

# OCULUS | SDI 4/BIOM 4

Wide Angle Observation



# OCULUS BIOM 4

**Binocular Indirect Ophthalmic Microscope**  
for non contact wide angle observation

- > The BIOM 4 series continuously incorporates the principle of indirect ophthalmoscopy in the operating microscope.
  - > The legendary success is continued with the mechanically focused version BIOM 4m.
- > The BIOM 4c with motorized focus completes the current range and offers maximum comfort in use.
  - > Improve your possibilities, upgrade your microscope!



The easy handling of the BIOM 4 persuades more and more surgeons. While observing the vitreous and the fundus, the BIOM 4 is aligned coaxially with the operating microscope. During extraocular phases of surgery, it is swung aside out of the observation beam while the inverting action of the SDI is neutralized manually, by foot switch or automatically, if the SDI 4c / BIOM 4c version is used. All sterilizable parts of the BIOM system are steam autoclavable following the latest recommendations.

# OCULUS BIOM 4

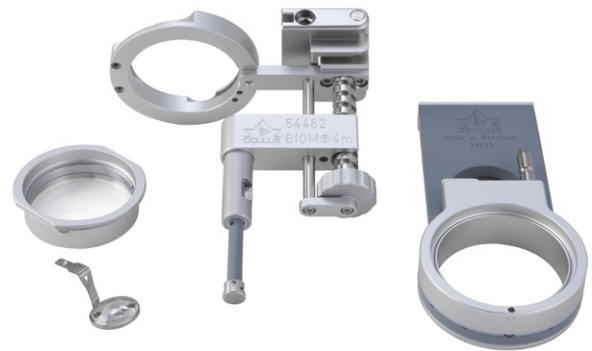
Use the original, trust on more than 20 years of experience and know how.

## BIOM 4m (mechanically focused)

Delivers perfect view, independent from the patient's refraction

For user's comfort as well as patient's benefit, it enables:

- Up to 125 degree of non-contact observation of the fundus
- High magnification of the macular area
- Vitreous surgery through small pupils
- Stable position over the eye
- Good fundus observation during use of vitreous substitutes
- No contact – no corneal stress
- Fast and easy adaption onto the microscope
- Improved lens alignment through magnetic support of BIOM 4 and corresponding adapter plate
- New enhanced lens holder
- Choice of different steam autoclavable lenses



> BIOM 4m setup

## Continuity and compatibility

Stay connected: BIOM 4 parts are interchangeable with most accessories of the former BIOM 3 version.

### Optimized lens stability

As a result of the new stainless steel lens holder, the lens position above the cornea is stabilized.

Due to the shape of the lens receptacle and the small size of the lens frame, space consumption in the operating field is minimized.



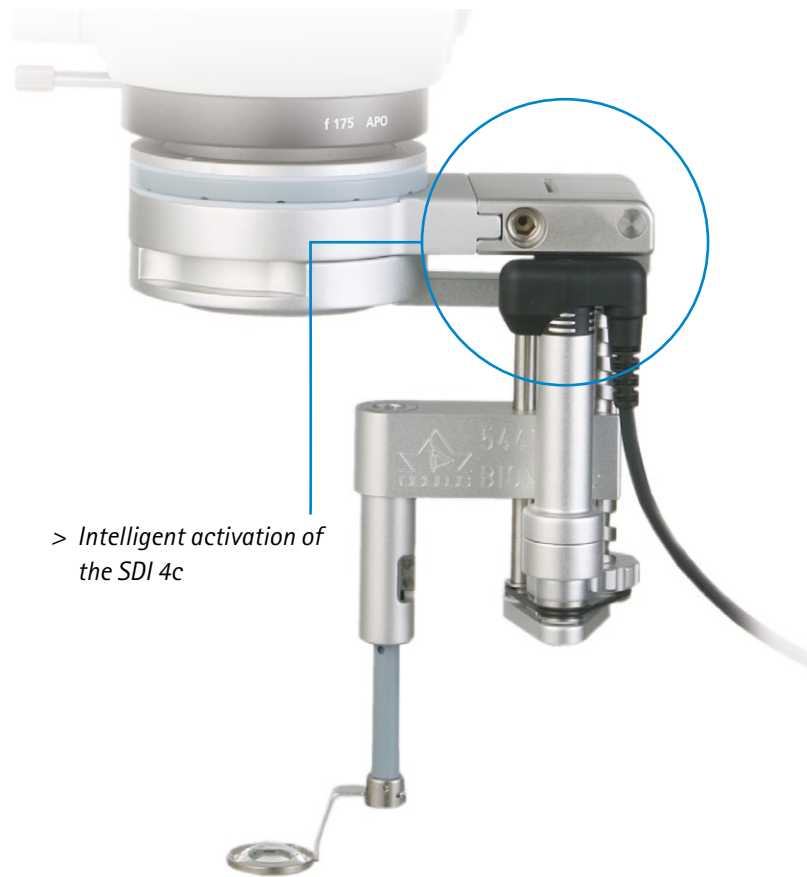
# OCULUS BIOM 4

## BIOM 4c (with motorized focus)

Including the improvements of the BIOM 4m, the latest version, the BIOM 4c offers additionally the comfort of motorized focusing of the BIOM image. It incorporates the intelligent and automatic control of the corresponding inverter, the SDI 4c.

