

# KAPS SOM<sup>®</sup> 62 ADVANCED OPERATING MICROSCOPE

USER MANUAL



Item no. 328200

TELEPHONE +49 7461 96 580 0

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## 1. GENERAL

Thank you for selecting one of our quality products. This device combines excellent illumination, easy and exact positioning, and very good optical performance in a variable and modular system. Your product can be subsequently aligned to different requirements at any time without problem. The ergonomic design of our products enables users to work without becoming tired. A brilliant 3-dimensional image with high depth of focus enables best possible success quotas in your diagnostics.

This instruction manual is an integral part of the deliverables and is part of the medical product. It must be kept in an easily accessible place by the operator for all users, and remains part of the product even when the product is sold on.











We reserve the express right to make changes to specifications shown in this instruction manual that result from technical enhancements.






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This instruction manual is not subjected to change management. Please contact the product manufacturer for the current revision.

## 2. SYMBOLS USED AND WHAT THEY MEAN

Important visual instructions are on the device packaging, in the instruction manual and on the device. The symbols used have the following meanings:

Symbol	Explanation
	By affixing the CE mark, the manufacturer certifies conformance of the medical device to the fundamental requirements (Article 3) laid down in Directive 93/42/EEC for medical devices.
	Shows the manufacturer of the medical device to EU Directive 93/42/EEC.
	Shows the serial number of a device so that a particular medical device can be identified.
	Shows the date on which the medical device was manufactured.
	Follow the instruction manual. Failure to follow the instruction manual can result in injury or material damage.
	Caution! The warning triangle makes reference to potential sources of danger for people, to injury risks or to health risks.
	General instruction sign. Denotes mandatory action by the user.
	General prohibition sign. Denotes prohibited action by the user.
	Shows a medical device that should not be used if the packaging is damaged or open.
	Denotes a medical device that can break or be damaged if not handled with due care.

Symbol	Explanation
	Denotes the upper and lower temperature values to which the medical device can be exposed safely.
	Denotes the moisture range to which the medical device can be exposed safely.
	Denotes a medical device that must be protected from moisture.
	Denotes the necessity for the user to refer to the instruction manual for important information pertaining to safety (such as warning signs and precautionary measures) that cannot be affixed to the medical device itself for a number of reasons.
	The product entered into circulation after 13 August 2005 and may only be disposed of in a separated waste stream (i.e. not in household waste).



**Note!**

Specifies a handling instruction, failure to comply with which does not result in injury or material damage.



**Caution!**

Denotes a danger that can cause minor injury or material damage.



**Warning!**

Denotes a danger that can cause semi-serious injury or material damage.

### 3. WARNING AND SAFETY ADVICE

Follow the instructions in this operating manual for proper function and safety of the device.

**Do not use the device when faults occur.**

#### 3.1 Installation Instructions

---



##### Warning!

- The mains plug of the device is used to isolate the device from the mains power supply. Set up the device such that the mains plug can be accessed without obstruction at all times.
- Caution! To prevent the risk of electrical shock, this device may only be connected to a supply having a protective earth connector.
- Only use approved components. Unapproved components can have a bearing on the load-carrying capacity and stability of the device, and can cause damage to the device.
- The ventilation for the device may not be obstructed.
- To prevent damaging the device, do not drop it or parts of it, or expose it/them to other mechanical forces.
- If the power lead is defective, immediately disconnect the device from the mains supply and contact the manufacturer.

#### 3.2 Notes for Use and Disposal

---



##### Warning!

- The microscope may only be deployed for its intended use (as specified in these instructions).
- Maintenance and repairs may only be carried out when required by authorised specialists or by factory customer service.
- Only spare parts and accessory components approved by the manufacturer may be used. Please contact the manufacturer in the event of doubt.
- Only replace defective fuses with those having the same ratings (nominal voltage, nominal current and switch-off characteristics).
- Use of the microscope is only permitted in dry rooms.
- Ensure that the device is only run on voltages specified on the nameplate.
- The device is fitted with a high- performance light source. Ensure that neither user nor patient is blinded by the light.
- Whilst the device is being used, ensure the patient does not look into the illumination unit of the microscope.
- Penetration of liquids into system components must be reliably prevented.
- When a fault occurs (such as when a fan is defective or ventilation slits are covered), immediately switch off the device so as not to cause any damage to it.
- Whilst the device is in use, all fuse components must be correctly inserted as described in this manual.
- Unplug the mains connector before changing fuses.
- Do not use the device near sources of electromagnetic radiation.
- Modifications to the device are strictly forbidden without consent from the manufacturer.

The residual risk of a hazard is assessed as extremely low if all instructions are followed and the device is used as intended.

## 4. DIRECTIVES, LAWS AND STANDARDS

The medical device described here conforms to the fundamental requirements laid down in Directive 93/42/EEC for medical devices. A conformity assessment procedure to Appendix VII has been conducted successfully. The following harmonised standards were applied for the conformity assessment procedure:

- DIN EN 60601-1:2013-12 (ed.3)
- DIN EN 60601-1-2:2011-07 (ed.3)
- DIN EN 60601-1-6:2010-10
- EN ISO 14971:2013-04
- EN ISO 13485:2015-05
- EN ISO 15223-1:2013-02
- ISO 11884-1-2006
- EN ISO 9001:2008
- DIN EN 62471:2009-03
- Directive 93/42/EWG

## 5. DELIVERY STATE

### 5.1 Deliverables

---

The device is delivered as 6 individual sub-assemblies:

- Wheeled stand with four rollers
- Column
- Swivel and floating arms with electrical supply and lighting
- Microscope head including attachment
- XY-coupling
- Foot-switch
- Instruction manual

Fasteners for all components are included.

### 5.2 Transportation/Packaging/Unpacking/Checking

---

The device is delivered in the assemblies listed above and can be installed and tested for correct function on request.



#### Note!

Check the packaging for damage before unpacking the device. If the packaging is damaged, the contents may be as well. If the packaging is visibly damaged, please notify EICKEMEYER® immediately.

#### Unpacking

All packaging and filler material must be disposed of in line with applicable local regulations.



#### Note!

After unpacking all of the components, use the delivery note to check the delivery is complete. If it is not, notify EICKEMEYER® immediately.

## 6. INTENDED USE

The product is intended for general-purpose operative and diagnostic medical deployment. It is used for optimum illumination and magnification of the treatment area. The product may only be used by trained specialists for the medical application described in this instruction manual. Training is held by the manufacturer or by personnel authorised by the manufacturer. Intended use does not include contact with the patient. The device may only be used in interior rooms having sufficient levels of illumination and cleanliness.

## 7. INSTALLATION

The device may only be installed by personnel assigned by the manufacturer, or by the manufacturer itself. Only the fixing and installation materials supplied may be used.

### 7.1 Installation of wheeled Stand and Column

---

Carry out the following installation steps as in Fig. 1:

- The four rollers (2) are already screwed to the foot (1). The rollers are fitted with brakes. Engage/disengage the brakes on the rollers when moving and securing the device.
- Place the column (3) onto the flange of the foot and tighten it with four screws (5), using the tool provided.
- Hang the eight lead weights (6) into the bars of the foot.
- Put on the protective cover (4).
- Secure the cover using the clamp ring (8) and four screws (7). Use the provided tool.



#### Caution!

Be careful with the lead weights. Ensure not to drop them and protect hands, etc. from falling weights. Always wear gloves when handling with the weights.

