TORQTECH

Geared Contra Angle Handpiece Attachment

CA-5IF(-O) (1:5 Increasing Contra-angle)
CA-DC(-O) (1:1 Contra-angle)
CA-10RC(-O) (10:1 Reduction Contra-angle)
CA-4R-O-PF (4:1 Reduction Vertical Reciprocating Movement Contra-angle)
CA-4R-PP (4:1 Reduction Prophy Contra-angle)

Straight Handpiece Attachment

ST-DH

INSTRUCTIONS FOR USE

Thank you for purchasing the TORQTECH geared contra angle motor handpiece attachment.
This instrument is intended for drilling and polishing teeth and dental prosthetics. For optimum performance, efficiency, avoiding hazards, preventing patient injury, and safety, read the instruction maul thoroughly before use, and follow all cautionary remarks and usage instructions. Keep this manual in a handy place for ready reference.

Trademarks and Registered Trademarks:

The names of companies, products, services, etc. used in this manual are either trademarks or registered trademarks owned by each company.

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

Do not use the TORQTECH for purposes other than its specified dental treatment purpose.

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.

This alerts the user of important points concerning operation of the instrument or the risk of damage to it.

Disclaimer

■ J. MORITA MFG. CORP. will not be responsible for accidents, product damage, or bodily injury resulting from:

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 of 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

■ The useful life of the TORQTECH is 7 years from the date of installation provided it is regularly and properly inspected and maintained.

■ 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.

* Replacement parts and consumable parts are described in the Regular Inspection List. Replace parts as necessary based on the degree of wear and length of use.
* Motor usage and handling: Read all instruction materials thoroughly before use and follow all cautionary remarks and usage instructions.

Standards and Procedures for the Disposal of Medical Devices

When disposing of this device, it should fall into the category of infectious waste.
The dentist or doctor must confirm that the device 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.

In Case of Accident

If an accident occurs, this device must not be used until repairs have been completed by a qualified and trained technician authorized by the manufacturer.

For customers who use this device in the EU:

If any serious incident occurs in relation to the device, report it to a competent authority of your country, as well as the manufacturer through your regional distributor. Observe relevant national regulations for detailed procedures.

Service and Contacts

TORQTECH may be repaired and serviced by

- The technicians of J. MORITA's subsidiaries all over the world.
- Technicians employed by authorized J. MORITA dealers and specially trained by J. MORITA.
- Independent technicians specially trained and authorized by J. MORITA.

For repairs or other types of service, contact your local dealer or J. MORITA OFFICE.

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Operating, Transport and Storage Environments

Operating Environments

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 Environments

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 handpiece to direct sunlight for an extended period of time.
* If the handpiece will not be used for an extended period of time, store it in a clean, dry place after autoclaving it.

Symbols

[Some symbols may not be used.]

CE(0197) marking
Conforms with the European Directive, 93/42/EEC
CE marking
Conforms with the European Directive, 2011/65/EU

SN Serial Number

UDI Unique device identifier

MD Medical device

135°C Autoclavable up to +135°C (+275°F)

Supports Washer-Disinfectors

GS1 DataMatrix

Temperature limitation

Humidity limitation

Atmospheric pressure limitation

Manufacturer

Date of manufacture

Refer to instructions for use

Rx Only Prescription Device
CAUTION: Federal law restricts this device to sale by or on the order of a dentist. (Valid only for U.S.A.)

EC REP Authorized representative in the European Community

CH REP Authorized representative in Switzerland

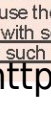
12-3-4-5-6789012
Registration number of medical device in Thailand
(The 12-digit sample number shown is for demonstration purposes only.)

Importer

Distributor

USA
EU
(Examples)
Country or region
(Country Names: Conforming to the ISO 3166-1 alpha-3 codes and EU for European Union)
Description noted next to the code is an indication that conforms to the regulations valid only for the relevant country or region.

Sold Separately



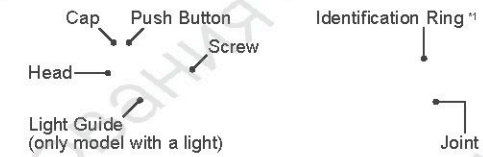
MORITA MULTI SPRAY

Code No.: 7914113 or 5010201

(Alcohol Disinfectable)

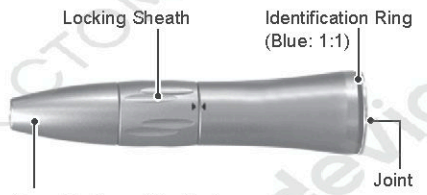
Parts Identification

CA-5IF(-O)
CA-10RC(-O), CA-DC(-O)

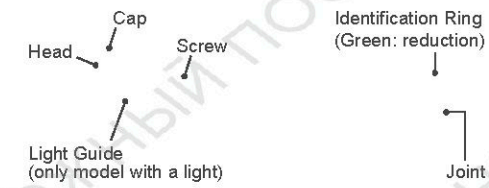


*1 Color Coding of TORQTECH
CA-5IF(-O): Red (increasing)
CA-10RC(-O): Green (reduction)
CA-DC(-O): Blue (1:1)

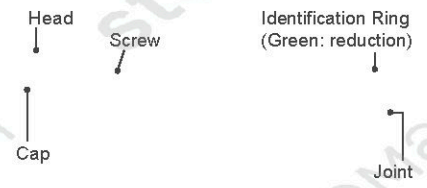
ST-DH



CA-4R-O-PF



CA-4R-PP



Accompanying Items

Spray Nozzle (CA-5IF(-O))	Spray Nozzle (Others)	Chuck Tester (lime green) (CA-5IF(-O))	Spray Hole Wire
Code No.: 5071345	Code No.: 5071343	Code No.: 5010695	Code No.: 5250940
(Alcohol Disinfectable)		(Alcohol Disinfectable)	(Autoclavable)
Tip Removal Tool (CA-4R-PF)		**Cup Support Jig** (CA-4R-PP)	(CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH, CA-4R-O-PF)
Code No.: 7396260		Code No.: 7396252	
(Autoclavable)		(Alcohol Disinfectable)	

* For parts that wear out and need periodic replacement, refer to the Inspection Items and replace parts whenever necessary.

