

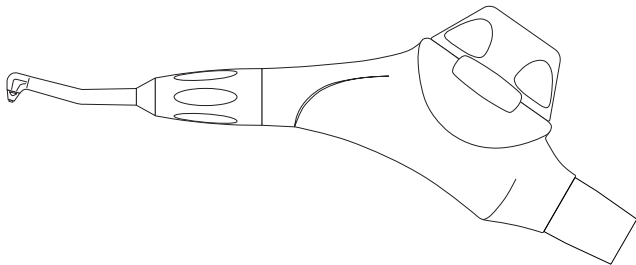
Dr. Mayer
LIFE & HEALTH

Jet Air Polisher

STORMJET X

SJX-K / SJX-W / SJX-S / SJX-B / SJX-N / SJX-4H / SJX-2H

INSTRUCTION MANUAL



Dear users,

Thank you for purchasing “StormJet X”.

To maintain optimum performance over time, read this instruction manual carefully and thoroughly before use.

Mishandling cause mechanical trouble and accidents during treatment.

Keep the instruction manual for future reference as specifications in the instruction manual may be changed for improvement and modification without prior notice.

* StormJet X is indicated by the models (SJX-K, SJX-W, SJX-S, SJX-B, SJX-N, SJX-4H, SJX-2H) in the instruction manual.

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1. PREFACE


Before reading the instruction manual, recognize the symbols below which indicate “most important points”.


The definitions in this instruction manual of the words preceded by the symbol  are as follows.


: This indicates not specific general attentions, cautions, and dangers.

 **CONTRAINDICATION AND RESTRICTION:**

This indicates exemptions from responsibilities such as improper use and excess of design limit.

 **DANGER:** This indicates potential direct dangers that may cause serious injury, death, property damages such as total loss of the instrument or fire disaster.

 **CAUTION:** This indicates potential indirect dangers that may cause serious injury, death, property damage such as total loss of StormJet X or fire disaster.

 **ATTENTION:** This indicates potential dangers that may cause light to middle injury, property damage such as partial loss of StormJet X or loss of computer data.

The illustrations in this instruction manual are SJX-K unless otherwise specified.

2. CAUTIONS FOR USE

CONTRAINDICATION AND RESTRICTION

1. Non-eligible patients

- 1) Never use StormJet X on patients;
 - on a low salt diet (due to hypertension, hypernatremia, edema, pregnancy toxemia, etc.),
 - having a serious ulcer in digestive organs,
 - having a renal dysfunction,
 - having cardiac dysfunction,
 - having asthma or chronic pulmonary disease,
 - having electrolyte abnormality due to hypochloric alkalosis.
- 2) Avoid using StormJet X on patients below, other than those stated in above 1);
 - having an intraoral injury or disease,
 - having a hyperemia, inflammation, or bleeding in the intraoral cavity,
 - easily getting oral mucosa inflammation or bleeding,
 - having allergies,
 - wearing contact lenses.
- 3) Depending on the patient physical conditions, allergy symptoms, or stomatitis may seldom occur. In such a case, stop using StormJet X.

2. Usage

- 1) StormJet X must be used only by qualified dental professionals and only for dental treatment.
- 2) Do not modify StormJet X.
- 3) In case of trouble, do not repair by yourself, ask your dealer for repair.
- 4) In case of deterioration or malfunction, do not use StormJet X.
- 5) Do not use StormJet X if it is not maintained.
- 6) To operate correctly and safely, keep the cautions for use.
- 7) Use sodium hydrogen carbonate powder for dental prophylaxis only. Other powder (for example, alumina powder) will cause a decrease in cleaning efficiency, powder clogging, or damage to the handpiece.



CONTRAINDICATION AND RESTRICTION

- 8) Do not reuse the powder.
- 9) The powder must be filled into the powder cap. Filling into the powder chamber may cause powder scattering due to early thread wear and sealing failure.
- 10) Never spray into the subgingival, root canal, or extraction socket. It may cause accidental symptoms such as emphysemas.
- 11) Never spray directly into the intraoral soft tissues (gingiva, mucosa). It may cause accidental symptoms such as surface damages.