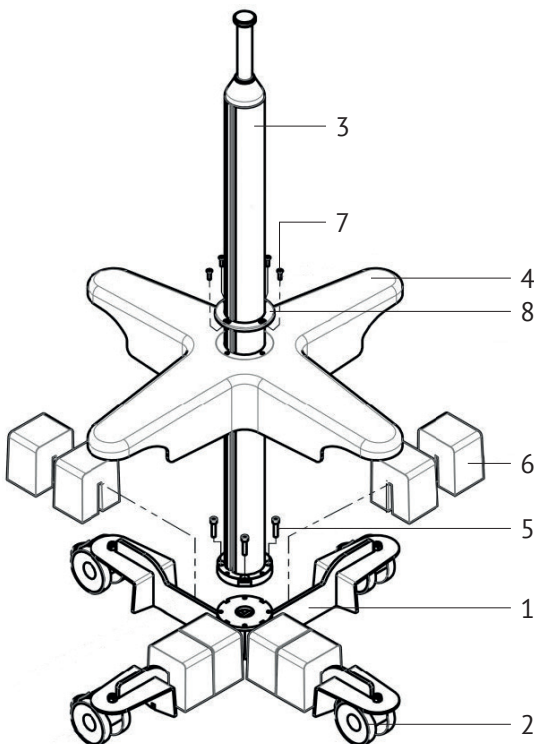


Figure 1

## 7.2 Installation of Swivel Arm, Suspension Arm and Microscope

Carry out the following installation steps as in Fig. 2:

- Undo the lock screw (3) on the upright guide cylinder (1) of the column (2).
- Put on the swivel arm (4). Ensure in the process that the star knob (5) is undone.
- Screw the lock screw (3) back on.
- Undo the safety cap (6) from the guide cylinder (7) of the XY-coupling (8).
- Press in the lock pin (9) and push in all the way the guide cylinder of the XY-coupling. The star knob (10) must be undone for this. Release the lock pin – it engages into place and prevents the XY-coupling (8) from falling out.
- Hand-tighten the lock cap (6) onto the projecting threaded part of the guide cylinder.
- Undo the safety cap (11) from the guide cylinder (12) of the microscope carrier (13).
- Press in the lock pin (14) and push in all the way the guide cylinder of the microscope carrier. The star knob (15) must be undone for this. Release the lock pin – it engages into place and prevents the microscope head from falling out.
- Hand-tighten the lock cap (11) onto the projecting threaded part of the guide cylinder.



### Caution!

Always ensure that the lock screw (3) for securing the swivel arm, the lock screw (6) for securing the XY-coupling and the lock screw (11) for securing the microscope head, are mounted correctly.

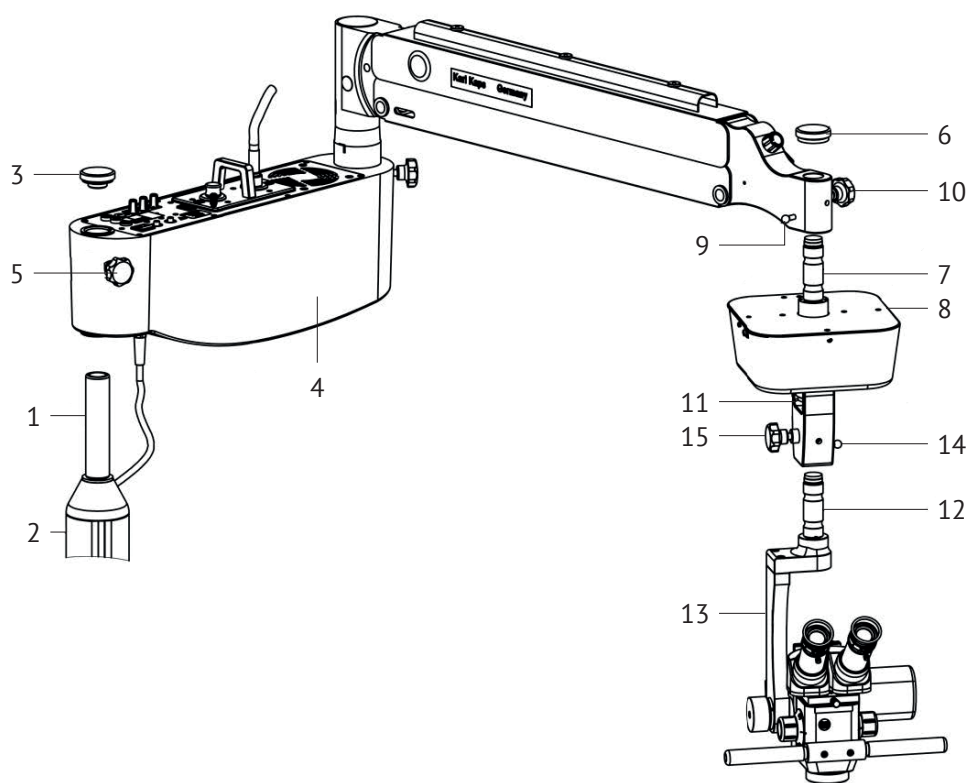


Figure 2

### 7.3 Connector and Light Guide

- Connect the connector (1) to the jack (2) and lock it with the coupling nut (4).
- Connect the connector (3) to the jack (4) and lock it with the coupling nut.
- Plug the light guide (5) into the cold light adaptor (6) and lock it with the knurled screw (7).

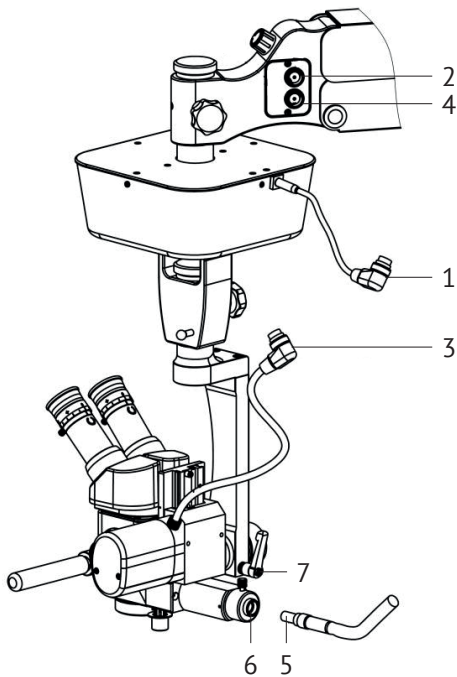


Figure 3

### 7.4 Foot Switch

Connect the foot-switch connector (1) to the jack (2) on the rounded side of the swivel arm and lock it with the knurled screws (3).

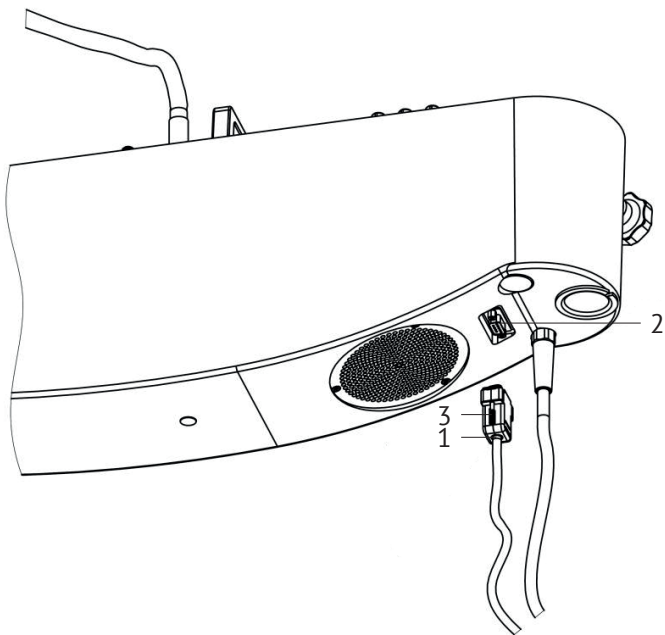


Figure 4

## 8. DEVICE DESCRIPTION

### 8.1 Identification and Nameplates

The nameplate is used for accurate identification of your product. It may not be removed or modified. Fig. 6 shows the position of the nameplate. It is located on the flat side of the swivel arm, regardless of device variant.

