



CP4-LD <with LED> Coupling CP4-W-LD <with LED and Spray Control> Coupling Operation Instructions

This instrument is a connection part (coupling) to connect the TWINPOWER TURBINE 4H series and ISO 9168 Type 3(C) tube, and does not have any performance or availability by itself.

In order to utilize the instrument's functions fully and ensure its safe and effective use, read this manual thoroughly before using the instrument and pay close attention to the operating procedures and precautions. Keep this manual at hand for quick reference.

The user (e.g., healthcare facility, hospital, clinic, etc.) is responsible for supervising the use and maintenance of medical devices. This instrument must not be used by anyone other than a dentist, doctor or other legally qualified professional.

This instrument must not be used for any purpose other than the provision of dental treatment.

Federal law restricts this device to sale by or on the order of a dentist (for U.S.A.).

The following symbols and expressions indicate the degree of danger and harm that could result from ignoring the instructions they accompany:

WARNING This warns the user of the possibility of serious injury or death to the patient, damage or complete destruction of the instrument or other valuable property, and fire.

CAUTION This warns the user of the possibility of slight or moderate injury to the patient.

Disclaimer

J. MORITA MFG. CORP. will not be responsible for the following matters, even during the warranty period.

1. Malfunction or damage resulting from repairs made by personnel not authorized by J. MORITA MFG. CORP.
2. Any unauthorized modifications to its products
3. Malfunction or damage resulting from maintenance or repairs carried out using parts or components other than those specified by J. MORITA MFG. CORP.
4. Malfunction or damage to Morita products caused by products made by other manufacturers unless they were supplied by J. MORITA MFG. CORP.
5. Malfunction or damage resulting from failure to observe the safety precautions or operating procedures described in these Operating Instructions
6. Malfunction or damage resulting from ambient conditions that do not conform to the operating conditions specified in these Operating Instructions, such as an improper electrical power supply or installation environment
7. Malfunction or damage resulting from a natural disaster, such as a fire, earthquake, flood or lightning

J. MORITA MFG. CORP. maintains supplies of service parts for 10 years after discontinuation of their production. For the duration of this period, we will supply replacement parts and be able to repair the product.

Standards and Procedures for the Disposal of Medical Devices

If there is a possibility that a medical device is contaminated, the dentist or doctor responsible for the patient's treatment must confirm that it is uncontaminated, and must then have it disposed of by a healthcare facility or an agent licensed and qualified to handle standard industrial waste and industrial waste requiring special treatment.

Specifications

Use this instrument with dental treatment units that conform to IEC 60601-1.

TYPE	CP4-LD	CP4-W-LD
Spray Control	No	Yes
Light Source	LED	
Joint	ISO 9168 Type 3(C)	
Input Voltage	AC 2.5 – 10 V / DC 2.5 – 15 V (for coupling contacts)	
Rated Input	Max. 6.6 VA	
IP Code	IPX0	

CAUTION

- Be sure to follow the input voltage. If it exceeds specifications, the LED lamp could burn out immediately.
- Some functions of a dental treatment unit, such as the light intensity and afterglow setting, may not work properly.
- The LED may flicker when it turns on and off depending on the dental treatment unit's light control system.
- This coupling cannot be connected to a tube that does not have light capability.

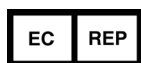
Operating, Transport and Storage Environments

Operating Temperature: +10°C to +40°C (+50°F to +104°F)
Humidity: 30% to 75% (without condensation)
Atmospheric Pressure: 70 kPa to 106 kPa

Transport and Storage Temperature: - 10 °C to +70°C (+14°F to +158°F)
Humidity: 10% to 85% (without condensation)
Atmospheric Pressure: 70 kPa to 106 kPa

- * Do not expose the coupling to direct sunlight for an extended period of time.
- * The service life (useful life) of the coupling will be 4 years (based on self-certification) only if maintenance and inspections are properly performed following its manufacture and shipping.

Symbols



EU authorized representative under the European Directive 93/42/EEC



Serial number
E.g., G00001
①
E.g., H630G00001K
①
①Year of Manufacture (G: 2018, H: 2019...)



Manufacturer



Refer to instructions for use



Temperature limitation



Humidity limitation



Atmospheric pressure limitation

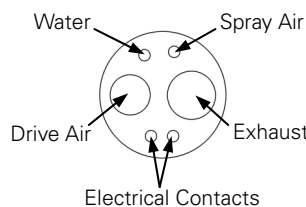
Accessories

Wrench
Cord No. 5011831

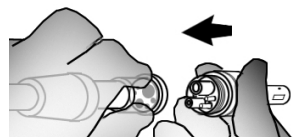
O-ring set
Cord No. 5811835

Before Use

- Check the following items:
- Connection end of the tube matches the coupling.
 - The input voltage is correct (see Specifications).