Specifications

Model	CA-5IF-O (with light) CA-5IF (w/o light)	CA-10RC-O (with light) CA-10RC (w/o light)	CA-DC-O (with light) CA-DC (w/o light)	ST-DH (w/o light)	CA-4R-O-PF (with light)	CA-4R-PP (w/o light)
Gear Ratio	1:5	10:1	1:1		4:1	
Length (mm)	94	94	94	83	94	94
Weight (g)	68	69	67	73	67	67
Maximum Motor Speed (rpm)	40,000				20,000	10,000
Usable Burs	Shank Type 3 (FG)*1	Shank Type 1 (CA)*1	Shank Type 1 (CA)*1	Shank Type 2 (HP)*1	EVA® tips/Lamineer® tips	PMTC Attachment (cup or brush)
Fitting length of shank (mm)	12	12	12	30	—	4 (Screw length)
Usable Bur Diameter (mm)	1.590 to 1.600	2.334 to 2.500	2.334 to 2.500	2.334 to 2.350	—	No.1-72UNF Screw
Maximum bur length (mm)	22	34	34	44.5	—	—
Working Area Diameter (Max)	2	—	4	—	—	—
Chuck Type	Push Button			Mechanical Lock	Friction Grip	Screw-In Type
Cooling Air Flow (NL/min)	Minimum 6 (Attached motor flow)					
Water Flow (ml/min)	Minimum 50 (for 0.2 MPa instrument pressure)					—
Spray Air Flow (NL/min)	Minimum 1.5 (for 0.2 MPa instrument pressure)					—
Connection Type	Conforms to ISO 3964 and DIN 13940					
Connectable Motors	Conforms to ISO 14457					

*1 Conforms to ISO 1797-1

⚠WARNING

- Never use the types of burs or points described below. Using such burs or points is extremely dangerous as they may become detached and cause injury to the patient's oral cavity or be swallowed by the patient.
  Those which do not conform to ISO standards. Those with scratched or bent heads or shanks. Those which are rusty, chipped or broken. Those which have been modified or altered such as those having shortened shanks. (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)
- Use burs and points with shanks that are at least 30 mm long. If the cutting tip touches the end of the attachment, it could get too hot and burn the patient, or the attachment could be damaged. (ST-DH)
- Never use the following types of tips; they could come out and injury the patient or be swallowed:
  Those with scratched or bent heads or shanks. Those which are rusty, chipped or broken. Those which have been modified or altered such as those having shortened shanks. (CA-4R-O-PF)
- Never use the following types cups and brushes; they could come out and injure the patient or be swallowed:
  Those with scratched or bent heads or shanks. Those which are rusty, chipped or broken. Those which have been modified or altered such as those having shortened shanks. (CA-4R-PP)

⚠CAUTION

- When using welded or blazed burs or points, ensure that the bur tip does not wobble. (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)
- Use only cups and brushes that do not wobble. (CA-4R-PP)

- Always use burs and points with clean shanks; dirty shanks cause the chuck to wear out more quickly and lose its gripping power.
- Some bur detergents contain ingredients that cause metals to rust. Be sure to wash away the bur detergent before inserting a bur or point into the chuck.
- Diamond points are easily bent. Even new burs and points are sometimes poorly balanced: if a bur makes a loud, metallic noise during rotation, stop using it. (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)

* If any bur detergent, dust, or other foreign matter enters the chuck, contact your local dealer or J. MORITA OFFICE to request an inspection.