3. INTENDED USE

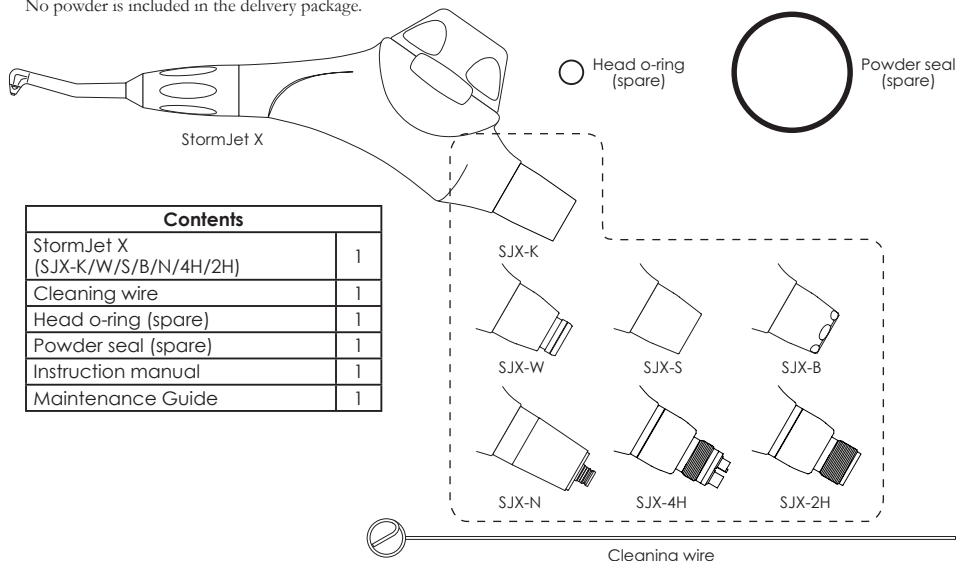
StormJet X is intended to remove dental plaque, stain, and discoloration from tooth surface by dental professionals for dental treatment.

4. CHARACTERISTICS

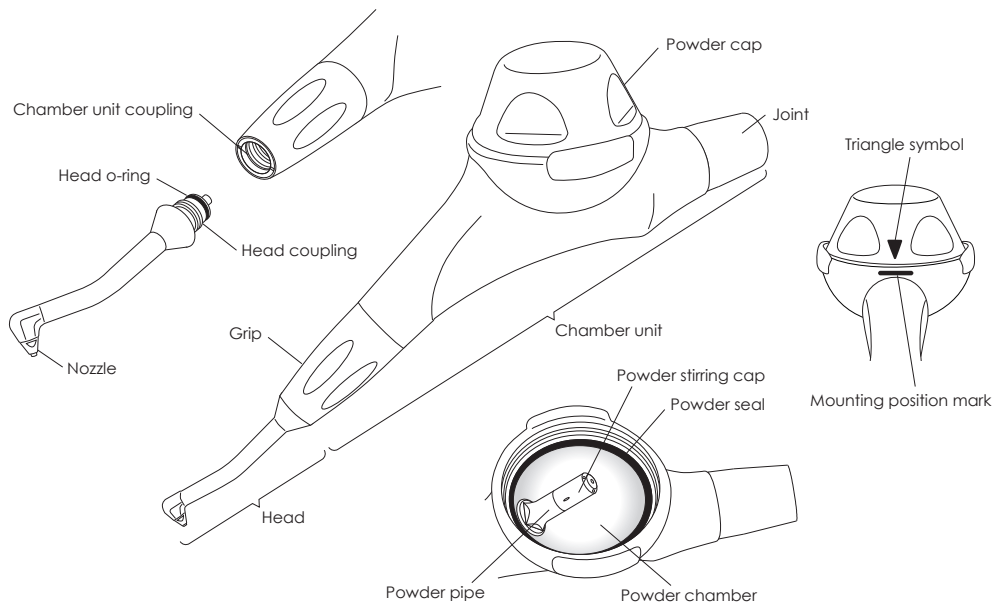
- 1) The compact handpiece is easy to carry between dental units and takes up little space for storage.
- 2) The quick-disconnect system allows easy replacement with turbines and immediate use. No need for cumbersome installation and allows easy integration into your treatment system (for SJX-K/W/S/B/N).
- 3) The contra-angled head rotates 360 degrees, allowing excellent access to all the intraoral objects.
- 4) The detachable head allows easy maintenance for powder clogging.
- 5) Driven by compressed air and water from the dental unit, the handpiece will not generate electromagnetic waves which could affect other medical devices or human body.

5. DELIVERY PACKAGE

The following components are included in the delivery package. When opening for the first time, confirm whether all components are included in the delivery package. If something is missing, contact your dealer immediately. No powder is included in the delivery package.



