

**TORQTECH****Geared Contra Angle Handpiece Attachment**

CA-5IF(-O), CA-5IF-O-UM (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 Prophylaxis Contra-angle)

**Straight Handpiece Attachment**

ST-DH

**INSTRUCTIONS FOR USE**

Thank you for purchasing the TORQTECH geared contra angle motor handpiece attachment. For optimum safety and performance as well as to avoid causing harm to people, read this manual thoroughly before using the instrument and pay close attention to warnings and cautions. Keep this manual in a readily accessible place for quick and easy reference.

**Trademarks and Registered Trademarks:**

Parts of the names of companies, products, services, etc. used in this manual may contain 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.

**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:

- Malfunction or damage resulting from repairs made by personnel not authorized by J. MORITA MFG. CORP.
- Any unauthorized modifications to its products
- Malfunction or damage resulting from maintenance or repairs carried out using parts or components other than those specified by J. MORITA MFG. CORP.
- Malfunction or damage to MORITA products caused by products made by other manufacturers unless they were supplied by J. MORITA MFG. CORP.
- Malfunction or damage resulting from failure to observe the safety precautions or operating procedures described in these Operating Instructions
- 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
- 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.

\* 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.

**Instructions for Use in Electronic Format (eIFU)**

The electronic data (PDF document) of the Instructions for Use is available. Scan the following QR code and visit our website.



In order to view PDF documents, you will need the free Adobe Acrobat Reader distributed by Adobe Inc. Download the latest version via the Adobe website. PDF documents may not be displayed correctly using previous versions.

**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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**Intended Use****■ Purpose**

This device transmits rotation of the motor to dental burs and reamers which cut, grind or polishes teeth or dentures with the same or transformed rotation.

**■ User Profile**

- |                            |   |
|----------------------------|---|
| a) Qualification           | : Dentist, doctor, or legally licensed professional |
| b) Education and Knowledge | : User needs dentistry education.                   |
| c) Language                | : English or local language                         |
| d) Experience              | : User needs dentistry experience.                  |

**■ Patient Population**

Age, weight, nationality, and sex are not relevant.

**■ Body Part or Tissue Type**

Teeth or artificial dentures

**■ Environment****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 device to direct sunlight for an extended period of time.

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

**■ Medical Indications**

Cut and polish the tooth or artificial dentures

**■ Supposed Useful Life**

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

**Sold Separately**

MORITA MULTI SPRAY  
Code No.: 7914113 or 5010201



(Alcohol Disinfectable)

**Specifications**

Model*3	CA-5IF-O (with light) CA-5IF (w/o light)	CA-5IF-O-UM (with 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	93	94	94	83	94	94	
Weight (g)	68	66	69	67	73	67	67	
Maximum Motor Speed (rpm)	40,000							20,000
Usable Burs	Shank Type 3 (FG)*1,*2		Shank Type 1 (CA)*1	Shank Type 1 (CA)*1	Shank Type 2 (HP)*1	EVA tips/Lameneer tips	PMT Attachment (cup or brush)	
Fitting Length of Shank (mm)	12 or more	9 or more	12 or more	12 or more	30 or more	—	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	
Bur Length (mm)	22 or less	21 or less 19 or less (only carbide bur)	34 or less	34 or less	44.5 or less	—	—	
Working Area Diameter (mm)	2 or less		—	4 or less	—	—	—	
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)							
Number of Spray Holes	3	1	1	1	1	1	—	
Connection Type	Conforms to ISO 3964 and DIN 13940							
Connectable Motors	Conforms to ISO 14457							

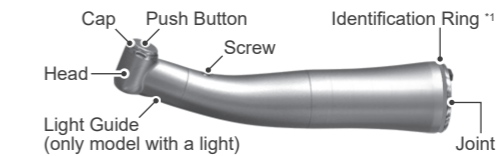
\*1 Conforms to ISO 1797-1

\*2 Do not use miniature burs or short-shank burs except for CA-5IF-O-UM models.