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Warnings and Cautions

⚠WARNING

- To prevent infection, be sure to perform the handpiece reprocessing procedures after use with each patient. ☞ **4. Reprocessing**
- Always wear personal protective equipment (PPE), such as safety glasses, gloves, mask, etc. when using this handpiece.
- In cases of tooth extractions, split teeth, endodontic treatment etc. or incision or open wounds in soft tissue, care must be taken to avoid causing a subcutaneous emphysema due to emitted air from the handpiece.
- Do not use reverse rotation; the cup or brush will come off. (CA-4R-PP)
- Before use, run the handpiece outside the patient's oral cavity to make sure of the following points:
  - Bur does not wobble
  - Tip does not wobble (CA-4R-O-PF)
  - Cup or brush does not wobble (CA-4R-PP)
  - No abnormal vibration or sound
  - No backlash movement at the head, push button, or cap
  - No heat is generated at the head, push button, or cap
  - Rotation speed and direction are correct
- Stop using the handpiece immediately if the handpiece is hot, the rotation speed reduces, or makes an abnormal vibration or noise. Ball bearings inside the handpiece are consumable parts.
- Stop using the handpiece immediately if the handpiece gets damaged; the head could overheat and result in burns to the user or patient.
- Wait until rotation stops completely before inserting or removing burs. Holding down the push button while the handpiece is in operation could result in burns to the user.
- Do not rotate the handpiece while the locking sheath is in the open position or turn the locking sheath while the handpiece is in use. Otherwise, the straight handpiece attachment will rotate and become dangerous. Moreover, this may overheat the handpiece and result in burns to you or the patient. (ST-DH)
- Wait until movement stops completely before inserting or removing the tip. (CA-4R-O-PF)
- Wait until rotation stops completely before inserting or removing the cup or brush. (CA-4R-PP)
- Do not operate the handpiece with the cap is contacting soft tissue such as buccal mucosa inside the oral cavity, or the push button is pressing against the antagonistic teeth. This could result in damage to the dental pulp or burns to the patient.
- Stop using the handpiece immediately if the bur becomes detached while you are drilling a tooth.
- Stop using the handpiece immediately if the tip becomes detached during use. (CA-4R-O-PF)
- Stop using the handpiece immediately if the cup or brush becomes detached during use. (CA-4R-PP)
- Do not apply force in a direction that could result in the bur becoming detached (scooping up). Otherwise, burs may become detached and cause injury to the patient's oral cavity or be swallowed by the patient.
- Do not use the handpiece if the cooling air is insufficient or not present. Otherwise, this may overheat the handpiece and result in burns to you or the patient.
- Always spray water and use the soft touch (feather touch) techniques while using the handpiece to avoid injury to the dental pulp.
- Always spray water while using the handpiece to avoid overheating the head, push button, and cap. Otherwise, this may result in burns to you or the patient.
- Wait for a bur to come to a complete stop before putting it into or taking it out of the patient's oral cavity.
- Wait for the handpiece to come to a complete stop before putting it into or taking it out of the patient's oral cavity. (CA-4R-O-PF, CA-4R-PP)
- Do not use cups or brushes with screw dimensions that do not match the handpiece. These cups or brushes may come off. (CA-4R-PP)

⚠CAUTION

- Always perform pre-use inspection before using the handpiece. ☞ **4. Reprocessing**
- If you notice any abnormal noise, vibration, heat generation, or wobbling of the bur during use, replace the bur with a new one and then try operating the handpiece to check if the problem has been resolved. If this does not resolve the problem, stop using the handpiece immediately and have it professionally repaired.
- If you notice any abnormal noise, vibration, or wobbling of the tip during use, replace it with a new one and then try operating the handpiece to check if the problem has been resolved. If this does not resolve the problem, stop using the handpiece immediately and have it professionally replaced. (CA-4R-O-PF)
- If you notice any abnormal noise, vibration, heat generation, or wobbling of the cup or brush during use, replace it with a new one and then try operating the handpiece to check if the problem has been resolved. If this does not resolve the problem, stop using the handpiece immediately and have it professionally repaired. (CA-4R-PP)
- Do not switch the rotation direction while the motor is running.
- Be sure to remove the bur when storing the handpiece in the dental chair unit. Failure to do so could injure another person or damage property.
- Be sure to remove the tip when storing the handpiece in the dental treatment unit. Failure to do so could cause injury or damage property. (CA-4R-O-PF)
- Be sure to remove the cup or brush when storing the handpiece in the dental treatment unit. Failure to do so could cause injury or damage property. (CA-4R-PP)
- If the bur gets stuck in the handpiece, do not forcibly remove it using pliers or other tools; have it professionally repaired instead.
  If excessive force is applied, the chuck mechanism may become damaged and the bur may become detached during use.
- Follow the bur manufacturer's recommendations for rotation speed and direction.
- Follow the tip manufacturer's recommendations for movement speed. (CA-4R-O-PF)
- Follow the cup or brush manufacturer's recommendations for rotation speed. (CA-4R-PP)
- Handle the handpiece carefully; do not drop it or let it swing and bang against the dental treatment unit.
- Do not directly look into the handpiece light.
- Be sure to use a rubber dam appropriately.
- For CA-4R-PP, there is no water spray mechanism; turn the function off using the dental treatment unit. (CA-4R-PP)

- Crown removal and similar operations produce considerable vibration, which may result in the bur coming out during use or the bur getting stuck in the handpiece after use. To avoid these problems, stop using the handpiece at regular intervals and take the bur out and reinsert it occasionally, rather than operating the handpiece continuously.
- During the treatment, if the push button is pressed against the teeth opposite the one being treated, it will result in wear to the tip surface. Otherwise, bur wobble, inserting and removal of the bur difficult.

1. Before Use

* The TORQTECH is not sterilized before shipping. It must be autoclaved before it is used for the first time.

Pre-use inspection:

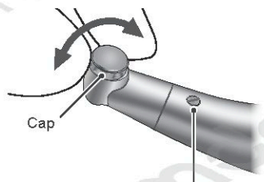
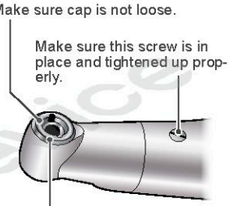
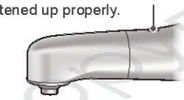
Check for the following points before using the handpiece.
If any abnormalities are found, stop using the handpiece immediately and have it professionally repaired.

