

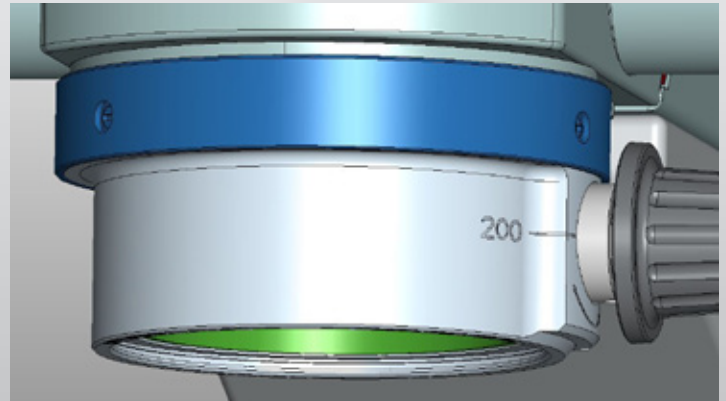
Living up to Life



# Leica M320 MultiFoc Objective / Drape Adapter

**Supplement to User Manual Leica M320  
(10718878)**

10745317 - Version 00



# Thank you

for deciding in favor of a Leica M320 MultiFoc Objective and/or Drape Adapter.  
For valuable information about Leica Microsystems products and services and  
the address of your nearest Leica representative, please visit our website:

[www.leica-microsystems.com](http://www.leica-microsystems.com)

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## Product identification

The model code and serial number of your product are provided on the fabrication  
label found on the transportation cover of the Leica M320 MultiFoc Objective. Copy  
this information to the line below so that it is handy in case you have questions for  
our representatives or service locations.

Type:

Serial number:

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## 1.1 BASICS

User Manual Leica M320 MultiFoc Objective / Drape Adapter is only valid in combination with User Manual Leica M320.

Be sure to read the User Manual and the “Safety Notes” chapter carefully before assembling and operating the product.

Keep the manual close to the instrument.

## 1.2 INTENDED USE

The Leica M320 MultiFoc Objective provides the user with an extended individual working distance adjustment.

## 1.3 SYMBOLS

### 1.3.1 IN THE MANUAL



Can cause minor injury.



Can cause property damage.



Information that is not safety-related, but is useful or important.

### 2.1 SAFETY NOTES

Information for the person responsible for the instrument/authorized trained personnel

- Please observe all safety rules and instructions listed in the user manual provided with your Leica M320 MultiFoc Objective.
- Make absolutely sure to observe this user manual.
- Follow directions provided by your employer regarding work organization and safety.
- The Leica M320 MultiFoc Objective must be used by authorized and qualified specialists only.

### 2.2 DIRECTIONS FOR THE USER OF THE INSTRUMENT

- The Leica M320 MultiFoc Objective may be operated with the Leica M320 microscope from Leica Microsystems only.
- The working distance of the Leica M320 MultiFoc Objective is not fixed and can be adjusted to the individual need any time.

### 2.3 STERILIZING THE STERILE CAPS

- The sterile caps for the Leica M320 MultiFoc Objective must be sterilized in the steam autoclave at 134°C for longer than 10 minutes.
- Sterilizing using ethylene oxide is not permitted.
- All other parts of the Leica M320 MultiFoc Objective and M320 Drape Adapter cannot be sterilized.

### 2.4 DISPOSAL



The respective applicable national laws must be observed for disposal of the products, with the involvement of corresponding disposal companies.  
The unit packaging is to be recycled.

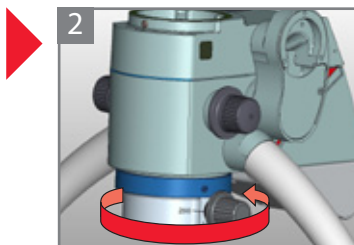
## 3.1 OBJECTIVES



Leica M320 Multifoc Objectives provide WD range from 200 mm to 300 mm.



Remove the cover from the optics carrier.



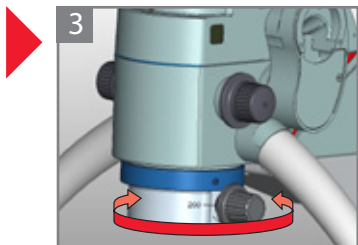
Screw in the objective.



Use Leica M320 MultiFoc Objective only with Leica M320.



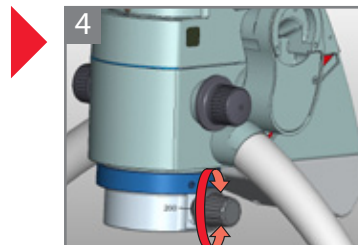
Leica M320 MultiFoc Objective is not compatible with M320 Orange Filter.



Align the WD adjusting knob to desired position, left or right handside of optics carrier.