6. PRODUCT COMPONENTS



7. HOW TO USE

7.1 Before use

CAUTION

Do not drop or give a shock to the handpiece. If the handpiece is shocked, stop using and ask your dealer for inspection and repair of the handpiece with powder cap. If the handpiece and/or powder cap has got a crack (including a small crack invisible to the naked eye) through the shock, the handpiece may break and cause accidents.

ATTENTION

- 1) Use StormJet X for the prescribed purpose according to the specified usage only.
- 2) When using other products which are compatible (such as peripheral devices and instruments) to StormJet X, follow instruction manuals of such devices or instruments.

1) Opening the package

When unpacking the package for the first time, confirm whether all the contents in “5. DELIVERY PACKAGE” are included in the package.

2) Confirmation of defect

Confirm all the components have no defect or damage such as cracks.

3) Sterilization (before first use and when a sterilization is required)



Clean the handpiece with alcohol and sterilize in an autoclave according to “9. CLEANING AND STERILIZATION”.

ATTENTION

- 1) All the components are not sterilized in the delivery condition. Clean with alcohol and sterilize in an autoclave before first use.
- 2) Do not lubricate the handpiece. Lubricant will be mixed into the compressed air and cause powder clogging.

4) Checking your air compressor

Drain the air filter of the compressor in your dental office to use clean and dry air with the handpiece. Do not use compressed air containing moisture. For drainage and regular maintenance of your compressor, please refer to your air compressor's instruction manual. Confirm the compressor is maintained according to its instruction manual.

7.2 Air pressure setting (at first use)

1) Preparation of the handpiece

- (a) If the handpiece is connected to a turbine hose, disconnect it from the turbine hose.
- (b) Attach the head and powder cap to the chamber unit according to “7.3 Attaching head” and “7.4 Attaching powder cap”.

Do not fill the powder yet.

2) Connection (for SJX-K/W/S/B/N)

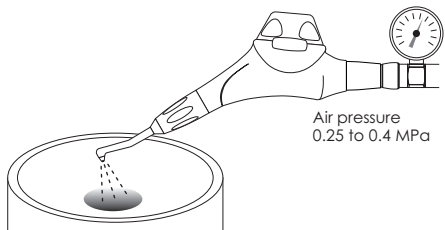
- (a) Connect your coupling (separately sold) to your turbine hose. Confirm the connection is fixed firmly.
- (b) Attach a pressure gauge to your coupling on your turbine hose until you hear a locking sound. Confirm the pressure gauge is firmly attached. (If you don't have a pressure gauge, ask your dental dealer.)
- (c) Attach the handpiece to the coupling of the pressure gauge until you hear a locking sound. Confirm the handpiece is firmly seated.

3) Connection (for SJX-4H/2H)

- (a) Connect a pressure gauge between the handpiece and your turbine hose. Confirm the pressure gauge is firmly seated. (If you don't have a pressure gauge, ask your dental dealer.)

4) Air pressure setting

- (a) Turn off the water supply of your dental unit. Direct the nozzle to your cuspidor and depress the foot control of your dental unit.
- (b) Adjust the air pressure of your dental unit until the pressure gauge shows 0.25 to 0.4MPa (about 2.5 to 4.1kgf/cm²).
- (c) Detach the pressure gauge and handpiece.

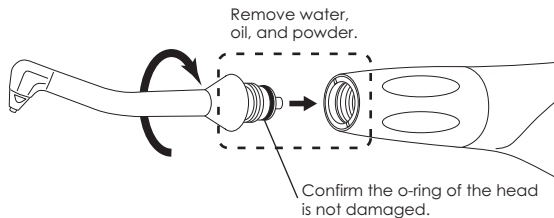


CAUTION

- 1) When connecting your coupling to the handpiece, confirm the connection is fixed firmly after hearing a locking sound (for SJX-K/W/S/B/N). Confirm the head and powder cap are fixed firmly. An unstable attachment will invite injury due to fall of the parts, or powder scattering.
- 2) Never pull the handpiece out of your coupling while the handpiece is in operation. This may cause injury due to disconnection of the handpiece (for SJX-K/S).
- 3) Never release your coupling from the handpiece while the handpiece is in operation. This may cause injury due to disconnection of the handpiece (for SJX-W/B/N).
- 4) The head and powder cap must not be detached while the handpiece is in operation. This may cause injury due to the disconnected parts, or powder scattering.
- 5) The air pressure at the coupling must be set within 0.25 to 0.4MPa (about 2.5 to 4.1kgf/cm²). Use at an excess air pressure will damage tooth surface and cause patient pain. It may also cause injury due to damaged parts, or powder scattering.