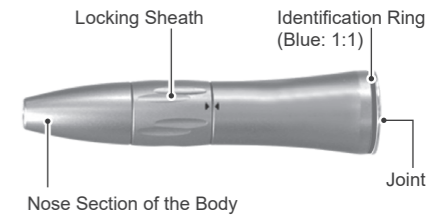
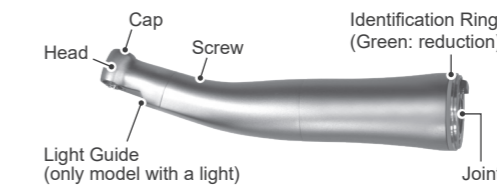
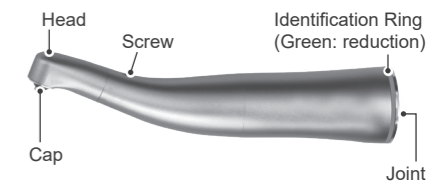
\*3 Some models described in this user manual may not be sold or have been discontinued in your country or region.

**⚠ WARNING**

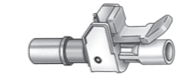





- Never use the types of burs or points described below. Using such burs or points is extremely dangerous as they may become detached and cause injury to the patient's oral cavity or be swallowed by the patient. Those which do not conform to ISO standards. Those with scratched or bent heads or shanks. Those which are rusty, chipped or broken. Those which have been modified or altered such as those having shortened shanks. (CA-5IF(-O), CA-5IF-O-UM, 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 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-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)

**Parts Identification**
**CA-5IF(-O), CA-5IF-O-UM,  
CA-10RC(-O), CA-DC(-O)**


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

**ST-DH****CA-4R-O-PF****CA-4R-PP****Accompanying Items**

for each item

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

**⚠ CAUTION**

- When using welded or blazed burs or points, ensure that the bur tip does not wobble. (CA-5IF(-O), CA-5IF-O-UM, 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-5IF-O-UM, 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.

## 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. Lack of sufficient spray water could result in burns to the working area.
- 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 inner surface of the push button, making insertion 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:

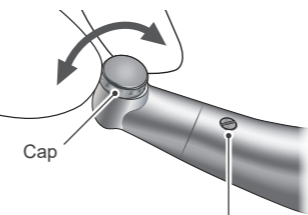
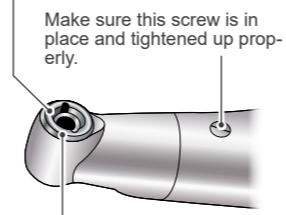
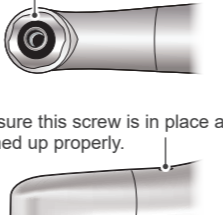
Check for the following points before using the handpiece. If any abnormalities are found, stop using the handpiece immediately and have it professionally repaired.

Check Points	CA-51F(-O),CA-51F-O-UM, 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.	✓	✓	✓

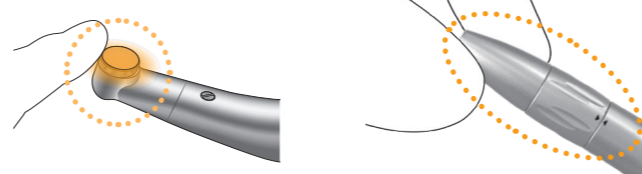
### ⚠️ WARNING

- 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

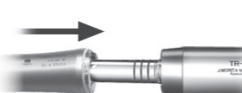
CA-51F(-O), CA-51F-O-UM, CA-10RC(-O), CA-DC(-O)	CA-4R-O-PF	CA-4R-PP
Make sure cap is not loose.	Make sure cap is not loose.	Make sure cap is not loose.
		
Make sure this screw is in place and tightened up properly.	Make sure this screw is in place and tightened up properly.	Make sure this screw is in place and tightened up properly.
Make sure there is no gap here.		* The CA-4R-PP cap is reverse threaded.

### ❹ 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 the O-rings on the motor's connection cylinder are OK.

### Burs (CA-51F(-O), CA-51F-O-UM, 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.

- ❶ Some detergents contain ingredients that cause metals to rust. Be sure to clean up the detergent before inserting the bur into the chuck.
- ❷ 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.
- ❸ Using dirty shanks will cause the chuck to lose its gripping strength and it may be difficult to take the bur out.
- ❹ 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.