1. Connect Coupling



Line up the projections on the coupling with the indentations in the tube and then tighten up the cover nut.

CAUTION

- Before connection, make sure the tube connector is clean and free of debris.

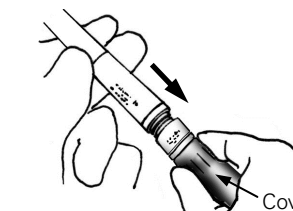
Tighten securely with the wrench provided.

CAUTION

- Air or water may leak if the coupling is not tightened up enough with the wrench.
- * Before using right after purchase, or if handpiece insertion/removal becomes tight, apply a small amount of the AR SPRAY or MORITA MULTI SPRAY to the O-rings of the instrument.

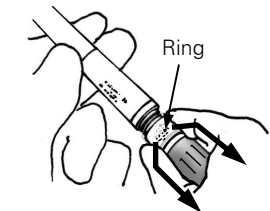
2. Handpiece Connection

Insertion



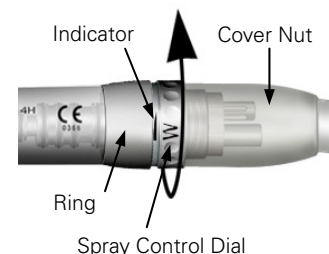
Hold the cover nut, and slide the handpiece straight onto the coupling until it clicks securely into place.

Removal



Push down the ring in the direction of the arrows as shown in the illustration.

3. Spray Adjustment (CP4-W-LD)



Turning the dial in the direction indicated by the arrow in the illustration will gradually reduce the amount of spray and then reach 0. For maximum spray, continue the turning the dial until the "W" matches up with the indicator. (See illustration.)

WARNING

- Hold the cover nut to adjust the amount of spray. The handpiece could come off its connection and injure someone if it is held by the ring part.
- Do not operate the TwinPower Turbine handpiece without emitting the water spray. Otherwise, this could burn the tooth.

CAUTION

- If the coupling is not tightened up enough with the wrench, the connection part get loose and air or water may leak when turning the spray control dial.

4. Cleaning

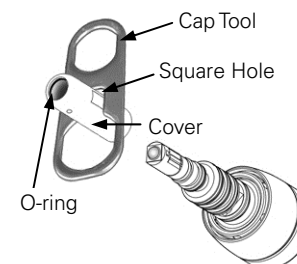
Wipe the outside cover with Ethanol for Disinfection (Ethanol 70 to 80 vol%).

CAUTION

- Coupling must NOT be autoclaved or cleaned ultrasonically.
- The coupling could be damaged if it is soaked in Ethanol for Disinfection (Ethanol 70 to 80 vol%) or cleaned with a strong, corrosive solution.
- (For USA) Do not use isopropyl alcohol.

5. LED Lamp Replacement

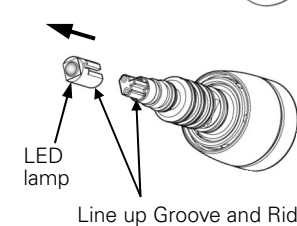
- * Use the LED lamp that is specially designed for this coupling.



Turn the dental treatment unit's main switch off. Remove the cover using the square hole in the cap tool.

CAUTION

- Before replacing the LED lamp, always make sure the cover is not too hot. Otherwise, you could get burned.
- Do not lose the O-ring in the end of the cover.



Take the LED lamp out of its socket. Line up the groove in the LED lamp with the ridge in the socket and push the LED lamp straight in all the way.



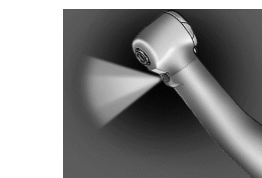
Screw the cover back on with your fingers and then tighten it up with the square hole in the cap tool.

WARNING

- Make sure the cover is properly tightened up. If it is loose, the handpiece cannot be connected to the coupling securely and air pressure could cause the tube to suddenly disconnect, and this could injure the patient.

CAUTION

- If the O-ring in the end of the cover is lost or damaged, the light may not be bright enough or it may malfunction.

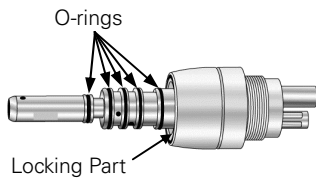


Put the handpiece back on its tube, step on the pedal and make sure the LED lights up.

WARNING

- Do not let the light strike anyone directly in the eye; this might impair one's vision.

6. O-ring Replacement



Replace the O-rings if air or water starts leaking from the connection. After replacement, apply a small amount of the AR SPRAY or MORITA MULTI SPRAY to the O-rings of the instrument.