#### electrical characteristics

Input voltage: 115/230 V AC

Fuses: 2x T 1 A

Frequency: 50/60 Hz

Rated power: 210 VA

Typ SOM:

S-No.:

Date of Manufacture:



**Eickemeyer®**

**EICKEMEYER KG**

Eltstraße 8

78532 Tuttlingen

Germany

T +49 7461 96 580 0

F +49 7461 96 580 90

info@eickemeyer.com

www.eickemeyer.com

Figure 5

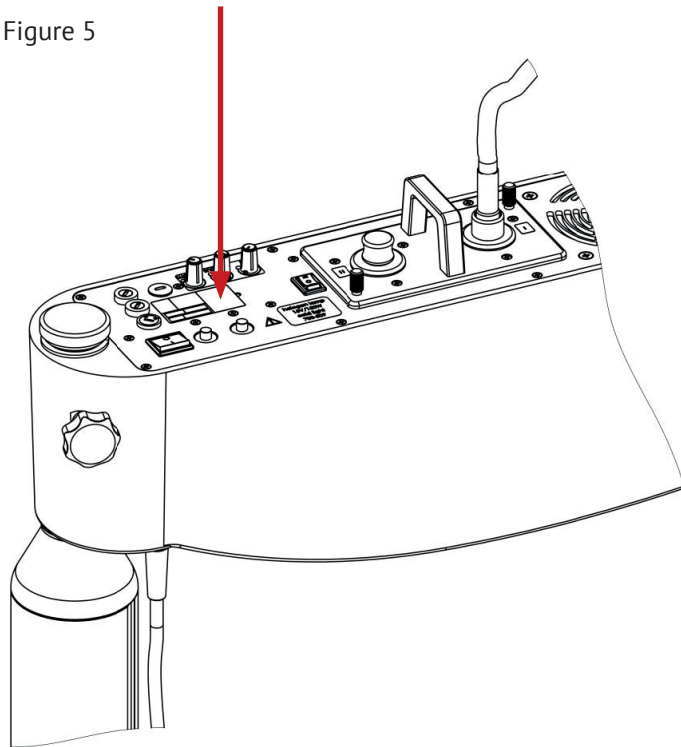


Figure 6



#### Note!

The nameplate must be legible at all times. If the nameplate is not legible, or is missing, a replacement must be sought.

### 8.2 Controls

The device is positioned on the floor with the wheeled stand. The foot has four rollers for moving the device. The following locking mechanisms, securing elements and controls are also fitted on the device:

- Star knob (1) for determining the rotation of the swivel arm
- Main switch (2)
- Potentiometer (3) for speed adjustment of focus and XY-coupling
- Lamp-switch (4) to change between main illumination (I) and backup illumination (II)
- Star knob (5) for determining the rotation of the suspension arm
- Clamp lever (6) for determining the height movement for the suspension arm
- Potentiometer (7) for regulation of lighting
- Star knob (8) for determining the rotation of the XY-coupling
- Switch (9) for centering of the XY-coupling
- Star knob (10) for rotation protection of the microscope head
- Knurled screw (11) for exchanging the binocular lens tube
- Clamp lever (12) for adjusting the required friction to tilt the microscope head
- Rotating knob (13) for magnification adjustment
- Lever (14) for swiveling in/out the colour filter
- Foot switch (15) for controlling of focus, zoom, XY-coupling and illumination

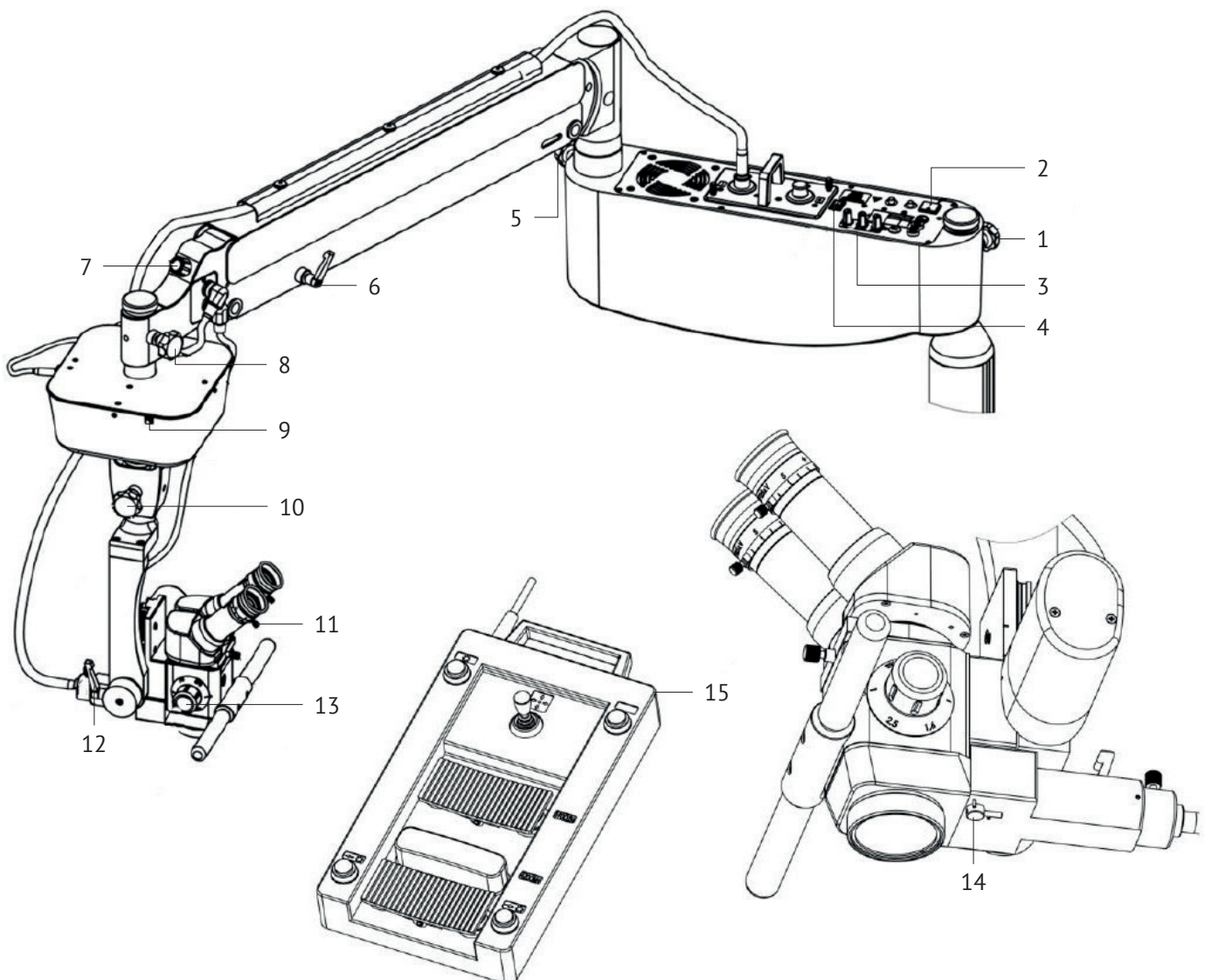


Figure 7

## 8.3 Medical Performance Data

The medical performance data pertains to the required medical performance data of the medical device. This performance data is listed in section 16 “Technical description”.

## 8.4 Additional Loads

The load capacity and tipping stability of the systems are aligned to the components in our product range. Only approved components may be installed and used.

### Suspension Arm Adjustment

The weight adjustment of the suspension arm is set at the factory to the requirement on delivery. The suspension arm adjustment may have to be aligned when components are used on or removed from the device head. (Anti) clockwise adjustment of the Allen screw (1) is used for this.

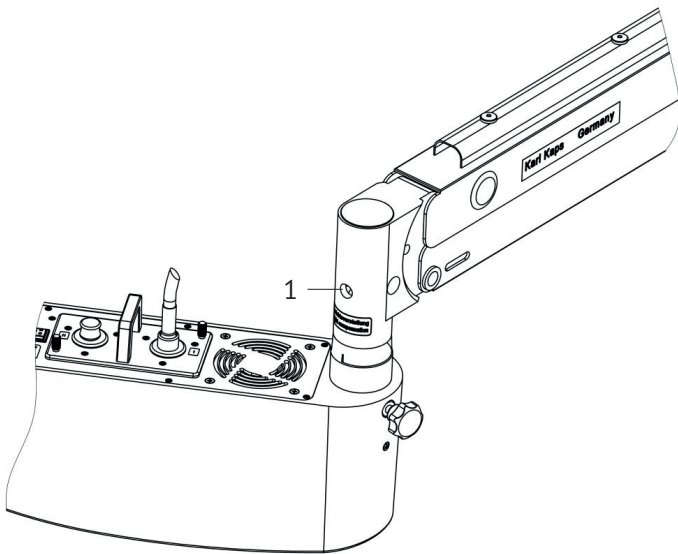


Figure 8

## 9. PREPARATION

### 9.1 Power Supply

Use the power lead to connect the device to the local voltage supply.