Check Points	CA-5IF(-O), CA-10RC(-O), CA-DC(-O), CA-4R-O-PF	CA-4R-PP	ST-DH
❶ Cap, body and screw tightness	✓	✓	—
❷ No gap between cap and head	✓	✓	—
❸ Light guide is not chipped, cracked or sticking out	✓	—	—
❹ No conspicuous corrosion around the chuck opening	✓	✓	✓
❺ No dirt or scratches etc. on the joint	✓	✓	✓
❻ No bent or deformed components	✓	✓	✓
❼ Motor connects properly and securely. Motor runs smoothly when foot control is depressed. Spray is emitted normally. No air or water leakage from motor joint. No abnormal noise or vibration. Head, push button and cap do not overheat.	✓	✓	✓
❽ Run the handpiece for approximately 10 seconds and check that there is no speed reduction, abnormal vibration, or noise.	✓	✓	✓
❾ Immediately after the above test, touch the head, push button, cap, as well as the nose section of the body with your hand and check that there is no heat.	✓	✓	✓

⚠WARNING

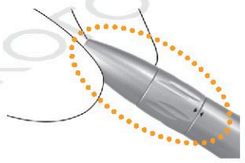
- Do not use if cap, body or screw is loose.
- If the cap is loose, worn, or damaged, it could come off inside the oral cavity.
- Do not use the handpiece if the head or body is bent, warped or otherwise deformed or damaged.

❶ Cap and Screw Location for Each Model

CA-5IF(-O), CA-10RC(-O), CA-DC(-O)	CA-4R-O-PF	CA-4R-O-PP
Make sure cap is not loose.	Make sure cap is not loose.	Make sure cap is not loose.
		
Cap	Make sure this screw is in place and tightened up properly.	Make sure this screw is in place and tightened up properly.
		
Make sure this screw is in place and tightened up properly.	Make sure there is no gap here.	* The CA-4R-PP cap is reverse threaded.

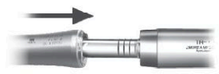
❾ Checking Heat Generation





2. Motor Connection

* Refer to the user manual for the motor.



Push the handpiece straight onto the motor's connection cylinder until you hear it snap into place. (Even for models with light capabilities, the light does not light up at this point.)



If it has a light, turn the handpiece until the projection on it lines up with the notch in the motor. There will be a click when the projection and notch line up.

* Make sure O-rings on the motor connection cylinder are OK.

⚠WARNING

- Before use, give the tube a light tug to check if the handpiece is securely connected and run the handpiece outside the patient's oral cavity. If the connection is loose, the handpiece could be dismounted and cause a hazardous situation.
- Wait for the handpiece to stop rotating before connecting or dismounting the handpiece.
- Wait for the motor to come to a complete stop before connecting or disconnecting the handpiece.

- Do not use any type of motor other than it conforms to ISO 14457.
- Do not connect the handpiece to a motor that rotates faster than 40,000 rpm.*1
  *1 20,000 rpm for CA-4R-O-PF, 10,000 rpm for CA-4R-PP
- Be sure the joint is free of dust such as cotton fibers or debris of O-ring, etc. Failure to do so could damage the instrument.
- Light-equipped handpiece cannot be connected to a motor that does not have a light.

Burs (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)

* Use burs or points with shanks that conform to ISO 1797-1.

☞ **Specifications**

⚠WARNING

- Never use the types of burs described below. Using such burs is extremely dangerous as they may become detached and cause injury to the patient's oral cavity or be swallowed by the patient.
  - Does not conform to ISO standards.
  - Has any grooves, scratched or damaged blades or shanks.
  - Deformed, bent, rusty, chipped or broken
  - It has been modified (such as short-shank burs).

⚠CAUTION

- When using welded or blazed burs, ensure that the bur tip does not wobble.
- Be sure to follow the requirements regarding the usable bur length and the shank length. Using non-supported burs is dangerous as they may become detached and cause a malfunction.

- Some detergents contain ingredients that cause metals to rust. Be sure to clean up the detergent before inserting the bur into the chuck.
- Even if it is an unused bur, it may not be balanced well due to a deformity. In this case, there is a risk of chuck or bearing damage due to bur wobble. Stop using the handpiece immediately if you notice that the rotation noise is significantly loud.
- Using dirty shanks will cause the chuck to lose its gripping strength and it may be difficult to take the bur out.
- If any detergent, dust, or other foreign matter enters the chuck, contact your local dealer or J. MORITA OFFICE to request an inspection.

Tips (CA-4R-O-PF)

⚠WARNING

- Do not use tips exhibiting any of the issues described below. Using such tips is extremely dangerous as they may become detached and cause injury to the patient's oral cavity or be swallowed by the patient.
  - Scratched
  - Deformed or bent
  - Rusty, chipped, or broken
  - Altered or modified (such as short shank tips)
- Never reuse disposable tips. This could result the tip coming off.

- Some detergents contain ingredients that cause metals to rust. Be sure to clean up the detergent before inserting the tip into the chuck.
- Using dirty shanks will cause the chuck to lose its gripping strength and it may be difficult to take the bur out.
- If any detergent, dust, or other foreign matter enters the chuck, contact your local dealer or J. MORITA OFFICE to request an inspection.