Check whether Leica M320 MultiFoc Objective fits tightly to optics carrier.

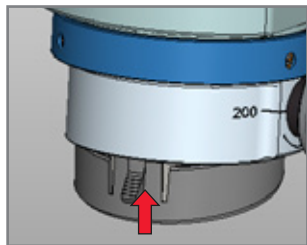


Turn the WD adjusting knob to adjust WD.

## 3.2 PROTECTIVE GLASS

**i INFO**

The protective glass is used to protect the objective. The glass is steam- or gas-sterilizable.



Leica M320 MultiFoc Objective:  
The nose points forward.

## 3.3 MOUNTING STERILE COMPONENTS

**! CAUTION**

Danger of infection!  
Avoid touching the sterile components. Allow sufficient free space.

**i INFO**

Do not install the sterile components until shortly before the operation.

Check installed components für proper fitting.

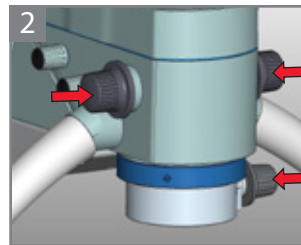
**i INFO**

Handle sleeves and caps for the magnification changer and Leica M320 MultiFoc Objective are steam sterilizable.

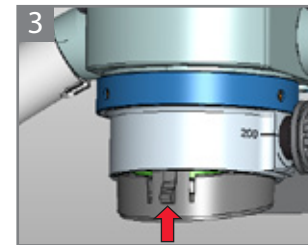
Sterilize the handle sleeves and caps after use.



1  
Insert until the handle sleeve clicks into place.



2  
Attach the caps.

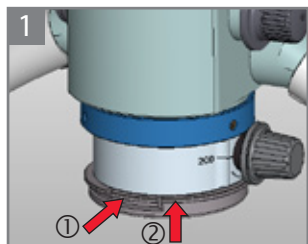


3  
Attach protective glass on Leica M320 MultiFoc Objective. The nose points forward.

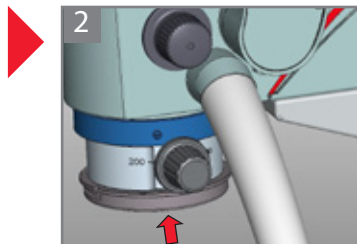
## 3.4 INSTALLING THE DRAPE

**! CAUTION**

Do not wrap the drape around the microscope too tightly. The distance between the microscope and drape should be 20 cm. Danger of overheating!



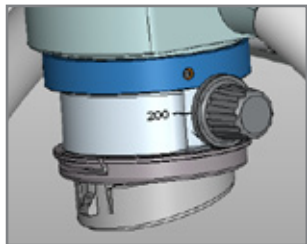
Attach M320 drape adapter on Leica M320 MultiFoc Objective by pressing ① nose and clipping ② the drape adapter on the objective.



Fit the drape.

**! CAUTION**

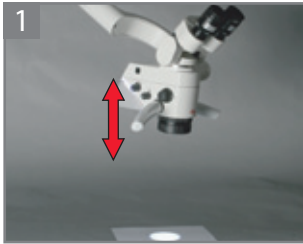
Use the Leica M320 protective glass to avoid reflexes.



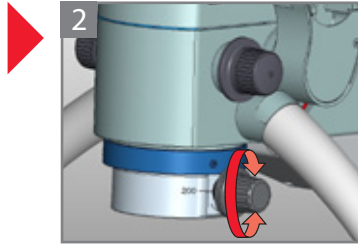
Remove the glass from the drape. Attach the protective glass.

### 4.1 ADDITIONAL SETTINGS

#### 4.1.1 ADJUSTING THE WORKING DISTANCE



Coarse focus by raising and lowering the microscope.



WD adjusting via optional Leica M320 MultiFoc Objective.  
Turn the WD adjusting knob.



## 5.1 MAINTENANCE INSTRUCTIONS

- Keep accessories away from dust when not in use, e.g., protect them using a dust cover.
- Remove dust with a pneumatic rubber bulb and a soft brush.
- Clean lenses and eyepieces using special optics cleaning cloths and pure alcohol.
- Thoroughly clean the optics carrier using germicidal disinfectant after each time it is handled.
- Protect your microscope from moisture, fumes and acids and from alkaline and caustic materials. Do not store chemicals close to the instrument.
- Protect from improper use. Never install other device sockets or unscrew optical systems and mechanical parts unless explicitly instructed to do so in this User Manual.
- Protect the microscope from oil and grease. Never oil or grease the guide surfaces or mechanical parts.
- Remove coarse contamination using a damp disposable cloth.
- Use disinfectants based on the following active ingredients: aldehydes, alcohols, quaternary ammonium compounds.
- Do not use preparations based on the following: halogen-splitting compounds, strong organic acids, oxygen-splitting compounds.
- Camera: Keep optical components clean. Clean optical surfaces using a lint-free cloth.  
Soak the cloth using a little methanol or glass cleaner. Do not use alcohol.
- Do not use ethanol or spirits.