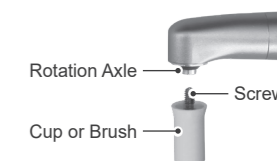
- ❶ Some detergents contain ingredients that cause metals to rust. Be sure to clean up the detergent before inserting the tip into the chuck.
- ❷ Using dirty shanks will cause the chuck to lose its gripping strength and it may be difficult to take the bur out.
- ❸ If any detergent, dust, or other foreign 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

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

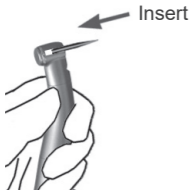
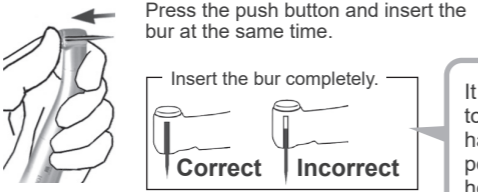
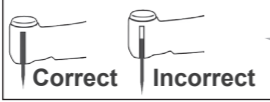


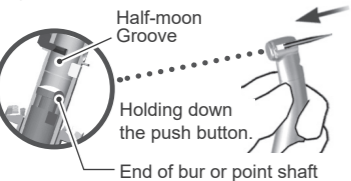

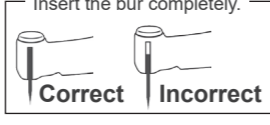

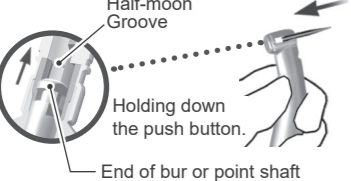

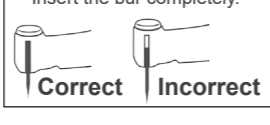

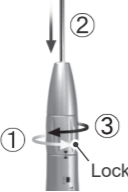
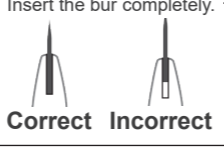

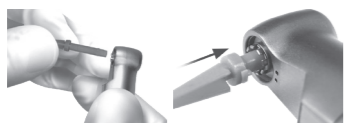
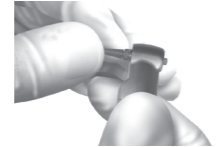

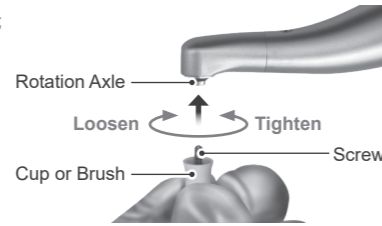
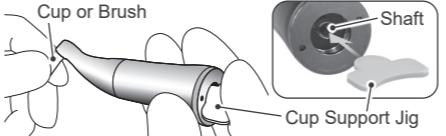


### ⚠️ WARNING

- 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 dismantled and cause a hazardous situation.
- Wait for the handpiece to stop rotating before connecting or dismantling the handpiece.
- Wait for the motor to come to a complete stop before connecting or disconnecting the handpiece.

- ❶ Do not use any type of motor other than it conforms to ISO 14457.
- ❷ Do not connect the handpiece to a motor with a maximum rotation speed of 40,000 rpm or over. Be sure to observe the maximum input motor speed for each handpiece.
- ❸ 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.
- ❹ Light-equipped handpiece cannot be connected to a motor that does not have a light.

