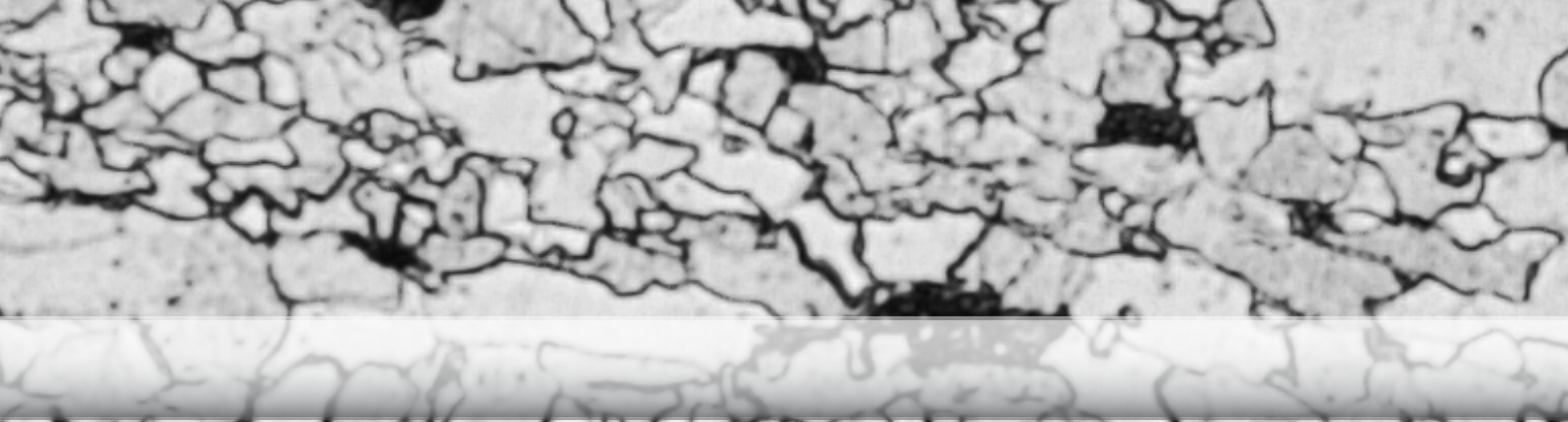
## INDUSTRY Series - B-600MET

### B-600MET

#### 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/0.14, 10x/0.25, 20x/0.4, 50x/0.7, 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:	12V/50W halogen bulb in external case or X-LED <sup>8</sup> ™ illumination system. In both systems the light is centrable and brightness is adjustable.
Metallurgical Attachment:	High-power white X-LED <sup>8</sup> ™ system with brightness control; field and aperture diaphragms (centrable). Simple sliding darkfield system.
Filters:	Blue, polarizer & analyzer.





## INDUSTRY Series - 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/0.14, 10x/0.25, 20x/0.4, 50x/0.7.
Magnifications:	50x, 100x, 200x, 500x.
Focusing system:	Coaxial coarse and fine.
Stage:	250x230mm; mechanical stage with lowered ergonomic coaxial controls. X-Y range: 114x81mm.
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	Eyepieces	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	0,7 .... 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	0,7 .... 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-353MET</b>	Trinocular	WF10x /20mm	Planachromatic IOS 4x, 10x, 20x, 50x (no cover slide)	Quintuple reversed	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Brightfield condenser: 1.25 N.A. Abbe type, with iris diaphragm, focusable	Transmitted illumination: X-LED™ Metallurgical Attachment: High-power white LED with field and aperture diaphragm.
<b>B-600MET</b>	Trinocular		Planachromatic 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	Coaxial coarse and fine system, with limit stop	Brightfield condenser: 0,7 N.A. swing-out type, with iris diaphragm, centrabale and focusable	Transmitted illumination: 12V/50W halogen bulb in external case or X-LED®™ illumination system. Metallurgical Attachment: High-power white X-LED™ system with brightness control.
<b>XDS-3MET</b>	Trinocular		LWD PLAN IOS MET (no cover slide) 5x, 10x, 20x, 50x	Quintuple reversed	250X230mm; mechanical stage with lowered ergonomic coaxial controls. X-Y range: 114x81 mm	Coaxial coarse and fine system, with limit stop	-----	12V/50W halogen bulb in external case. Centrabale bulb and brightness control.