7.3 Attaching head

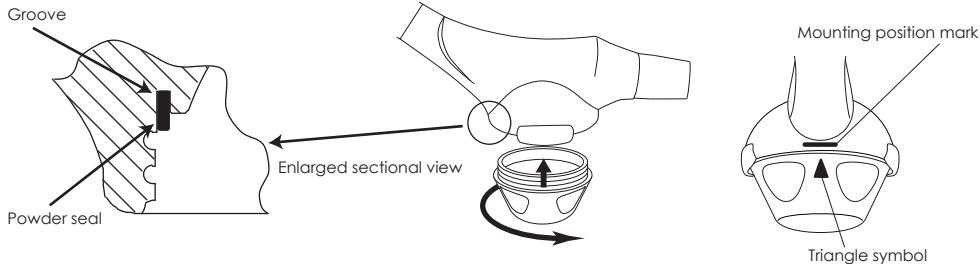
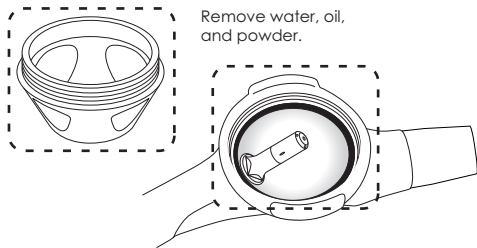
- 1) The handpiece must be disconnected from a turbine hose of your dental unit when attaching and detaching the head. If it is connected, disconnect from the turbine hose first.
- 2) Confirm the o-ring of the head is not damaged.
- 3) If water, oil, or powder adheres to the head or the inside of the chamber unit coupling, wipe off with a cotton swab or dry cloth.
- 4) Align the head to the thread of the chamber unit coupling, turn the head in the direction of the arrow in the illustration until it stops.
Confirm the head is attached firmly.



7.4 Attaching powder cap

* **Do not fill the powder yet. Water from sterilization must be expelled by idling first.**

- 1) The powder cap must be attached or detached when the handpiece is not connected to a turbine hose. If connected, detach from the turbine hose.
- 2) If water, oil, or powder adheres to the inside of the powder chamber, powder cap, or powder seal, wipe off with a dry cloth.
- 3) Confirm the blue colored powder seal is engagingly fitted in the groove of the powder chamber shown in the illustration.
- 4) Turn the powder cap in the direction of the arrow in the illustration until it stops. Confirm the powder cap is firmly attached and the triangle symbol on the powder cap lies the inside of the mounting position mark. In case the triangle symbol lies outside of the mounting position mark, replace the powder seal with a new one according to “10.4 Replacement of powder seal”.



 **CAUTION**

- 1) The powder cap and powder seal must be attached firmly. An unstable attachment will invite injury due to coming off the powder cap, or powder scattering.
- 2) Make sure the powder stirring cap is attached in place. An improper attachment will lower the cleaning efficiency.
- 3) Remove powder remaining in/on the threads of the powder chamber, powder cap, and surface of the powder seal. If the powder adheres firmly and is hard to remove, clean the remaining powder according to “8.1 3) Cleaning and disinfection”. Early thread wear or sealing failure due to the remaining powder may cause powder scattering.
- 4) Before use, check if the threads of the powder chamber and powder cap have any damage such as wear, crack, deformation, etc. If the powder chamber or powder cap has a damage, do not use and ask your dealer for repair.
- 5) If the triangle symbol on the powder cap lies outside of the mounting position mark while the handpiece is in operation, this may cause trouble like crack, damage, or early thread wear of the powder chamber and powder cap.

 **ATTENTION**

Remove water, oil, or powder remaining in/on the head, chamber unit coupling, powder chamber, and powder cap. Otherwise, the powder will become damp and cause clogging.