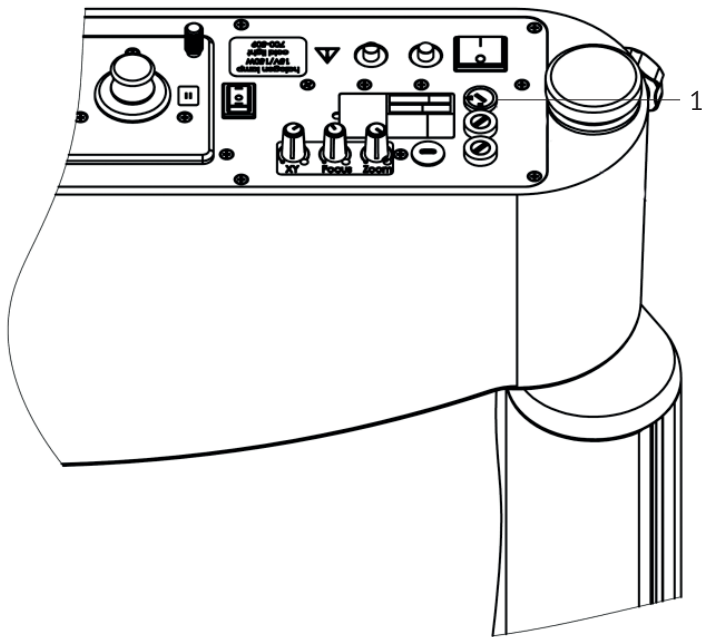


Figure 9



#### Caution!

Make sure, that the voltage selector switch (1) is set to the correct voltage.

### 9.2 Brakes

The clamps are adjusted by tightening/loosening the star-knob screws/clamp levers (see section 8.2).  
The device clamps must be adjusted so that the degree of free movement satisfies the respective requirements.



#### Caution!

Never fasten the clamp lever of the suspension arm (6 in Fig. 7) when the suspension arm has no load.  
Never move the suspension arm when its brakes are activated.

### 9.3 Adjusting Eye Distance

The eye distance must be set individually for every user.

To do this, move the microscope to the working position and view an object through the eyepieces. The eyepieces must be set to Index 0. The object must now be brought into focus by adjusting the working distance. Now adjust the eye distance as shown in Fig. 10. It must be possible for both eyes to make out the object by the same amount, i.e. the object should be seen as a single 3-dimensional image.

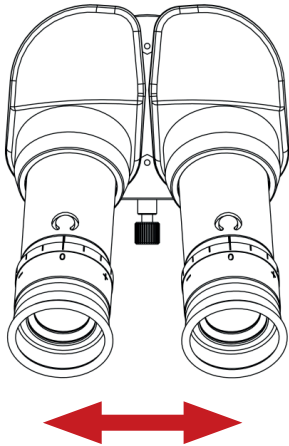


Figure 10

### 9.4 Dioptre Adjustment

For dioptre adjustment, first undo the clamping screw (1) on the eyepieces (3). Then line up the “Zero” on the dioptre scale (5) of the eyepieces (3) with the index mark (4) and move the microscope towards the object until it appears in focus.

Those wearing glasses and with spherical ametropia for long distances can set the relevant dioptre number on the eyepieces without glasses, and are able to focus as described above.

Ametropes with astigmatic eye failures keep on their glasses for distances, peel back the rubber eye cups (2) of the eyepieces (6) and adjust the dioptre ring of the eyepieces to “Zero”. Focusing is then also as described above.

The clamping screw (1) must be re-tightened after the dioptre adjustment.

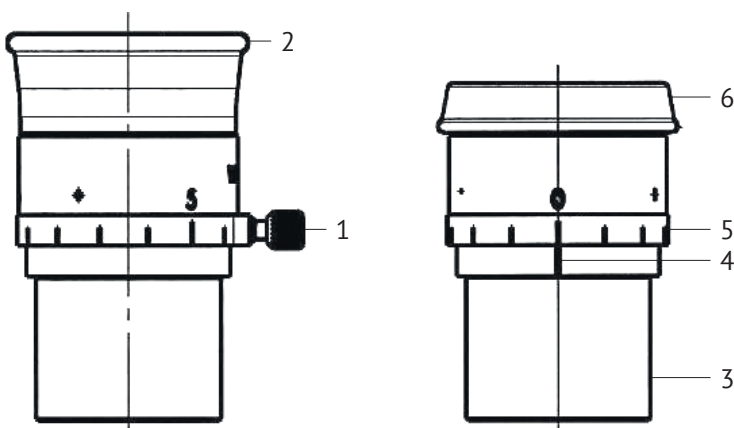


Figure 11

9.5 Checklist

Working through the following checklist prior to every use is a requirement to ensure safe use for patient and user.

Function	OK
Is the device connected to a suitable voltage source?	
Are all parts and accessory parts installed correctly and fully operational?	
Are all cover caps removed?	
Are illumination and brightness control working correctly?	
Is the zoom/magnification unit working correctly?	
All outer parts of the microscope are cleaned and free of dirt and impurities.	
A check must be made in the operation area on whether the sterilization hood is being used properly.	

## 10. OPERATION

### 10.1 Transport Position/Rest Position

---

The device must be moved into a transport position for safe transportation. For this, the clamps of the axes must be undone and the device moved into the transport position shown in Fig. 12.



#### Warning!

The device is at risk of tipping over if not moved into the transport position described.

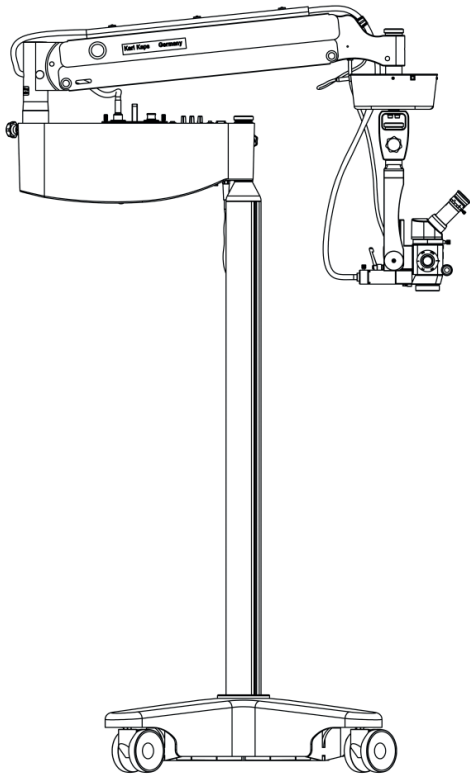


Figure 12

### 10.2 Replacing Objective and Eyepieces

The following steps are required to replace lenses and eyepieces (refer to Fig. 13):

- The objective (1) has a screwed socket. Turn to the left to release the objective and to the right to affix it. Only hand-tighten them.
- The eyepieces (2) are inserted. To remove them, they are simply pulled out, and the replacements are inserted.