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

	Insert	Remove
<b>CA-5IF(-O) CA-5IF-O-UM</b>	<p>1 Be sure to insert the bur straight all the way in.</p>  <p>2 Press the push button firmly and insert the bur all the way in at the same time.</p>  <p>Insert the bur completely.</p>  <p>Correct Incorrect</p> <p>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.</p>	<p>Hold down the push button firmly and pull the bur out straight.</p>  <p>Press the push button.</p>  <p>Press the push button and remove the bur at the same time.</p>
<b>CA-10RC(-O)</b>	<p>1 Holding down the push button and insert the bur so that it aligns with the half-moon groove.</p>  <p>Half-moon Groove Holding down the push button. End of bur or point shaft</p> <p>2 Insert the bur all the way in. Release the button to secure it. Give it a light tug to make sure the bur does not pull out.</p>  <p>Insert the bur completely.</p>  <p>Correct Incorrect</p>	<p>Hold down the push button firmly and pull the bur out straight.</p> 
<b>CA-DC(-O)</b>	<p>1 Holding down the push button and insert the bur so that it aligns with the half-moon groove.</p>  <p>Half-moon Groove Holding down the push button. End of bur or point shaft</p> <p>2 Insert the bur all the way in. Release the button to secure it. Give it a light tug to make sure the bur does not pull out.</p>  <p>Insert the bur completely.</p>  <p>Correct Incorrect</p>	<p>Hold down the push button firmly and pull the bur out straight.</p> 
<b>ST-DH</b>	<p>1 Turn the locking sheath in the direction shown by the arrow to open the chuck.</p> <p>2 Insert a bur or point all the way in.</p> <p>3 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.</p>  <p>1 2 3 Locking Sheath</p> <p>Closed Open</p> <p>Insert the bur completely.</p>  <p>Correct Incorrect</p>	<p>1 Turn the locking sheath in the direction shown by the arrow until the chuck is completely open.</p>  <p>2 Pull out the bur or point.</p>
<b>CA-4R-O-PF</b>	<p>1 Insert tip. If the tip has a lock prong, line it up with the notch in the chuck.</p>  <p>2 Push the tip further in until you hear it click into place.</p> 	<p>Use the tip removal tool to push the tip out; then pull it the rest of the way out.</p>  <p>Tip Removal Tool</p>
<b>CA-4R-PP</b>	<p>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.</p>  <p>Rotation Axle Loosen Tighten Cup or Brush Screw</p>	<p>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.</p>  <p>Cup or Brush Shaft Cup Support Jig</p>

#### ⚠ 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-5IF-O-UM, 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-5IF-O-UM, 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-5IF-O-UM, 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-5IF-O-UM, CA-10RC(-O), CA-DC(-O))
- Do not insert or take a bur out without pressing the push button. (CA-5IF(-O), CA-5IF-O-UM, 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

#### Hygiene Plan Guidebook

A reference guidebook of hygiene information about our products is available. Scan the following QR code and visit our website.



In order to view PDF documents, you will need the free Adobe Acrobat Reader distributed by Adobe Inc. Download the latest version via the Adobe website. PDF documents may not be displayed correctly using previous versions.

#### ⚠ 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



1 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.



2 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.

#### 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<sub>0</sub> = 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.

#### Manual Cleaning and Disinfection



1 Clean the parts in running water with a toothbrush.



2 Clean the spray hole(s) with the spray hole wire, 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.



3 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.

1 Do not clean the handpiece with ultrasonic cleaning or immersion cleaning devices.

1 Do not use disinfectants other than those designated by J. MORITA MFG. CORP.

1 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.

## 4. Reprocessing

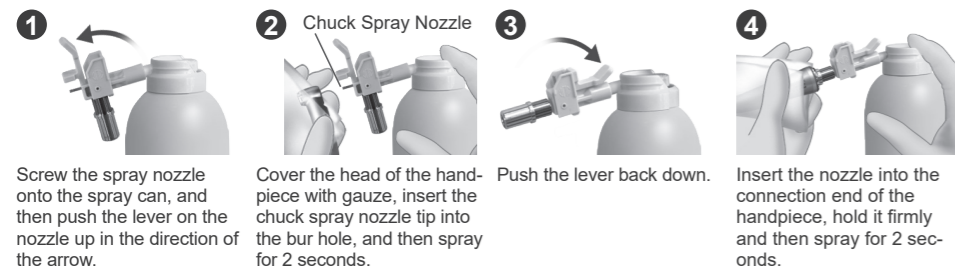
### 4-3. Lubrication

\* 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.

