

Instructions for use

MULTIflex coupling 465 RN - REF

0.553.1600 | MULTIflex LUX cou-

pling 465 LRN - REF 0.553.1550



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# 1 User instructions





Dear User

Congratulations on purchasing this KaVo quality product. By following the instructions below you will be able to work smoothly, economically and safely.

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## Symbols

	Refer to the chapter on Safety/Warning symbol
	Important information for users and service technicians
	Action request
	Non-sterilisable

## **Target group**

This document is intended for dentists and their assistants. The section on starting up is also intended for service technicians.

## 2 Safety

### 2.1 Description of safety instructions



Warning symbol

## Structure



### DANGER





**The introduction describes the type and source of the hazard.**

This section describes the potential consequences of non-observance.

- ▶ The optional step includes necessary measures for hazard prevention.

## Description of hazard levels

The safety instructions listed here, together with the three levels of danger will help avert property damage and injury.

	 <b>CAUTION</b>
	<b>CAUTION</b> indicates a hazardous situation that can cause damage to property or mild to moderate injuries.

**WARNING****WARNING**

indicates a hazardous situation that can cause death or serious injury.

**DANGER****DANGER**

indicates a hazardous situation that can directly cause death or serious injury.

## 2.2 Safety instructions



### WARNING

#### Electricity

Electrical shock from incorrectly connecting a non-KaVo system to the product.

- ▶ When installing and operating the product with treatment equipment and devices from other manufacturers, observe the provisions in "Protection against electrical shock," "Leakage cur-

rent," and "Non-grounding the application part" in accordance with DIN EN IEC 60601-1.

- ▶ The medical device may only be combined with a treatment unit released by KaVo.



## **WARNING**

**Hazard from direct exposure to radiation.**  
Blinding.

- ▶ Do not look directly into the lamp.



**CAUTION**

**Premature wear and malfunctioning from improper storage during long periods of nonuse. Reduced production time.**

- ▶ The product must be cleaned and stored dry if it has not been used for a long period.

**Note**

Any waste which is generated must be recycled or disposed of in a manner which is safe both for people and for the environment. This must be done in strict compliance with all applicable national regulations.

Questions on proper disposal of the KaVo product can be answered by the KaVo branch.

The following individuals are authorized to repair and service KaVo products:

- Technicians at KaVo branches throughout the world
- Technicians specially trained by KaVo

Service may only be provided by repair shops that have undergone training by KaVo and that use original KaVo replacement parts.

### 3 Product description



**MULTIflex coupling 465 RN (Mat. no. 0.553.1600)**



**MULTIflex LUX coupling 465 LRN (Mat. no. 0.553.1550)**

## **3.1 Purpose – Intended use**

### **Purpose:**

The MULTiflex (LUX) / MULTiflex LED coupling is an accessory of the medical device designed for coupling the supply hose to MULTiflex-compatible dental turbines. Any other type of use or alteration to the product is impermissible and can be hazardous.

## **Proper use:**

According to these regulations, the MULTIflex (LUX) / MULTIflex LED coupling may only be used for the specified application by a knowledgeable user. You need to comply with the following:

- the applicable health and safety regulations
- the applicable accident prevention regulations
- these Instructions for use

According to these regulations, it is the responsibility of the user to:

- only use equipment that is operating correctly,
- use the equipment for the proper purpose,
- protect him or herself, the patient and third parties from danger, and
- avoid contamination from the product.

## **3.2 Technical Specifications MULTiflex coupling 465 RN**

Connection according to DIN EN ISO 9168 type 3.

With rotary ring for spray regulation.

With return suction stop.



All KaVo (LUX) handpieces featuring an original MULTiflex connector can be attached.

### **3.3 Technical Specifications MULTiflex LUX coupling 465 LRN**

Connection according to DIN EN ISO 9168 type 3.

With rotary ring for spray regulation.

With return suction stop.

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Operating voltage of the high-pressure lamp	3.0 to 3.35 V DC (KaVo recommends 3.2 V DC)
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High-pressure lamp power	max. 2.5 Watt
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All KaVo (LUX) handpieces featuring an original MULTiflex connector can be attached.

**Note**

Please comply with the Instructions for Use of the product coupled to the MULTiflex (LUX) / MULTiflex LED coupling. Ascertain the suitability of the product for use with the MULTiflex (LUX) / MULTiflex LED coupling.



## Note

### Operation on KaVo units:

- ▶ 1042: on the unit, set the cold light intensity to the lowest intensity level and increase the brightness level maximally to intensity level 4.
- ▶ 1065 / 1060: For use of the MULTiflex (LUX) / MULTiflex LED coupling on these units, have a technician adjust the voltage.