# INDUSTRY Series - Accessories

## XC-100L - Measuring microscope

M-899 Pen illuminator

## XZ-1 - Measuring monozoom microscope

M-001 Eyepiece H5x  
M-003 Eyepiece WF16x/12mm  
M-005 Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.  
ST-012 Object-plate white/black, type 2 dia. 95 mm  
ST-014 Glass stage, type 2, dia. 95 mm  
ST-028 Halogen bulb 12V/10W  
M-013 Halogen bulb, with dichroic mirror 12V/10W  
ST-029 Dust cover type 12

## XZ-2 - Measuring monozoom videomicroscope

M-001 Eyepiece H5x  
M-003 Eyepiece WF16x/12mm  
M-004 Eyepiece micrometer WF10x/18mm.  
M-005 Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.

## B-600MET - Upright metallurgical microscope

M-680 Ergo Binocular Head 30°-60°  
M-625 Eyepiece EWF10x/22mm  
M-601 Eyepiece WF15x/16mm  
M-602 Eyepiece micrometer EWF10x/22mm  
M-005 Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.  
M-693.1 Objective IOS planachromatic 5x/0.14 (no cover slide)  
M-694.1 Objective IOS planachromatic 10x/0.25 (no cover slide)  
M-695.1 Objective IOS planachromatic 20x/0.40 (no cover slide)  
M-696.1 Objective IOS planachromatic 50x/0.70 (no cover slide)  
M-698.2 Objective IOS planachromatic 100x/0.90 DRY (no cover slide)  
M-613 Polarising set (filters only) for transmitted light  
M-615 Lambda filter for polarising set for transmitted light  
M-614 Rotating table for polarising set  
M-619 Photo tube adapter for SLR cameras Full Frame  
M-699 Photo tube adapter for DIGI digital camera series  
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  
M-034 Dust cover type 5  
M-975 Blue filter, 45 mm diameter for transmitted light  
M-977 Green filter, 45 mm diameter for transmitted light  
M-979 Yellow filter, 45 mm diameter for transmitted light  
M-989 Frosted glass filter, 45 mm diameter  
M-690 Eyecup (pair)  
M-173 APS-C Reflex camera adapter

## B-353MET - Upright metallurgical microscope

M-301 Eyepiece high-point WF10x/20mm  
M-302 Eyepiece high-point WF16x/12mm  
M-303 Eyepiece micrometer high-point WF10x/20mm  
M-005 Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm  
M-330 Objective IOS Planachromatic 4x/0.10  
M-331 Objective IOS Planachromatic 10x/0.25  
M-332 Objective IOS Planachromatic 20x/0.40  
M-333 Objective IOS Planachromatic 40x/0.65  
M-335 Objective IOS Planachromatic 50x/0.75 (no cover glass)  
M-334 Objective IOS Planachromatic 100x  
M-365 Photo tube adapter for SLR cameras Full Frame  
M-366 CCD camera adapter  
M-031 Dust cover type 3  
M-173 APS-C Reflex camera adapter

## XDS-3MET - Inverted metallurgical microscope

M-625 EWF10x/22mm Eyepiece  
M-601 WF15x/16mm Eyepiece  
M-602 Micrometer Eyepiece EWF10x/22mm  
M-005 26x76 mm micrometric slide. Range 1mm, div. 0,01mm  
M-735 LWD 5x/0.14 IOS planachromatic objective (no cover slide)  
M-736 LWD 10x/0.25 IOS planachromatic objective (no cover slide)  
M-737 LWD 20x/0.40 IOS planachromatic objective (no cover slide)  
M-738 LWD 50x/0.70 IOS planachromatic objective (no cover slide)  
M-746 LWD 100x/0.80 IOS plan achromatic objective (no cover slide)  
M-619 Photo tube adapter for SLR cameras full frame  
M-699 Photo tube adapter for DIGI digital camera series  
M-789 CCD camera adapter  
M-622 12V/50W halogen bulb  
M-036 Dust cover type 7  
M-173 APS-C Reflex camera adapter



### 15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.

## OPTIKA SRL

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