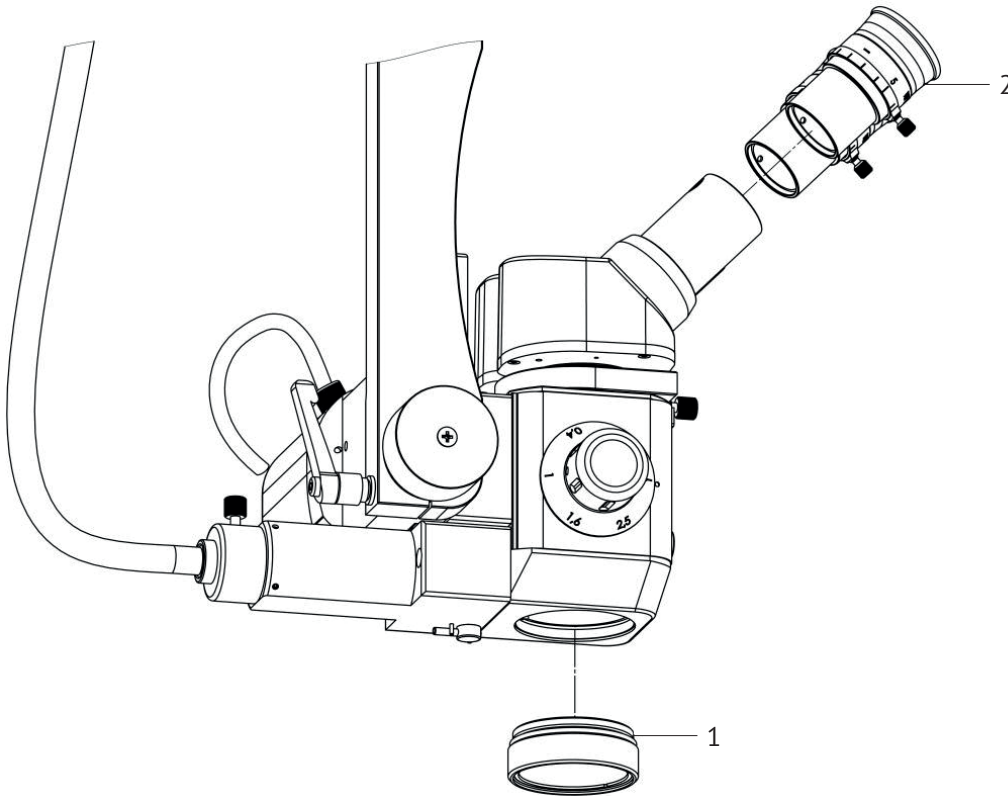


Figure 13

### 10.3 Switching the Device On and Off

The main switch (1) of the device is located on the flat side of the swivel arm. The device is ready to use when the green status light (2) is ON. The red status light indicates overheating of the electronics. If the red status light (3) is ON, immediately switch off the device and check the ventilation slits. If they are dirty, try to remove the dirt with a brush or slightly moist cloth. Then switch the device back on. If the red status light is still ON, immediately switch off the device and call customer service.

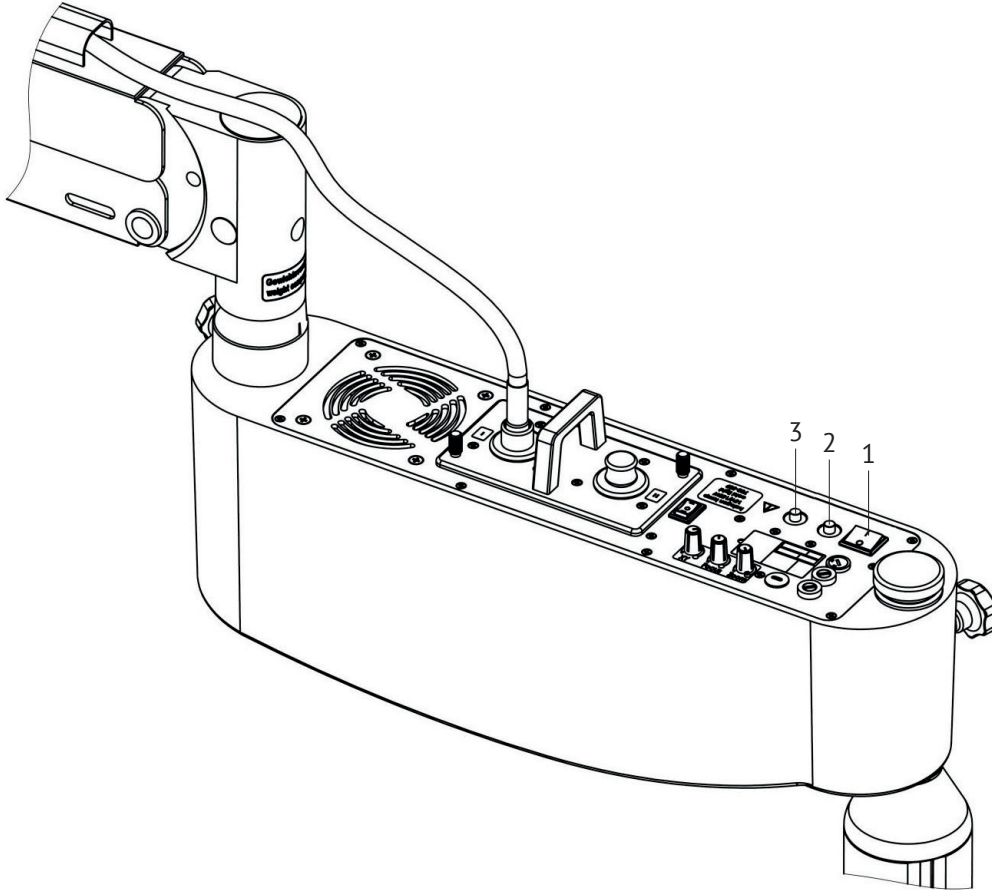


Figure 14



#### Caution!

Do not use the device when the red status light is ON as it can result in damage to the electronics.

### 10.4 Brightness Control

Turning the potentiometer (1) enables continuously variable adjustment of the brightness to the requirements of the user.

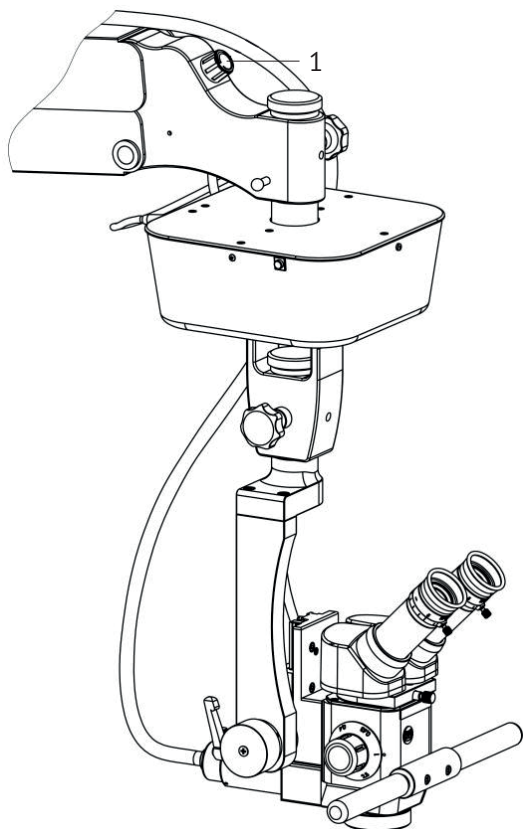


Figure 15

## 10.5 Magnification and Focus Adjustment

Subsequently, the magnification and focus adjustment is described.

### Magnification

The magnification is used to make fine structures visible. To adjust the magnification, turn the knob (1). The engagement of the knob on the marked position indicates that the magnification is set correctly.