## The secret

A steam autoclavable micro switch for control of the SDI 4c guarantees comfort at its best. The activation of the inverter function is ensured as long as the position of the BIOM 4c requires it. Certainly the SDI can be controlled independently.



> *Intelligent activation of the SDI 4c*



# OCULUS SDI 4

## Stereoscopic Diagonal Inverter

- > Cutting-edge technology in a stunning design
  - > Smaller than ever – really slim
  - > For ergonomics in use

Minimized dimensions of all inverter types of the SDI 4 product line allow integration in most surgical microscopes in the market. All inverters are using high transmission glass optics, specially coated.

### Manually operated inversion

The basic version, easy to mount on nearly every microscope type in the ophthalmological discipline. No voltage supply or cables required. The inverting function is controlled via sterile covered control knob on the front side.

### Motorized inversion

The SDI 4e can be activated by an optional foot switch. Some microscope types also offer the integration of the switch control into the foot pedal of the microscope.

### Automatic inverter controlled by the position of the BIOM 4c

The most comfortable version. This SDI is required to control the motorized focus of the BIOM 4c. It also can be used together with any other version of the BIOM. Used together with BIOM 4c, the SDI 4c is activated depending on the position of the BIOM 4c.



> SDI 4m

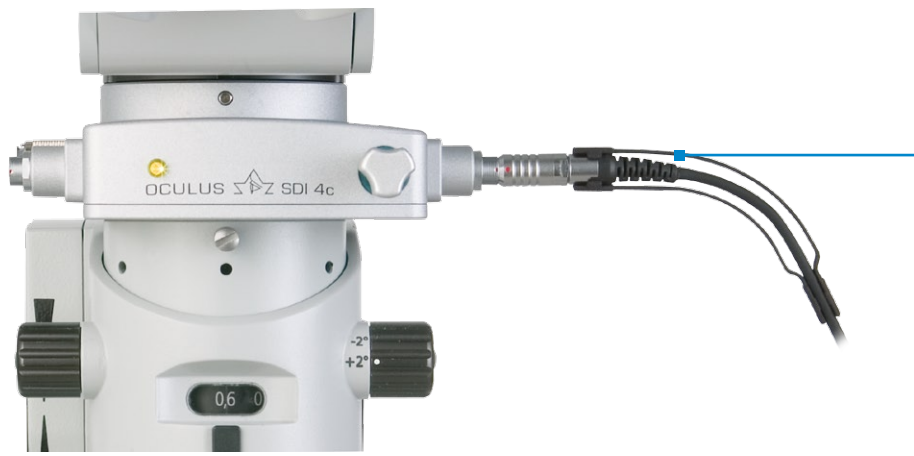


> SDI 4e



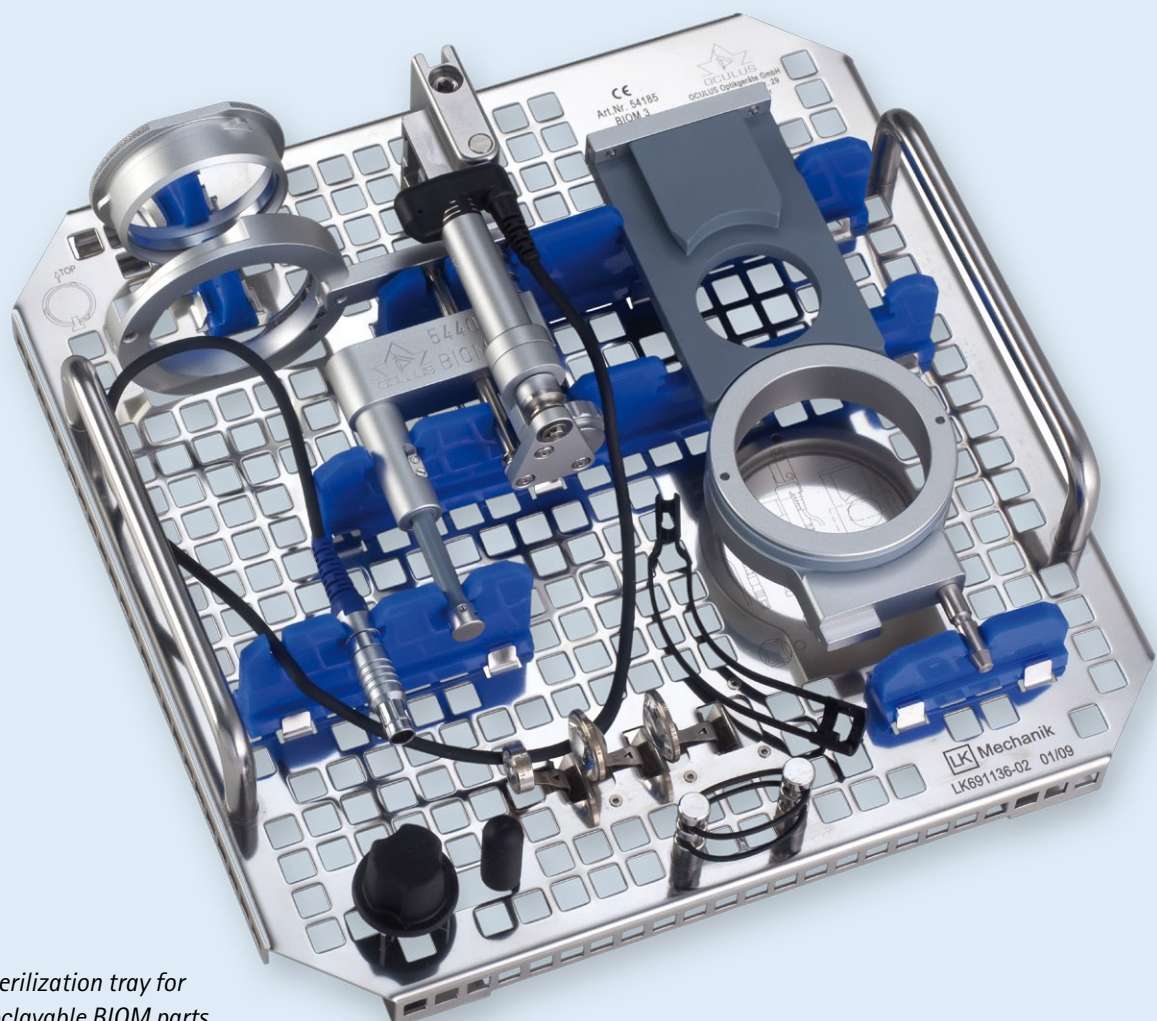
> SDI 4c

# A useful accessory – sterilizable cable guide







> Connectors on both sides of the SDI 4c enable comfortable handling of the BIOM 4c

> Specially designed for the BIOM 4c, this steam autoclavable guidance directs the connecting cable