Cups or Brushes (CA-4R-PP)

⚠WARNING

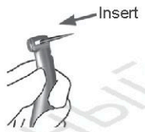
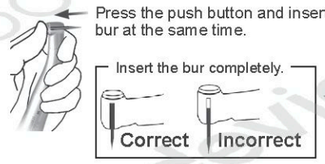
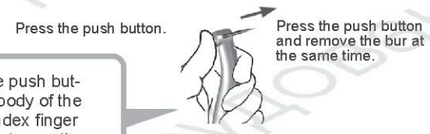
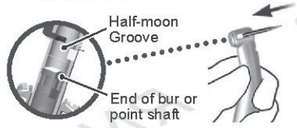
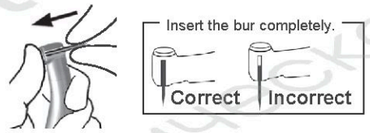
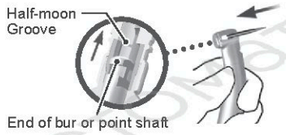
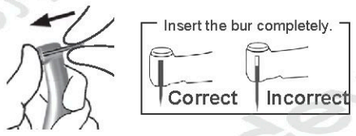
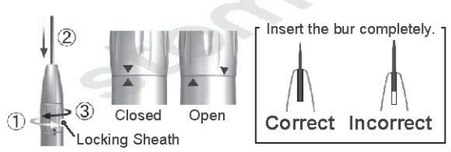
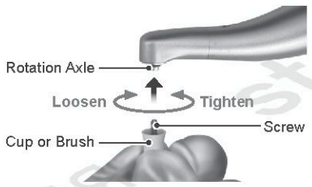
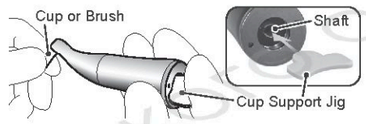
- Do not use cups or brushes exhibiting any of the issues described below. Using such cups or brushes is extremely dangerous as they may become detached and cause injury to the patient's oral cavity or be swallowed by the patient.
  - Scratched
  - Deformed or bent
  - Rusty, chipped, or broken
  - Altered or modified

- Some detergents contain ingredients that cause metals to rust. Be sure to clean up the detergent before inserting the cup or brush into the chuck.
- If the cup or brush is used with debris or dirt on the screw, its retaining strength will be reduced, or the cup or brush will wear out quickly.
- If any detergent, dust, or other foreign matter enters the chuck, contact your local dealer or J. MORITA OFFICE to request an inspection.



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3. Inserting and Removing Burs, Points,Tips, Cups, and Brushes

	Insert	Remove
CA-5IF(-O)	❶ Be sure to insert the bur straight all the way in.  ❷ Press the push button firmly and insert the bur all the way in at the same time.  It is easier to press the push button if you support the body of the handpiece with your index finger positioned at a point between the head and the body.	Hold down the push button firmly and pull the bur out straight. 
CA-10RC(-O)	❶ Insert the bur up to the half-moon groove inside the chuck.  ❷ Push the bur or point further in until you hear it click into place. 	Hold down the push button firmly and pull the bur out straight. 
CA-DC(-O)	❶ Insert the bur up to the half-moon groove inside the chuck.  ❷ Push the bur or point further in until you hear it click into place. 	Hold down the push button firmly and pull the bur out straight. 
ST-DH	❶ Turn the locking sheath in the direction shown by the arrow to open the chuck. ❷ Insert a bur or point all the way in. ❸ Turn the locking sheath in the direction shown by the arrow until the match marks are lined up to close the chuck all the way. 	❶ Turn the locking sheath in the direction shown by the arrow until the chuck is completely open. ❷ Pull out the bur or point. 
CA-4R-O-PF	❶ Insert tip. If the tip has a lock prong, line it up with the notch in the chuck.  ❷ Push the tip further in until you hear it click into place. 	Use the tip removal tool to push the tip out; then pull it the rest of the way out. 
CA-4R-PP	Grip the cup or brush and insert the threaded part into the rotation shaft; then lightly screw it all the way on. After screwing it on, make sure the cup or brush is securely and completely installed. 	Grip the cup or brush and unscrew it. If it is hard to get off, take the handpiece off the motor, and fix the shaft in its joint to the cup support jig provided; then unscrew the cup or brush. 

⚠WARNING

- Insert the bur firmly as far as it will go into the chuck, and give it a light tug to make sure it is held securely. (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)
- Using the handpiece with a bur that is improperly inserted could result in a bur coming out and injuring the oral cavity or being swallowed by the patient. (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)
- Insert the tip firmly as far as it will go into the chuck, and give it a light tug to make sure it is held securely. (CA-4R-O-PF)
- Using the handpiece with a tip that is improperly inserted is extremely dangerous as it may become detached and cause injury to the patient's oral cavity or be swallowed by the patient. (CA-4R-O-PF)
- Screw the cup or brush as far as it will go into the rotation axle, and give it a light tug to make sure it is held securely. (CA-4R-PP)
- Using the handpiece with a cup or brush that is improperly screwed in is extremely dangerous as it may become detached and cause injury to the patient's oral cavity or be swallowed by the patient. (CA-4R-PP)

⚠CAUTION

- Wear gloves and take extra care not to injure your fingers when inserting or removing the bur.(CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)
- If you open the locking sheath after a cutting operation with strong vibrations, it may cause the bur to pop out. Never direct the bur towards a person when opening the locking sheath. (ST-DH)
- Wear gloves and take extra care not to injure your fingers when inserting or removing the tip. (CA-4R-O-PF)
- Wear gloves and take extra care not to injure your fingers when inserting or removing the cup or brush. (CA-4R-PP)

- When inserting or removing a bur, make sure that the rotation is stopped completely. Failure to do so will result in wear to the inner surface of the push button, making insertion and removal of the bur difficult. (CA-5IF(-O), CA-10RC(-O), CA-DC(-O))
- Do not insert or take a bur out without pressing the push button. (CA-5IF(-O), CA-10RC(-O), CA-DC(-O))
- Wait for the handpiece to come to a complete stop before inserting or removing burs. (ST-DH)
- Do not rotate the handpiece with the chuck open (▼▲marks are misaligned). The chuck mechanism and bur will collide during rotation, and it results in wear and damage to the chuck mechanism. (ST-DH)
- Do not forcibly insert or remove the bur with the locking sheath closed. (ST-DH)
- Wait for the handpiece to come to a complete stop before inserting or removing tips. (CA-4R-O-PF)
- Wait for the handpiece to come to a complete stop before inserting or removing cups or brushes. (CA-4R-PP)

4. Reprocessing

⚠WARNING

- Always wear personal protective equipment (PPE), such as safety glasses, gloves, a mask, etc. when performing the handpiece reprocessing procedures.