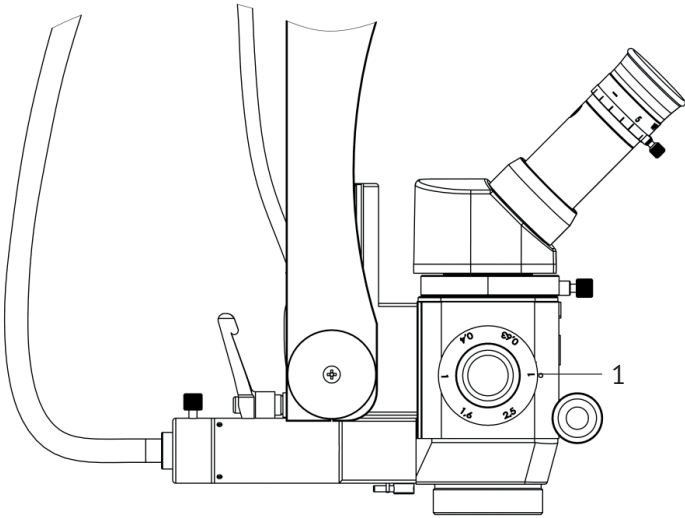


Figure 16

### Focus

The rockers are assigned as follows:

Rocker position	1	2	3	4
Function	Focus +	Focus -	Focus +	Focus -

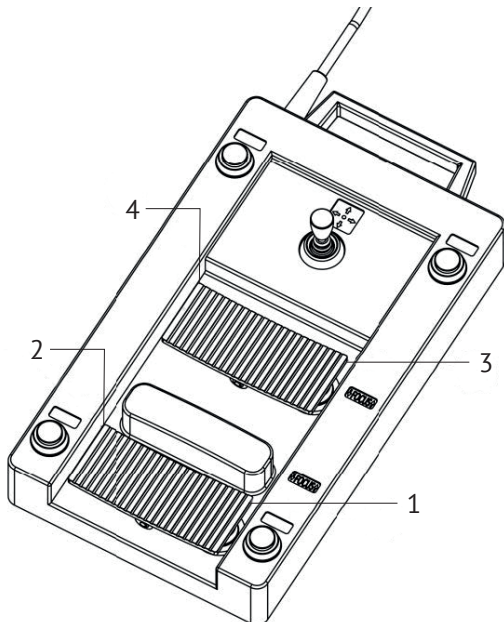


Figure 17

### 10.6 XY-Coupling

By moving the joystick (1) the XY-coupling will drive in the correspondent direction according to its actual orientation.

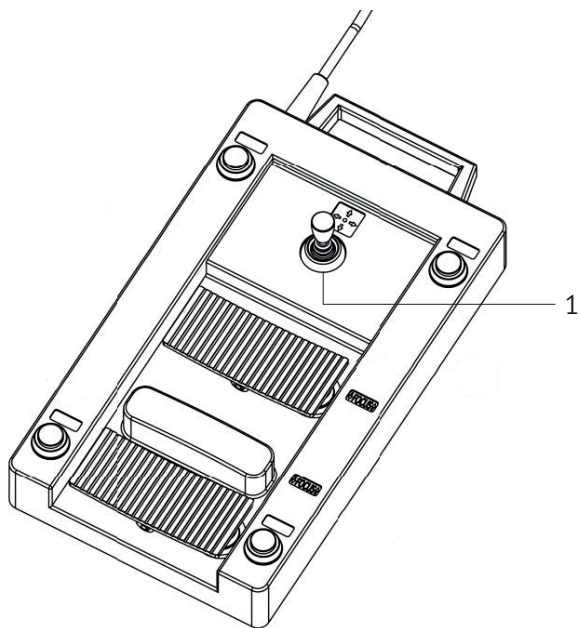


Figure 18

By pushing the button (2) the XY-coupling will start to center itself.

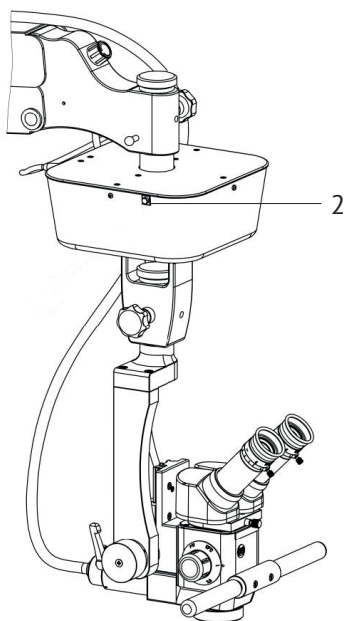


Figure 19

## 10.7 Swiveling In/Out the Filter

Move the lever (1) to swivel in the colour filter.

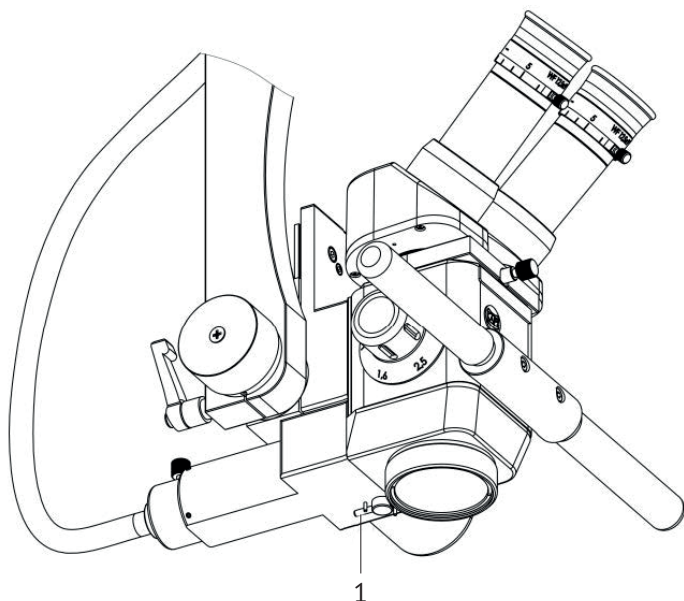


Figure 20

## 10.8 Removing/Exchange the Binocular Tube

- Undo the knurled screw (1) and remove the tube (2).

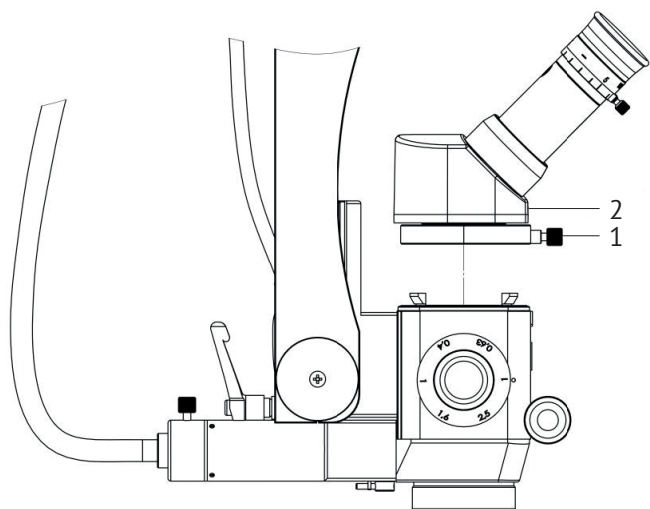


Figure 21

## 11. SHUTTING THE SYSTEM DOWN

After every treatment, the device must be cleaned and disinfected depending on application and in accordance with the specifications in 12. The device must then be moved into the transport position described in 10.1 Transport position/idle position. This is the optimal idle position when the device is not in use. If the device is not used for longer than 24 hours, putting on the lens covers (supplied) and pulling the protective cover (supplied) over the device are recommended. Similarly, unused accessories should be removed and placed into the storage packaging provided. This prevents damage to the lenses and dirtying of the device.

## 12. MAINTENANCE AND CLEANING

The device need not be serviced at regular intervals. The recommendation nevertheless, depending on frequency of use, is to have an inspection carried out by a service centre authorised by the manufacturer. Contact the manufacturer for information on these service centres. Every maintenance operation has to be carried out by suitably trained personnel.

### 12.1 Fuse Replacement

---

Carry out the following steps according to Fig. 22:

- Unplug the mains connector. Insert a screwdriver into the slit of the fuse holder (1) and turn it anticlockwise by 90°. A spring presses the cap up.
- Remove the cap and replace the fuse attached in the cap.
- Insert the cap with a new fuse in, press it down and lock it into place by turning the screwdriver clockwise by 90°.