⚠ WARNING

- Replace all five O-rings at the same time and make sure that there is no debris or broken pieces of the old O-rings.
 If something remains at the locking part, the tube could detach suddenly due to air pressure and cause physical injury.

⚠ CAUTION

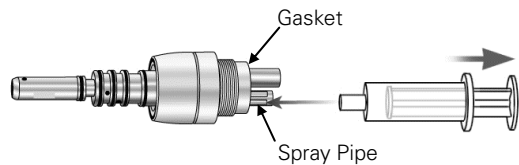
- Using any kind of lubricant other than the AR SPRAY or MORITA MULTI SPRAY could cause the O-rings to swell up and make it hard to put the handpiece on and take it off.

7. Replace One-way Spray Valve

Inspect One-way Valve

* If the one-way valve is defective, cutting debris and contaminated matter could get inside the tube. Inspect the one-way valve at least once a month.

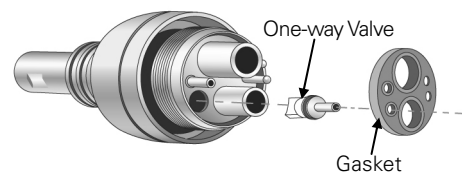
Cover the spray pipe with the end of a plastic disposable syringe with the needle removed. Press the end of the syringe flush against the gasket on the coupling so that it is air tight. Pull the plunger out slightly and see if it sucked back towards its original position. If it does not move back at all, the one-way valve must be replaced.



⚠ CAUTION

- The end of the syringe must be pressed firmly against the gasket so that air cannot leak into the syringe. Otherwise the plunger will not go back even if the one-way valve is working normally.

Replacement



Take off the gasket with a needle. Take out the one-way valve. Slide a new valve into place. Put the gasket back on in its original position.

⚠ CAUTION

- Do not damage the part of the gasket that bunches up against the spray pipe as it is required to make an effective seal.
- If the gasket is not put on right, the coupling could malfunction.

8. Replacement Parts

Replace parts as necessary based on the degree of wear and length of use. Order parts from your local dealer or J. MORITA OFFICE.

O-ring set	LED Lamp	One-way Valve	Gasket
Code No. 5811835	Code No.5011575	Code No.5811837	Code No.5811838

Appendix – Electromagnetic declaration

This device conforms to IEC 60601-1-2: 2007, the relevant international standard for electromagnetic compatibility (EMC).

The following is the "Guidance and Manufacturer's Declaration" which is required by IEC 60601-1-2: 2007, the relevant international standard for electromagnetic compatibility.

⚠ WARNING

- Coupling (hereafter referred to as the CP4-LD) needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in the ACCOMPANYING DOCUMENTS.
- Portable and mobile RF communications equipment can affect the CP4-LD.
- Use of accessories other than the genuine ones specified by the manufacturer may result in increased EMC emissions or decreased EMC immunity of the CP4-LD.

Guidance and Manufacturer's Declaration – Electromagnetic Emissions		
The CP4-LD is intended for use in the electromagnetic environment specified below. The customer or the user of the CP4-LD should assure that it is used in such an environment.		
Emissions Test	Compliance	Electromagnetic Environment – Guidance
RF emissions CISPR 11	Group 1 Class B	The CP4-LD uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.

Guidance and Manufacturer's Declaration – Electromagnetic Immunity			
The CP4-LD is intended for use in the electromagnetic environment specified below. The customer or the user of the CP4-LD should assure that it is used in such an environment.			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact	±6 kV contact	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
	±8 kV air	±8 kV air	
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic field should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Guidance and Manufacturer's Declaration – Electromagnetic Immunity			
The CP4-LD is intended for use in the electromagnetic environment specified below. The customer or the user of the CP4-LD should assure that it is used in such an environment.			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the CP4-LD, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1.2 \sqrt{P}$ $d = 1.2 \sqrt{P}$ 80 MHz to 800MHz $d = 2.3 \sqrt{P}$ 800MHz to 2.5 GHz
			Radiated RF IEC 61000-4-3

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^a Field strengths from fixed transmitters, such as base stations for ratio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicated theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the CP4-LD is used exceeds the applicable RF compliance level above, the CP4-LD should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the CP4-LD.
^b Over the frequency range 150 kHz to 80MHz, field strengths should be less than 3 V/m.

Recommended Separation Distances between Portable and Mobile RF Communications Equipment and the CP4-LD.

The CP4-LD is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the CP4-LD can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the CP4-LD as recommended below, according to the maximum output power of the communications equipment.

Rated Maximum Output Power of Transmitter W	Separation Distance According to Frequency of Transmitter m		
	150 kHz to 80 MHz $d = 1.2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.
 NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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