> Customized sterilization tray for all steam autoclavable BIOM parts.

# Wide variety of lenses

	Mini Wide Field Lens	Hi Res Macula Lens	90 D Lens	Wide Field Enhanced Lens	Wide Field High Definition Lens
					
Max. observation angle	approx. 70°	approx. 60°	approx. 90°	approx. 120°	approx. 60° - 125°
Outer diameter	12 mm	19 mm	19 mm	19 mm	21 mm
Steam autoclavable with max. temperature	134° C	134° C	134° C	134° C	134° C
Surface / material	amorphous carbon coating	amorphous carbon coating	amorphous carbon coating	amorphous carbon coating	quartz glass
Features	for easy maneuverability of instruments in small and deep seated or infants' eye	best resolution of small structures, high magnification of the microscope possible	intermediate field	most common BIOM lens, first choice of advanced users	high resolution combined with wide field of view

# Adaptations

## OCULUS SDI 4 / BIOM 4

SDI 4/BIOM 4 adaptations are currently available for the following microscope types:

Kaps	SOM
Leica	M500 / M501, M620, M650, M690, M841, M820, M844
Möller	Ophthalmic 900, Hi-R 900, EOS 900, Allegra 900
Takagi	OM18
Topcon	OMS 110, OMS 600, OMS 610, OMS 650, OMS 710, OMS 800 Standard, OMS 800 Pro, OMS 850 Standard, OMS 850 Pro
Zeiss	OPMI VISU 150 / 160, VISU 200 / 210, Lumera 700, Lumera T, Lumera i, OPMI CS with Retrolux 1/3/CS or with Retroskop 1/2/CS, OPMI MDI/MDO/MDU, OPMI 1/6

CE in accordance with Medical Device Directive 2007/47/EG

### Fits to most surgical microscopes



- Specific: All SDI 4c/BIOM 4c functions can be controlled with the 16 functions foot pedal of the Leica M844/M820 surgical microscope.

[WWW.OCULUS.DE](http://WWW.OCULUS.DE)



OCULUS is certified by TÜV according to  
DIN EN ISO 13485/DIN EN ISO 9001

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