- ▶ E80 / E70 / E50 / 1058 / 1080 / 1066 / 1062: The MULTiflex (LUX) / MULTiflex LED coupling can be used on these units with any further measures being required.





### 3.4 Transportation and storage conditions

 **CAUTION**

**It is hazardous to start up the product after it has been stored refrigerated.**

This can cause the product to malfunction.

- ▶ Prior to start-up, very cold products must be heated to a temperature of 20°C to 25°C (68°F to 77°F).

	Temperature: -20°C to +70°C (-4°F to +158°F)
	Relative humidity: 5% RH to 95% RH absence of condensation
	Air pressure: 700 hPa to 1060 hPa (10 psi to 15 psi)
	Protect from moisture

## 4 First use



### WARNING

#### **Hazard from contaminated products.**

Infection danger to the care provider and patient.

- ▶ Before first use and after each use, prepare the product.



**CAUTION****Damage from soiled and moist cooling air.**

Contaminated and moist cooling air can cause malfunctions.

- ▶ Make sure that the supply of cooling air is dry, clean and uncontaminated according to ISO 7494-2.

## 5 Operation



### Note

At the beginning of each workday, the water-conducting systems should be rinsed for at least 2 min. without the instrument being attached; if there is a risk of contamination from reflux or back suction, the system must be rinsed for 20-30 seconds.

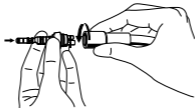
## 5.1 Connecting the MULTiflex (LUX) coupling to the hose



### CAUTION

**Malfunction from holding the regulating ring.  
Defects in the product.**

- ▶ Do not grip the regulating ring.



- ▶ Plug the **MULTiflex (LUX) / MULTiflex LED coupling** onto the turbine hose and tighten it firmly using the union nut of the hose.



- ▶ Re-tighten with the enclosed wrench.
- ▶ Spray the O-Rings lightly with KaVo Spray.

**Note**

The coupling remains screwed onto the hose. Use the key if it is to be removed.

## 5.2 Replacing (LUX) handpieces



### WARNING

**Detachment of the medical device during treatment.**

A medical device that is not properly locked in place can release from the MULTIflex (LUX) / MULTIflex LED coupling during treatment.

- ▶ Before each treatment, check if the medical device is securely locked onto the MULTiflex (LUX) / MULTiflex LED coupling by pulling on it.



### CAUTION

#### **Inexact coupling.**

Reduces the service life of the lamp.

- ▶ Avoid inexact coupling.
- ▶ Check the secure fit of the (LUX) handpieces on the coupling by pulling on them.



- ▶ Plug the MULTiflex (LUX) handpiece onto the **MULTiflex (LUX) / MULTiflex LED coupling** in exact orientation and push it backward until the coupling can be heard to snap into place in the medical device.
- ▶ Check the secure fit of the MULTiflex (LUX) handpiece on the coupling by pulling on it.



## 5.3 Regulating the spray



- ▶ Rotate the spray ring on the **MULTiflex (LUX) / MULTiflex LED coupling** in order to regulate the fraction of water. The water volume can be regulated by selecting different stop positions.



Turn clockwise to reduce the water volume

Turn counterclockwise to increase the water volume.



## 6 Troubleshooting

### 6.1 Check for malfunctions before initial startup

	 <b>CAUTION</b>
	<p><b>Danger due to hot bulb.</b> Burning hazard.</p> <ul style="list-style-type: none"><li>▶ Do not touch the bulb after it has been used. Let the lamp cool off.</li></ul>

**CAUTION****Missing or damaged O-rings.**

Malfunctions and premature failure.

- ▶ Make sure that all O-rings are on the coupling and undamaged.

**Note**

Stop working if the O-ring is missing or damaged.

## 6.2.1 Troubleshooting: Replacing the high-pressure lamp



### CAUTION

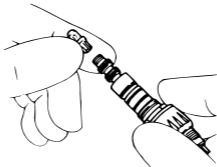
**Danger due to hot bulb.**

Burning hazard.

- ▶ Do not touch the bulb after it has been used. Let the lamp cool off.

**Note**

Inserting the lamp, make sure that the contacts in the coupling are not damaged. Screw-on the screw cap.



- ▶ Unscrew the screw cap in counterclockwise direction.
- ▶ Take lamp from the mount.
- ▶ Insert the new lamp very carefully.

## 6.2.2 Troubleshooting: Exchanging the O-rings



### CAUTION

**Hazard from improper care of the O-rings.**  
Malfunctions or complete failure of the product.

- ▶ Do not use Vaseline or other grease or oil.



### Note

The O-ring on the coupling may only be lubricated with a cotton ball wet with KAVO spray.