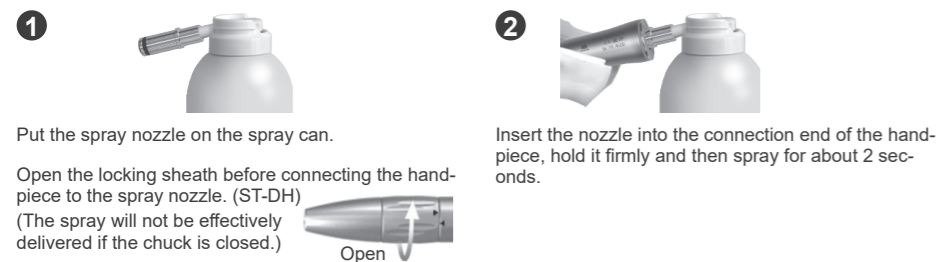


Lubrication and excess oil removal can be performed by J. MORITA's dental handpiece maintenance device.

#### CA-51F(-O), CA-51F-O-UM



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



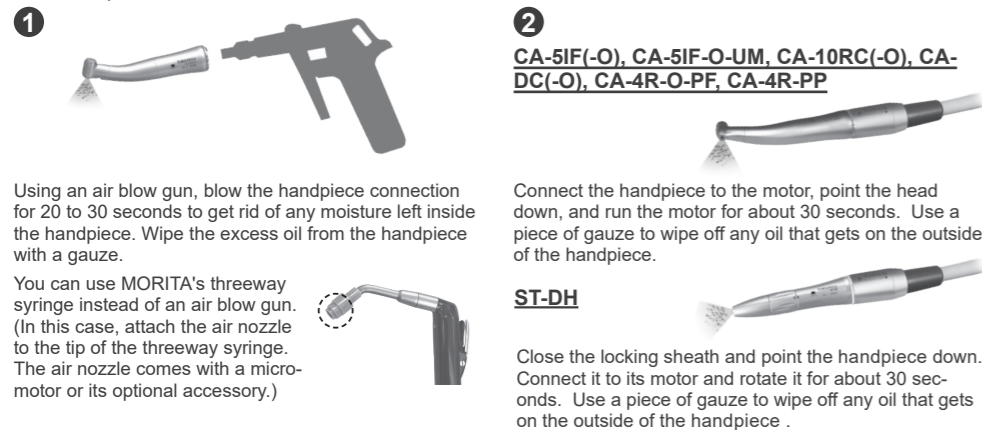
### WARNING

- 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.



\* 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-51F(-O), CA-51F-O-UM, CA-DC(-O))

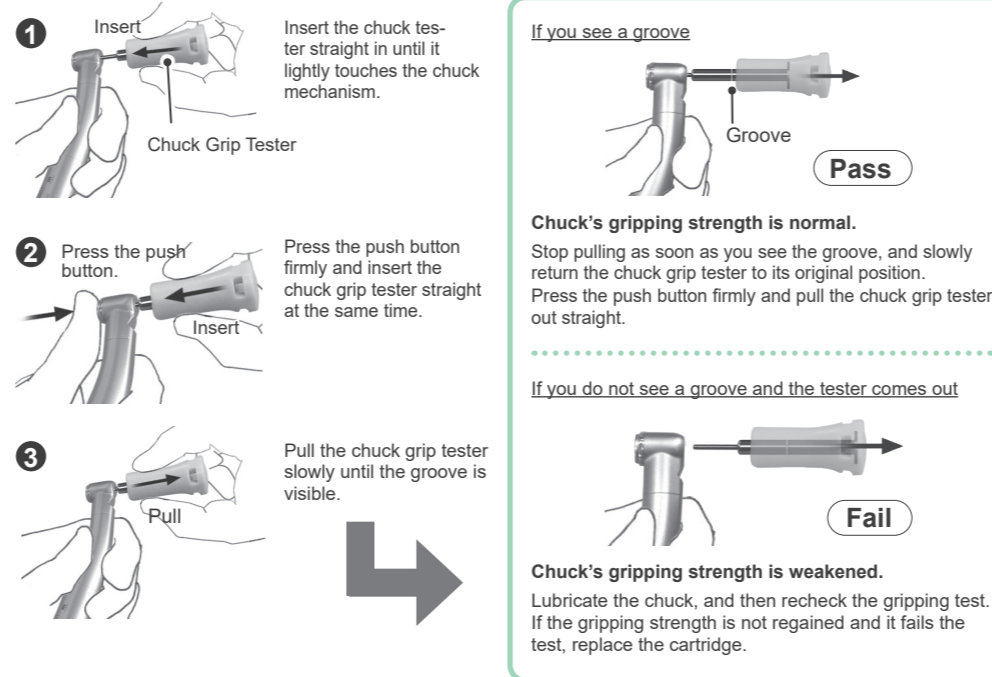
### 4-5. Inspection (CA-51F(-O), CA-51F-O-UM)