* Be sure to perform the handpiece reprocessing procedures promptly after use with each patient by following procedures **4-1** through **4-7**.

4-1. After Use

❶ Remove the bur, point, cup, or brush from the handpiece, turn on the water supply switch of the dental treatment unit, and run the handpiece for 20 seconds.

❷ Wipe the whole handpiece from the motor to the head with a piece of gauze that has been dampened with tap water or protein anticoagulant agent to remove visible contaminants. Disconnect the handpiece from the treatment unit, and clean the handpiece.



* If you cannot clean the handpiece immediately, spray protein anticoagulant agent over the handpiece and clean it within 2 hours.

Usable Protein Anticoagulant: Neutral and foamless agent applicable to aluminum and brass materials.

- Be sure to remove the bur from the handpiece after use. If the bur is left in the handpiece, it may get stuck.
- Perform handpiece maintenance promptly after use. If the parts are left contaminated with blood, it will be difficult to remove.
- Do not use any chemicals that may coagulate proteins before cleaning.
- If a medical or adhesive agent being used for treatment has adhered to the component, immediately wash it off under tap water.
- Do not immerse the handpiece in protein anticoagulant agent.
- If dust or other impurities enter the handpiece, they may cause poor rotation or poor spray delivery.

4-2. Cleaning & Disinfection

⚠CAUTION

- Be sure to autoclave the handpiece; the reprocessing procedures must continue beyond the disinfection step.

Automated Cleaning and Disinfection



* Be sure to use washer-disinfectors that conform to ISO 15883-1 for cleaning and disinfection.
* If your region is susceptible to hard water scale buildup, use deionized water (ion-exchanged water) for the final rinse process.

Recommended Conditions

Unit Name	Mode	Detergent (concentration)	Rinse (concentration)
Miele G7881	Vario TD	neodisher MediClean (0.3% to 0.5%)	neodisher MediKlar (0.03% to 0.05%)

Put the handpiece in a handpiece holder.

Select the washer-disinfector's mode as shown in the chart above and start the process. (For thermal disinfection, setting the operation mode to A_0 = 3000 is recommended.)

After completion of the process, expel remaining moisture inside the handpiece with compressed air.

- For details on handling medical agents, adjusting their concentration, and about water quality, refer to the accompanying user manual for the washer-disinfector.
- Be sure to lubricate the handpiece after washing.

⚠WARNING

- Any moisture left inside the handpiece after the cleaning could cause corrosion, or poor lubrication and sterilization.

- If the handpiece is cleaned without using the handpiece holder, it could result in corrosion or clog in the air or water line and damage the handpiece due to impurities or remaining medical agents.
- Inappropriate cleaning methods and medical agents will damage the handpiece.
- Do not use strong acidic or alkaline chemicals that could cause the metal to corrode.
- Moisture left inside the handpiece after cleaning could result in the remaining water coming out during use.
- Do not start drying when the handpiece is filled with water. Otherwise, this could cause corrosion due to condensation of the rinsing solution.
- Do not leave a handpiece inside the washer-disinfector.

Manual Cleaning and Disinfection

❶ Clean the parts in running water with a toothbrush.



❷ Clean the spray hole(s) with the spray hole wire provided, and rinse off the handpiece in running water.

Attach a suitable adapter to the WL-clean can. Insert the adapter into the handpiece connection end. Spray 3 times for 2 seconds each. Remove the handpiece from the adapter and place it aside. Wait for at least 1 minute for the cleaning agent to work effectively.

Attach a suitable adapter to the WL-cid can. Insert the adapter into the handpiece connection end. Spray for approximately 3 to 5 seconds. Remove the handpiece from the adapter and place it aside. Wait for approximately 1 to 2 minutes for the disinfectant to work effectively.

Attach a suitable adapter to the WL-dry can or WL-Blow. Connect the WL-Blow to the compressed air line properly. Insert the adapter into the handpiece connection end. Blow compressed air for approximately 3 seconds.



❸ Wipe the whole handpiece with a piece of microfiber cloth (e.g., Toraysee for CE) that has been dampened with mikrozid AF liquid, FD322, or Rubbing alcohol.



- Do not clean the handpiece with ultrasonic cleaning or immersion cleaning devices.
- Do not use disinfectants other than those designated by J. MORITA MFG. CORP.
- Do not immerse the handpiece in or wipe it with any of the following: functional water (acidic electrolyzed water, strong alkaline solution, and ozone water), medical agents (glutaral, chloride-containing, etc.), or any other special types of water or commercial cleaning liquids. Such liquids may result in metal corrosion or adhesion of the residual medical agent to the handpiece.

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4. Reprocessing

4-3. Lubrication

* Be sure to lubricate the handpiece with the MORITA MULTI SPRAY after use with each patient.
Be sure to lubricate the handpiece after the cleaning and disinfection steps or before autoclaving.



Lubrication and excess oil removal can be performed by J. MORITA's dental handpiece maintenance device.

CA-5IF(-O)

1


Screw the spray nozzle onto the spray can, and then push the lever on the nozzle up in the direction of the arrow.