If the coupling is not tight, change the O-rings.



- ▶ Press the O-ring between your fingers to form a loop.



- ▶ Shove the O-ring to the front, and remove it.
- ▶ Insert new O-rings into the grooves and spray with KaVo Spray.

## 7 Preparation methods according to ISO 17664

### 7.1 Preparations at the site of use

	 <b>WARNING</b>
	<p><b>Hazard from contaminated products.</b> An infection hazard exists from contaminated products.</p> <ul style="list-style-type: none"><li>▶ Observe suitable personal protective measures.</li></ul>

- 
- ▶ Remove all residual cement, composite or blood without delay.
  - ▶ The product should be reprocessed as soon as possible after treatment.
  - ▶ The product must be dry when transporting it to the site of reprocessing.
  - ▶ Do not place it in a solution or similar.

## 7.2 Cleaning



### CAUTION

**Malfunctions from cleaning in the ultrasonic unit.  
Defects in the product.**

- ▶ Only clean manually!

## 7.2.1 Cleaning: Manual cleaning - external

Accessories required:

- Tap water  $30\text{ °C} \pm 5\text{ °C}$  ( $86\text{ °F} \pm 10\text{ °F}$ )
- Brush, e.g. medium-hard toothbrush



- ▶ Brush off under flowing tap water.

## 7.2.2 Cleaning: Automated external cleaning

Not applicable.

## 7.2.3 Cleaning: Manual cleaning of the inside




- ▶ Rinse the spray air and spray water tube with tap water.

## **7.2.4 Cleaning: Automated internal cleaning**

Not applicable.



## 7.3 Disinfection

	 <b>CAUTION</b>
	<p><b>Malfunctioning from using a disinfectant bath or chlorine-containing disinfectant.</b> Defects in the product.</p> <ul style="list-style-type: none"><li>▶ Disinfect manually only!</li></ul>

### 7.3.1 Disinfection: Manual disinfection - external



KaVo recommends the following products based on material compatibility. The microbiological efficacy must be ensured by the disinfectant manufacturer.

- Mikrozyd AF Liquid made by Schülke & Mayr
- FD 322 made by Dürr
  
- CaviCide made by Metrex

Required tools:

- Cloths for wiping off the product.
  
- ▶ Spray the disinfectant on a cloth then wipe the product and let it work according to the disinfectant manufacturer.
  
- ▶ Follow the instructions for use of the disinfectant.

### **7.3.2 Disinfection: Manual disinfection - internal**

Not applicable.

### **7.3.3 Disinfection: Automated disinfection of the inside and outside**

Not applicable.

## **7.4 Drying**

### **Manual Drying**

- ▶ Blow off the outside and inside with compressed air until water drops are no longer visible.

### **Automatic Drying**

Not applicable.

## 7.5 Sterilisation



Non-sterilisable.

## 7.6 Storage

- ▶ Reprocessed products should be stored protected from dust with minimum exposure to germs in a dry, dark and cool space.

## 8 Tools

Available from dental suppliers.

<b>Material summary</b>	<b>Mat. no.</b>
Wrench	0.411.1563
Spare gasket 465 RN	0.553.1872
Spare gasket 465 LRN	0.553.5262
High-pressure lamp 465 LRN	1.002.2928
KaVo MULTI LED lamp	1.007.5372
O-ring, large	1.004.2776
O-ring, small	1.004.2775





## **9 Warranty terms and conditions**

The following warranty conditions apply to this KaVo product:

KaVo provides the end customer with a warranty of proper function and guarantees zero defects in respect of material and processing for a period of 12 months from the date of the invoice, subject to the following conditions:

In case of justified complaints, KaVo will honour its warranty with a free replacement or repair. Other claims of any nature whatsoever, in particular with respect to compensation, are excluded. In the event of default, gross

negligence or intent, this shall only apply in the absence of mandatory legal regulations to the contrary.

KaVo shall not be liable for defects and their consequences that have arisen or may arise from natural wear, improper handling, cleaning or maintenance, non-compliance with operating, maintenance or connection instructions, calcination or corrosion, contaminated air or water supplies or chemical or electrical factors deemed abnormal or impermissible in accordance with KaVo's instructions for use or other manufacturer's instructions. The warranty granted does not usually extend to lamps, light conductors made of glass and glass fibres, glassware, rubber parts, and the colourfastness of plastic parts.

All liability is excluded if defects or their consequences originate from manipulations or changes to the product made by the customer or a third party that is not authorised by KaVo.

Warranty claims will only be accepted if the product is submitted along with proof of purchase in the form of a copy of the invoice or note of delivery.

The dealer, purchase date, type, and serial number must be clearly evident from this document.









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