

## 1 Intended purpose

Used to connect the tubing of the dental unit and a dental handpiece to conduct water and air.

## 2 Description of danger levels

	<b>CAUTION</b>
	<b>CAUTION</b> is used if a deficiency in adequate care may result in an endangering of the patient, the user or others.
	<b>WARNING</b>
	<b>WARNING</b> is used if improper use may result in serious injuries.

## 3 Technical specifications

		<b>QC4012K</b>	<b>QC4014K</b>	<b>QC5016K</b>	<b>QC6016K</b>
	Ideal luminosity (184mA) at	-	-	3,2 - 3,5V	3,2 - 3,5V
	Light	-	-	XENON	LED
	Type	2-hole	4-hole	6-hole	6-hole
	Suitable connector	MK-dent, KaVo Multiflex <sup>®</sup>			
	Suitable replacement bulb	-	-	BU7012	BU8012

 KaVo<sup>®</sup> is a registered trademark. MK-dent does not have any economical connection to the company mentioned above.

## 4 Putting into service and operation

	<b>WARNING</b>
	<b>Risk of infection for patients and operator due to non-sterile instruments</b> → Before the first and after each further use the instrument and the attachments must be processed and sterilized.
	<b>WARNING</b>
	<b>Dysfunctions and/or risk of an infection caused by moist and contaminated compressed air and by contaminated cooling water</b> → This product may only be operated with CE-certified dental units or with others certified by actual national guidelines and with a corresponding supply of water and compressed air according to the valid norms of dental care.

☞ Every morning thoroughly rinse the coupler for at least 2 minutes without a handpiece on.

## 5 Usage

### 5.1 Connection to a high speed handpiece

Please consider the manual of your handpiece manufacturer for instructions.

### 5.2 Connection to a tubing

- ☞ Attach the coupler to the tubing connector and tighten the coupling nut of the tubing.
- ☞ Use the attached key to tighten the connection.
- ☞ Lubricate the o-rings thoroughly using the MK-dent Premium Service Oil LU1011.

 After usage the coupler remains on the tubing.

## 6 Removal of dysfunctions

### 6.1 Exchange of o-rings

In case of leakage replace the o-rings on the coupler.

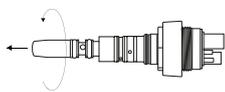
- ☞ Remove the worn out o-rings and replace by new ones.
- ☞ Lubricate the o-rings thoroughly using the MK-dent Premium Service Oil LU1011.

 Do not use Vaseline or other grease and oil for lubrication.

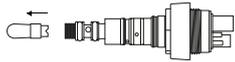
### 6.2 Exchange of the illuminant (concerning couplers with light)

	<b>WARNING</b>
	<b>Risk of burns due to hot illuminant</b> The illumination produces heat while being used.
	→ Only touch/exchange illuminant, when it is completely cooled off.

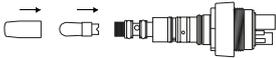
 LEDs operate with **an exact adjustment of poles**. If the LED does not work after installing, remove the LED and turn for 180° before inserting it again.



1. Turn off the ring of the thread in direction of the arrow as shown in the figure.



2. Remove the defect illuminant.



3. Insert the new illuminant and reattach the bulb protection cap by turning in the opposite direction of the arrow.

## 7 Processing according to ISO 17664

### 7.1 Manual cleaning of the surface

Tools:

- Drinkable water 30 °C ± 5 °C (86 °F ± 10 °F)
- Brush or medium tooth brush

☞ Place the coupler under running water and carefully brush debris completely off the surface.

### 7.2 Mechanical cleaning of the surface

Not applicable.

### 7.3 Manual cleaning of the interior

- ☞ Rinse the water- and air pipes with drinking water.
- ☞ Blow on the instrument with compressed air from the inside and the outside until no visible drops are left.

### 7.4 Mechanical cleaning of the interior

Not applicable.

### 7.5 Desinfektion

 WARNING	<b>WARNING</b>
	<b>Malfunctions through the use of ultrasonic cleaners. Couplers can not be sterilized!</b> → Only clean the coupler as described below.

 WARNING	<b>WARNING</b>
	<b>The use of disinfecting baths and/or of chlorinated disinfectants may lead to defects and dysfunctions of the coupler.</b> → Only clean and disinfect the coupler manually.

**i** Only use disinfectants whose microbiological effectiveness is ensured by the manufacturer (e.g. VAH/DGHM-registration and CE-mark). Concerning the material compatibility, only disinfectants free of aldehyde and based on alcohol may be used.

- ☞ Apply the disinfectant to a cloth and wipe the coupler clean.
- ☞ Consider the reacting time that is set by the manufacturer of the disinfectant.
- ☞ Follow the manual for the disinfectant.

## 8 Tools & spare parts

Replacement coupler with LED/XENON/without light	QC6016K/QC5016K/QC4014K
Replacement o-ring, white	OR4011WK
Replacement o-ring, black	OR4011BK
O-ring set 3x OR4011BK, 2x OR4011WK	OR4011BWK
Replacement-LED/XENON	BU8012/BU7012
Key	KE1029

## 9 Warranties

MK-dent provides the end user a warranty for proper function, immaculate material and workmanship for a period of 24 months after purchasing. Relevant for this is the invoice date.

MK-dent is not liable for defects and their consequences that have arisen whose arising may be due to natural wear, improper handling, improper cleaning, or maintenance, non-compliance with operating or manual instructions, calcination or corrosion, contaminated air and water supply or chemical or electrical influences that are unusual or not permitted according to MK-dent's instruction for use or to other manufacturer's instructions.

In case of justified complaints MK-dent carries out a free repair or a possible free replacement. This will be decided by MK-dent.

Other claims of any kind, in particular damage compensation are excluded. In the event of default, gross negligence or intent, this shall only apply unless there are compelling legal regulations.

The warranty does usually not cover lamps, light conductors made of glass fibers, glassware, rubber parts and the color fastness of plastic parts.

All liability is excluded if defects or their consequences arise because of interventions or modifications on the product by the end user or by a third party not authorized by MK-dent.

Warranty claims will only be accepted if the product is submitted with a proof of purchase in the form of an invoice or a copy of the delivery note. Dealer, purchase date, model and serial number must be clearly visible.



**MANUFACTURER**

MK-dent GmbH  
Marie-Curie-Str. 2  
D-22941 Bargteheide

Phone: +49 (0)4532 40049 0  
Fax: +49 (0)4532 40049 10  
Email: [info@mk-dent.com](mailto:info@mk-dent.com)  
Web: [www.mk-dent.com](http://www.mk-dent.com)