2 Chuck Spray Nozzle


Cover the head of the handpiece with gauze, insert the chuck spray nozzle tip into the bur hole, and then spray for 2 seconds.

3


Push the lever back down.

4


Insert the nozzle into the connection end of the handpiece, hold it firmly and then spray for 2 seconds.

CA-10RC(-O), CA-DC(-O), ST-DH, CA-4R-O-PF, CA-4R-PP

1


Put the spray nozzle on the spray can.

Open the locking sheath before connecting the handpiece to the spray nozzle. (ST-DH)
(The spray will not be effectively delivered if the chuck is closed.)



2


Insert the nozzle into the connection end of the handpiece, hold it firmly and then spray for about 2 seconds.

⚠WARNING

- Never direct the spray towards a person.
- Do not use the spray in a closed space without proper ventilation. Open windows or turn on exhaust fans to make sure the room is well ventilated.
- Do not get the spray in your eyes. If you accidentally get it in your eyes, wash your eyes with plenty of water and see a doctor.
- Do not get the spray on your skin. If it gets on your skin, wash it off with soap and water.
- If used in a sink or other enclosed space, a flammable propellant could permeate the air; keep the area free of open flames or other ignition sources.

- Do not use any type of maintenance spray other than the MORITA MULTI SPRAY.
- Always keep the maintenance spray can in an upright position when using and storing.
- Failure to lubricate the handpiece will result in a malfunction.
- If spraying continues for more than 5 seconds, the moisture inside the handpiece may freeze up. Operating the handpiece under this condition could damage the ball bearings.
- Insert the spray nozzle tip straight into the bur insertion hole and pull it straight out. Failure to do so may damage the nozzle tip.

4-4. Removing Excess Oil

* After handpiece lubrication, be sure to remove excess oil.

1


Using an air blow gun, blow the handpiece connection for 20 to 30 seconds to get rid of any moisture left inside the handpiece. Wipe the excess oil from the handpiece with a gauze.

You can use MORITA's threeway syringe instead of an air blow gun. (In this case, attach the air nozzle to the tip of the threeway syringe. The air nozzle comes with a micromotor or its optional accessory.)



2

CA-5IF(-O), CA-10RC(-O), CA-DC(-O), CA-4R-O-PF, CA-4R-O-PP



Connect the handpiece to the motor, point the head down, and run the motor for about 30 seconds. Use a piece of gauze to wipe off any oil that gets on the outside of the handpiece.

ST-DH



Close the locking sheath and point the handpiece down. Connect it to its motor and rotate it for about 30 seconds. Use a piece of gauze to wipe off any oil that gets on the outside of the handpiece .

* When friction-produced debris comes out from the head, re-lubricate the handpiece.

⚠CAUTION

- Excess oil inside the handpiece may result in overheating during rotation.

- If any oil seeps into the motor, it could result in a malfunction.
- When wiping off excess oil from the head, make sure that you do not touch the push button while the handpiece is running. Otherwise, it will result in wear to the cap, making insertion and removal of the bur difficult. (CA-5IF(-O), CA-DC(-O))

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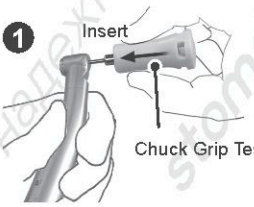
4-5. Inspection (CA-5IF(-O))

Test Chuck's Gripping Strength

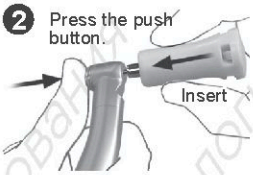
* Test the chuck's gripping strength when you sense it is weakened or at least once a day.

⚠WARNING

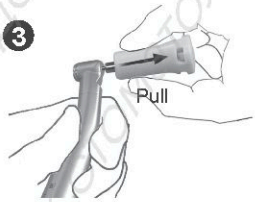
- Weakening of the chuck's gripping strength could result in detaching a bur causing injury to the patient's oral cavity or in a bur being swallowed by the patient.



Insert the chuck tester straight in until it lightly touches the chuck mechanism.



Press the push button firmly and insert the chuck grip tester straight at the same time.



Pull the chuck grip tester slowly until the groove is visible.

If you see a groove



Chuck's gripping strength is normal.

Stop pulling as soon as you see the groove, and slowly return the chuck grip tester to its original position.
Press the push button firmly and pull the chuck grip tester out straight.

If you do not see a groove and the tester comes out



Chuck's gripping strength is weakened.

Lubricate the chuck, and then recheck the gripping test. If the gripping strength is not regained and it fails the test, replace the cartridge.

4-6. Packaging



Make sure that the handpieces are not wet, and then put them in individual sterilization pouches.
Use only sterilization pouches that conform to ISO 11607.

- Do not use any sterilization pouches that contain hydrosoluble adhesive ingredients such as PVA (polyvinyl alcohol). Otherwise, its adhesive ingredient may seep into the handpiece during sterilization, resulting in a solid residue that may cause a failure to rotate properly or poor water delivery. Note that even ISO 11607 conformable sterilization pouches may contain PVA.

4-7. Sterilization



Autoclave the handpiece. After autoclaving, store them in a dry environment.

Recommended Temperature and Time

Sterilizer Type	Temperature	Time	Drying Time after Sterilization
Pre-vacuum Type (Dynamic Air Removal, class B)	+134°C (+273.2°F)	3 minutes	10 minutes
Gravity Type (except class B)	+134°C (+273.2°F)	min. 6 minutes	min.10 minutes
	+121°C (+249.8°F)	min. 60 minutes	

⚠WARNING

- To prevent the spread of infections, the handpiece must be autoclaved after each patient's treatment has been completed.