#### Test Chuck's Gripping Strength

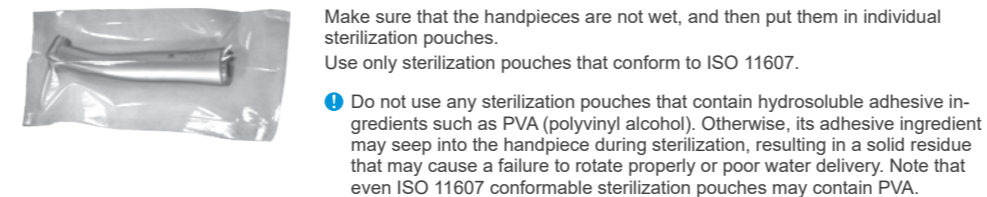
\* Test the chuck's gripping strength when you sense it is weakened or at least once a day.

### 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.



### 4-6. Packaging



### 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.

## 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 brush**
- Chuck grip is weakened (CA-51F(-O), CA-51F-O-UM)**  
Lubricate the chuck and then use a new bur, point, tip, cup or brush to check if the problem has been resolved. If this does not resolve the problem, have the handpiece repaired.

- Poor rotation (CA-51F(-O), CA-51F-O-UM, 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-51F(-O), CA-51F-O-UM, 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-51F(-O), CA-51F-O-UM, 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

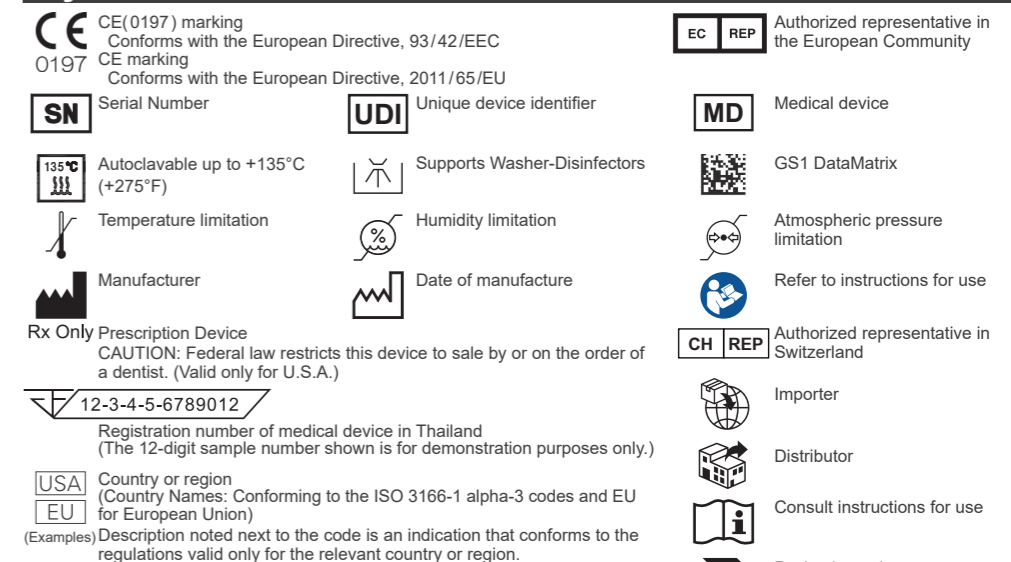
Refer to the accompany user manual for the motor.

- Overheating (CA-51F(-O), CA-51F-O-UM, 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.

## Symbols

[Some symbols may not be used.]



## 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-PP**  
**24 months: CA-51F(-O), CA-51F-O-UM, 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.