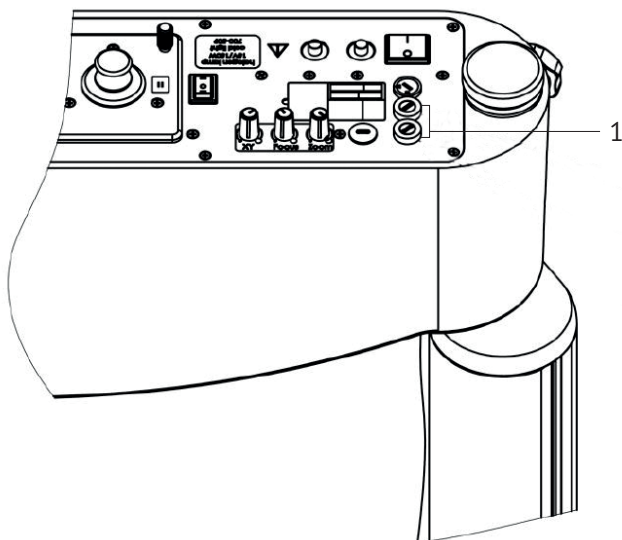


Figure 22



#### Caution!

Only replace defective fuses with those having the same ratings (nominal voltage, nominal current and switch-off characteristics).

### 12.2 Disinfection and Sterilisation

---

Moisten a cloth with antiseptic liquid (such as Sagrotan – P). Wipe as required the parts of the microscope touched most often (such as knobs and hand grips).

For some controls, sterilizable covers are available. We recommend replacing these after 30 sterilization cycles with new ones. The sterilization may be carried out with an autoclave at a temperature of 134 °C and a pressure of 2 bar.

## 12.3 Cleaning optical Surfaces

Remove coarse dirt particles from outer optical surfaces with a clean, dry hair brush (lens, eyepiece, eyepiece lens). Beforehand, clean the brush in pure alcohol or ether, and allow it to dry. Then moisture a soft cotton cloth with pure alcohol and wipe the lens with a circular motion from the centre of the lens outwards. Breathe on the lens and re-polish it with a dry cotton cloth (cleaning kits suitable for glasses can also be used). The anti-reflex coats are extremely resistant because they have been hot coated. The coats are not damaged if cleaning is as described above.

## 12.4 Cleaning Painted Parts

Moisten a soft cotton cloth with water (to which just a little washing-up liquid has been added) and wipe it over the dirty parts. For any remaining spots, moisten the cloth with pure alcohol or cleaning solvent and wipe the spots carefully.

## 12.5 Exchange of the Power Cord

The exchange of the power cord should be carried out only by the manufacture itself or by a person nominated by the manufacturer.

## 12.6 Lamp Replacement

For lamp replacement perform the following steps according to Fig. 23.

- Turn off the device using the main switch (1), disconnect device from power supply.
- Undo the two knurled screws (2).
- Take out the lamp unit (3).
- Pull off the lamp socket (4).
- Take off the lamp (5) and replace it with an identical new lamp. The lamps are clamped by a spring wire (6) and can be replaced without any tools. Always pay attention to the correct fit of the lamps.
- Press the lamp socket (4) on the lamp contacts.
- Attach the lamp unit (3) and fix it with the two knurled screws (2).

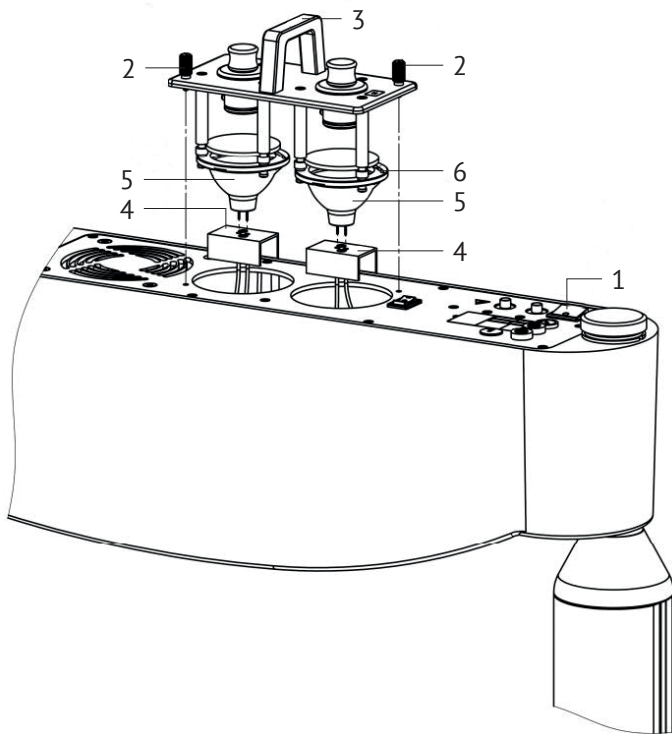


Figure 23

## 13. DISPOSAL

### User Information on Disposing Electrical Equipment



This symbol denotes products that may not be disposed of in household waste. Proper disposal is to the benefit of us and the environment.

For more detailed information on disposal, please contact the local sales outlet or the manufacturer.

### Disposal within the European Union

Please contact the local sales outlet or the manufacturer specified.

### Disposal outside the European Union

Please enquire into which disposal regulations are applicable in your country.

## 14. ACCESSORIES

The system is a medical product and has been developed and tested in accordance with applicable standards. Do not use any accessory parts that are not approved for the device or do not satisfy the applicable standards/directives. Please contact the EICKEMEYER® customer service in the event of doubt.

## 15. WHEN FAULTS OCCUR

The device works extremely reliably when used as intended. Should faults occur nevertheless, please follow the instructions below.

### Summary of Potential Faults

Fault	Cause	Fault Rectification
No microscope lighting	Mains switch in OFF position	Move the switch to "ON"
	Mains cable not connected to socket	Plug in the cable
	Optical fibre not connected	Connect optical fibre
	Lamp defective	Use backup lamp, replace lamp as soon as possible
	In-house power supply outage	Have the electrical installation checked
	Lamp selection switch in "0" position	Switch the lamp selection switch to position "I" or "II"
System cannot be positioned with the foot rollers or can only be moved with high level of exertion	One of more brakes applied	Disengage the brake
	Rollers dirty	Clean the rollers
	Roller defective	Have the roller replaced by service
Floating arm can only be tilted with difficulty, or not at all	Brake too tight	Loosen the brake from the star knob
Floating arm drops slowly	Pressure spring defective	Have the floating arm corrected by Service
	Load too high	Align the pre-tension or replace the spring arm
Swivel arm can only be moved with difficulty, or not at all	Brake too tight	Loosen the brake from the star knob
Microscope head can only be moved with difficulty, or not at all	Brake too tight	Loosen the brake from the star knob
Only one optical channel through the lens tube visible	View not set correctly to the eye distance	Adjust the view (eye distance)
Vignetting visible in image	Changer to intermediate position	Use the knob to set the changer to the magnification required until the position engages noticeably
Uneven focus in right and left views	Incorrect dioptr setting	Adjust the dioptr as per the instructions
Image foggy	Eyepieces or lens dirty	Clean the lens as per the instructions
Dirt in image	Eyepieces, lens or light guide dirty	Clean the lens as per the instructions
Sudden drop in light power	The illumination unit is overheated	Switch the device off. Clean the ventilation openings of the lighting unit with a slightly moist cloth. Notify the manufacturer if the fault still occurs.

## 16. TECHNICAL DESCRIPTION

### 16.1 Technical Details

<b>Model</b>	KAPS SOM® 62 Advanced Operating Microscope
<b>Dimensions and Weight</b>	
Dimension	See Figure 24
Weight	approx. 120 kg
<b>Function Data</b>	
Function displays	Status display on ON/OFF switch
Supply connectors	Mains connector, 1-phase AC
Isolation	Power lead
Operation	All controls are mechanical. Refer to the description for the mode of operation.
<b>Operational Information</b>	
Place of use	Enclosed rooms, not in oxygen-rich environments
Protective class	I, protective earth conductor
Equipment protection	IP 20
Duty type	Long-term usage
Electrical safety	DIN EN ISO 60601-1:2013
Mains voltage	115/230 V AC
Mains frequency	50/60 Hz
Fuses	2x T 1A
Illumination type	Halogen
<b>Environmental Conditions</b>	
Operational ambient temperature	+10 °C to +35 °C
Operational ambient humidity	30 % to 85 %
Air pressure	800 hPa to 1,060 hPa
Storage ambient temperature	-20 °C to +70 °C
Storage ambient humidity	Maximum 100 %
<b>Regulatory information</b>	
Protection class	1