⚠CAUTION

- Handpieces are extremely hot after autoclaving; wait for them to cool off before touching.

- Do not sterilize the handpiece by any method other than autoclaving.
- Remove a bur from the handpiece before autoclaving.
- Failure to clean and lubricate the handpiece before autoclaving will result in a malfunction.
- The sterilization and drying temperatures must not exceed +135°C (+275°F). If they exceed +137°C (+278.6°F), it will result in discoloration of the handpiece or a malfunction.
- Do not let the handpiece come into contact with the heat source or chamber wall inside of the autoclave to avoid damage of the O-rings or other parts due to the high temperature.
- When autoclaving the handpiece in an upright position, make sure that it is placed in the autoclave with its head at the top.
- Do not leave the handpiece in the autoclave.

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5. Troubleshooting

Before inspecting or adjusting the handpiece, make sure the main power switch is turned on and that the main air and water valves are open. If the handpiece does not work properly even after inspection and adjustment, contact your local dealer or J. MORITA OFFICE and have it repaired.

- **Cannot insert burs, points, tips, cup or brash**
- **Chuck grip is weakened** (CA-5IF(-O))

Lubricate the chuck and then use a new bur, point, tip, cup or brash to check if the problem has been resolved. If this does not resolve the problem, have the handpiece repaired.

- **Poor rotation** (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)
- **Tips does not go up and down** (CA-4R-O-PF)
- **Cup or Brush does not rotate** (CA-4R-PP)

Make sure the motor is properly connected to its tube. Remove the handpiece from the motor and step on the foot control. Does the motor run?

If motor runs

Make sure the handpiece is connected to the motor correctly, then step on the foot control to see the bur runs. If the bur does not run, have the handpiece repaired. (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH)

Connect the handpiece securely to the motor and step on the foot control to see if the tip rotates. If it does not have the handpiece repaired. (CA-4R-O-PF, CA-4R-PP)

If motor does not run

Refer to the accompany user manual for the motor.

- **Poor water delivery** (CA-5IF(-O), CA-10RC(-O), CA-DC(-O), ST-DH, CA-4R-O-PF)

Take the handpiece off the motor and step on the foot pedal. Does water come out of the motor joint?

If water comes out

Check the o-ring on the motor joint. Replace it if it is worn or damaged and coat it with oil. If the o-ring is OK, clean out the air and water holes on the handpiece. Also, take out the water filter and clean it; see diagram at right. (Only models with light capabilities.) If the spray still does not work, have the handpiece repaired.



If water does not come out

Refer to the accompany user manual for the motor.

- **Overheating** (CA-5IF(-O), CA-DC(-O), ST-DH)

Make sure flows for cooling air and spray are up to specifications. Also make sure the motor is operating properly.

TERMS AND CONDITIONS

J. MORITA MFG. CORP. warrants the Product as follows:

1. **Warranty Term.**
   J. MORITA MFG. CORP. warrants that the Product will be free from defects in materials and workmanship for the following period of time.
   12 months: CA-10RC(-O), CA-4R-O-PF, CA-4R-O-PP
   24 months: CA-5IF(-O), CA-DC(-O), ST-DH
2. **Items Not Covered by Warranty.**
   This Warranty will not cover parts of the Product or consumables which normally need to be replaced such as glass or rubber components, and the like. Further, this warranty will not cover defects or damage caused by:
   a. Failure to operate or use the Product in accordance with the Operation Instructions or warning/cautionary labels.
   b. Modifications of the Product, connecting the Product to other products, or using components or replacement parts not specified or approved by J. MORITA MFG. CORP.
   c. Repairs performed by parties not designated by J. MORITA MFG. CORP.
   d. Accidents or forces outside of J. MORITA MFG. CORP.'s control, such as dropping the Product or collision of the Product with other objects, fire, flood, natural disaster, etc.
   e. Use or operation of the Product in settings or under conditions not specified by J. MORITA MFG. CORP. or set forth in the Operation Instructions including, without limitation, unauthorized changes in equipment settings, connection to unauthorized devices.
3. **Remedies of Customer.**
   Customer must present this Warranty when claiming coverage or application thereof, and either ship or deliver the Product to an authorized location of J. MORITA MFG. CORP. or its subsidiaries or authorized dealers. Upon receipt and verification of this Warranty, inspection of the Product, and determination of coverage by this Warranty, J. MORITA MFG. CORP. will, at its sole option, supply the parts or components either replaced or repaired free of charge to the Customer. Delivery and shipping charges are the responsibility of the Customer.
4. **LIMITATIONS AND EXCLUSIONS FROM WARRANTY.**
   The remedy set forth in paragraph 3 is the sole and exclusive remedy of Customer. J. MORITA MFG. CORP. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES AND SPECIFICALLY EXCLUDES ALL OTHER WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL J. MORITA MFG. CORP. BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL, DIRECT OR INDIRECT, OR SPECIAL DAMAGES OF ANY KIND INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF REVENUE, LOSS OF BUSINESS OR BUSINESS OPPORTUNITY, OR OTHER SIMILAR FINANCIAL LOSS ARISING OUT OF THE PERFORMANCE, USE OR INTERRUPTED USE OF THE PRODUCT.
5. **Repairs Not Covered by Warranty.**
   With respect to repairs not within the period of this Warranty or otherwise not covered by this Warranty, J. MORITA MFG. CORP. will perform the same, timely, efficiently, and for an appropriate cost.

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