### Tropical environment/fungus

Leica Microsystems employs certain safety precautions in its manufacturing techniques and materials. Other preventive measures include:

- Keep optical parts clean.
- Use and store them in a clean environment only.
- Store under UV light when not in use.
- Use in continuously climate-controlled rooms only.
- Keep moisture away and cover using a plastic cover filled with silica gel.

### Notes on reprocessing of resterilizable products

#### Limitations on reprocessing

Observe local legal regulations when processing medical products used to treat patients who have or are suspected to have Creutzfeldt-Jakob disease (CJK) or its variant (vCJK). Usually, these resterilizable medical products can be safely disposed of by burning.

#### Occupational safety and health protection

Observe work safety and health protection of persons responsible for processing contaminated products. Current regulations of hospital hygiene and prevention of infection must be observed in the preparation, cleaning and disinfection of the products.

## Instructions

### Workplace

Remove surface contamination with a paper towel.

### Reprocessing

Recommended: reprocess a product immediately after use.

### Sterilization

		Permissible sterilization methods	
Article No.	Designation	Steam autoclave 134 °C, t > 10 min.	Ethylene oxide max. 60 °C
10428328	Rotary knob, binocular tube T	x	
10731202	Rotary knob, Leica M320 MultiFoc Objective	x <sup>2)</sup>	
10448440	Cover, sterilizable for Leica M320 handle	x	
10448431	Protective objective glass, Leica M320		x <sup>1)</sup>

<sup>1)</sup> Products with optical components can be steam-autoclaved using the conditions listed above. However, this may cause a layer of dots and streaks to form on the glass surface, which may reduce the optical performance.

<sup>2)</sup> Change in color through sterilisation possible.

### Cleaning

Needed: water, detergent, spirits, microfiber cloth

1. Flush the surface with running water (<40 °C), using a little detergent if necessary.
2. Also use spirits to clean optical components.
3. Dry optical components using a microfiber cloth, dry the rest of the product using a paper towel.

### Disinfection

After disinfection, thoroughly clean optical surfaces using running water/fresh drinking water and then rinse using fresh, demineralized water.

Dry the products completely before the subsequent sterilization.

Leica Microsystems (Schweiz) AG validates:

The instructions above are suitable for preparing a product to be reused. The processor is responsible for the desired results. Before deviating from the instructions provided, first verify the deviations for effectiveness and possible consequences.

### Maintenance

The Leica M320 surgical microscope is maintenance-free. To ensure operational safety and reliability, Leica Microsystems (Schweiz) AG recommends taking the precaution of contacting the responsible service organization. There, periodic inspections can be agreed or a maintenance contract can be concluded.

## Optical Data

Working distance WD200				
Eyepiece	Total magnification (mm)		Field of view Ø (mm)	
	min.	max.	max.	min.
8.33 × 22	1.8	11.6	99.6	15.8
10 × 21	2.2	14.0	95.1	15.1
12.5 × 17	2.8	17.5	77.0	12.2

Working distance WD250				
Eyepiece	Total magnification (mm)		Field of view Ø (mm)	
	min.	max.	max.	min.
8.33 × 22	1.6	9.9	116.9	18.5
10 × 21	1.9	11.9	111.6	17.7
12.5 × 17	2.4	14.9	90.3	14.3

Working distance WD300				
Eyepiece	Total magnification (mm)		Field of view Ø (mm)	
	min.	max.	max.	min.
8.33 × 22	1.4	8.6	134.1	21.2
10 × 21	1.6	10.4	128.0	20.2
12.5 × 17	2.1	13.0	103.6	16.4

All the above data is based on M320 microscope including binocular tube 0–180° (10448088).

All above values have a tolerance of ±5%.

The fruitful collaboration “with the user, for the user” has always been the foundation of Leica Microsystems’ innovative strength. On this basis, we have developed our five corporate values: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement.

## MEDICAL DIVISION

What does a surgeon expect from an outstanding surgical microscope? Sharp, clear images, and a modular system aligned with the surgeon and OR staff needs.

### Innovations for your practice

From the first surgical microscope with widefield optics in the 1980s to the first microscopes with Horizontal Optics and with LED illumination, Leica Microsystems has been at the forefront of innovation in the development of surgical microscopes.

HD video, fluorescence and retinal viewing systems also demonstrate the continued innovative nature of the Leica team. We strive to provide the surgeon with leading edge technology to enhance performance, surgeon comfort, and patient outcomes.

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