Standards applied	<ul style="list-style-type: none"> <li>• DIN EN 60601-1:2013-12 (ed.3)</li> <li>• DIN EN 60601-1-2:2011-07 (ed.3)</li> <li>• DIN EN 60601-1-6:2010-10</li> <li>• EN ISO 14971:2013-04</li> <li>• EN ISO 13485:2015-05</li> <li>• EN ISO 15223-1:2013-02</li> <li>• ISO 11884-1-2006</li> <li>• EN ISO 9001:2008</li> <li>• DIN EN 62471:2009-03</li> <li>• Directive 93/42/EWG</li> </ul>
Manufacturer	Karl Kaps GmbH & Co. KG
CE mark	CE

## 16.2 Dimensions

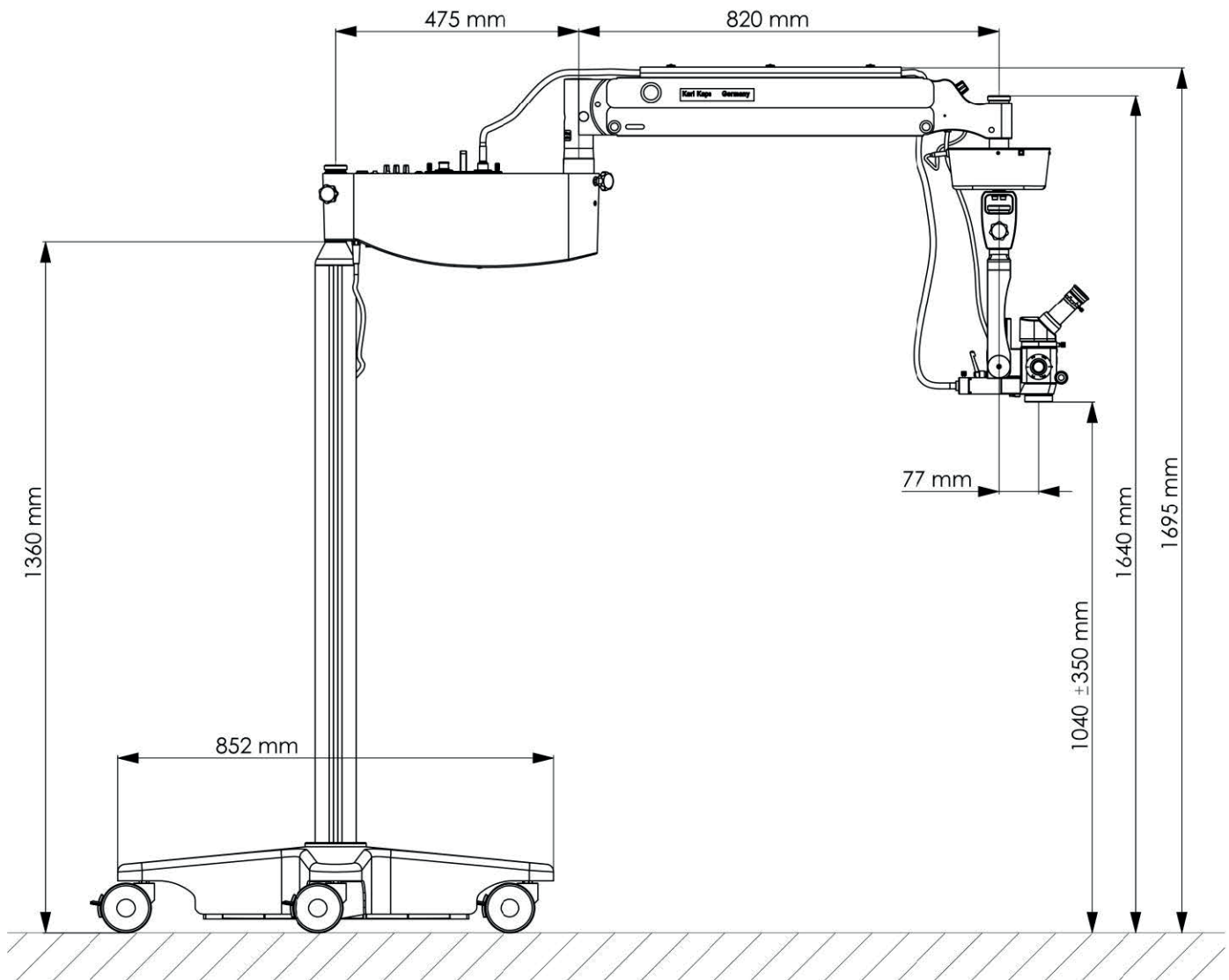


Figure 24

## 17. WARRANTIES

We provide a warranty for the respective period stipulated legally from the time of transfer of the product to the purchaser. Complaints due to incomplete or incorrect delivery, and objections due to evident deficiencies, must be communicated immediately after receipt of the delivery, and immediately after their discovery in writing in the event of other deficiencies.

The purchaser must preserve right of recourse against third parties (such as for a factual report in the event of damage during transit). Processing or further sale, or combination or mixing, shall be deemed to constitute unconditional approval. In the event of notice of defects being submitted in due time, we shall accept liability within the framework of the provisions set out hereinafter. Our liability due to deficiencies (warranty) extends to providing products free of defects to the degree possible in accordance with best available technology. Modifications to design or implementation carried out by us prior to delivery do not provide entitlement to complaint or objection.

In the event we have warranty claims against our suppliers, our liability is fulfilled through assignment of these claims to the purchaser who already agrees to accept this assignment for this case.

If a claim cannot be asserted against the supplier or if the supplier refuses to accept any liability in respect of the purchaser, our liability shall be limited to supplementary performance, i.e. delivery of a substitute or repair at our discretion. The purchaser must release the defective goods or parts replaced to us.

If supplementary performance fails or we are not in a position to deliver, the purchaser is entitled to withdraw from the contract or lower the purchase price. All liability restrictions are not applicable to consumer goods or batteries, or improper use or installation of the device.

Any entitlement of the purchaser to reimbursement of costs incurred in conjunction with the assertion of claims against a supplier shall in all cases be excluded if any actions triggering the costs, specifically the initiation of legal proceedings, were not agreed with us beforehand.

All warranty claims must be directed to the organisation that sold you the device. In special cases, please contact the EICKEMEYER® customer service.



GERMANY

EICKEMEYER KG  
Eltastraße 8  
78532 Tuttlingen  
T +49 7461 96 580 0  
F +49 7461 96 580 90  
info@eickemeyer.de  
www.eickemeyer.de

SWITZERLAND

EICKEMEYER AG  
Sandgrube 29  
9050 Appenzell  
T +41 71 788 23 13  
F +41 71 788 23 14  
info@eickemeyer.ch  
www.eickemeyer.ch

POLAND

EICKEMEYER Sp. z o.o.  
Al. Jana Pawła II 27  
00-867 Warszawa  
T +48 22 185 55 76  
F +48 22 185 59 40  
info@eickemeyer.pl  
www.eickemeyer.pl

ITALY

EICKEMEYER S.R.L.  
Via G. Verdi 8  
65015 Montesilvano (PE)  
T +39 085 935 4078  
F +39 085 935 9471  
info@eickemeyer.it  
www.eickemeyer.it

DENMARK

EICKEMEYER ApS  
Solbakken 26, Hammelev  
6500 Vojens  
T +45 7020 5019  
info@eickemeyer.dk  
www.eickemeyer.dk

NETHERLANDS

EICKEMEYER B.V.  
Doejenburg 203  
4021 HR Maurik  
T +31 345 58 9400  
info@eickemeyer.nl  
www.eickemeyer.nl

UNITED KINGDOM

EICKEMEYER Ltd.  
3 Windmill Business Village  
Brooklands Close  
Sunbury-on-Thames  
Surrey, TW16 7DY  
T +44 20 8891 2007  
info@eickemeyer.co.uk  
www.eickemeyer.co.uk

CANADA

EICKEMEYER Inc.  
617 Douro Street  
Suite 205  
Stratford, Ont. Canada  
N5A 0B5  
T +1 519 273 5558  
info@eickemeyervet.ca  
www.eickemeyercanada.ca