7.5 Connecting to dental unit

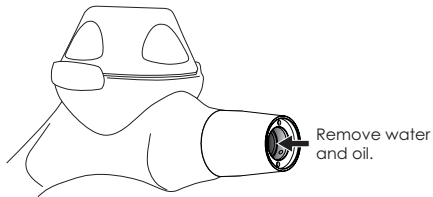
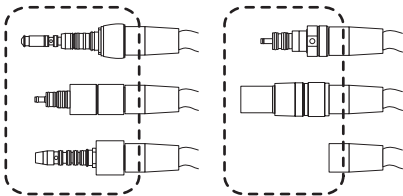
1) Cleaning of coupling and turbine hose

- (a) Confirm no water or oil remains in your coupling (for SJX-K/W/S/B/N) or on your turbine hose (for SJX-4H/2H).
Remove with a dry cloth if remains.

*** When a handpiece (air turbine, air scaler, etc.) is detached, water and oil remain in the joint. Remove the water and oil without fail.**

- (b) Confirm no water or oil remains in the joint of the handpiece. Remove with a cotton swab if remains.

Remove water and oil.

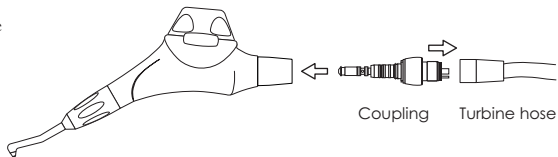


⚠ ATTENTION

Remove water or oil remaining in/on your coupling (for SJX-K/W/S/B/N), your turbine hose (for SJX-4H/2H), and the joint of the chamber unit. Otherwise, the powder will become damp and cause clogging.

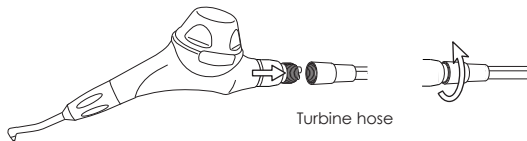
2) Connection (for SJX-K/W/S/B/N)

- (a) Connect a coupling (separately sold) compatible with the handpiece to your turbine hose.
- (b) Insert the coupling on your turbine hose into the joint of the handpiece until you hear a locking sound. Confirm the coupling and the handpiece are firmly seated and also the turbine hose is not loosen.
- (c) If the coupling has a light source, turn off the illumination switch of your dental unit.



3) Connection (for SJX-4H/2H)

- (a) Align the backend of the handpiece and connector holes of your turbine hose.
- (b) Hold the handpiece at the joint. Rotate the ring nut to attach the handpiece until fixed in the connector completely. Confirm the handpiece is firmly seated and the turbine hose is not loosened.



CAUTION

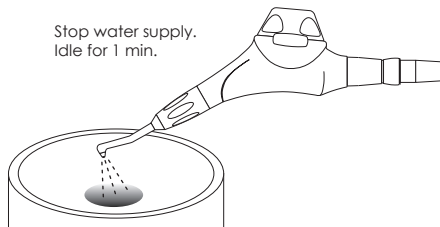
When connecting your coupling to the handpiece, confirm the connection is fixed firmly after hearing a locking sound (for SJX-K/W/S/B/N). Confirm the head and powder cap are fixed firmly. An unstable attachment will invite injury due to fall of the parts, or powder scattering.

ATTENTION

To avoid shortening the life of the light source (light bulb) of your coupling, turn off the illumination of your dental unit when using the handpiece.

7.6 Water removal in circuits (idling)

- 1) Confirm no powder remains in the powder chamber.
- 2) Direct the nozzle to your cuspidor. Depress your foot control without water from your dental unit. Run for 1 minute to remove water remaining in the circuits of the handpiece.



ATTENTION

Run the handpiece for 1 minute without powder before use. If water remains the inside of the handpiece, powder will become damp and cause clogging.

7.7 Powder filling

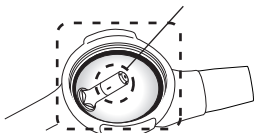
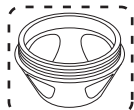
- 1) Remove the handpiece from your turbine hose before filling the powder, disconnect it from the turbine hose.
- 2) Detach the powder cap by turning in the direction of the arrow in the illustration.
- 3) Confirm the powder stirring cap is attached in place.
- 4) If water, oil, or powder remains the inside of the powder chamber or powder cap, remove it with a dry cloth.
- 5) Fill less than 15g of sodium hydrogen carbonate powder into the powder cap.

*** The powder must be filled into the powder cap. Take care not to spill the powder over the thread of the powder cap. If the powder is spilled over the thread, wipe it off with a dry cloth. Filling too much powder may cause early thread wear or sealing failure due to adhering the powder on the thread or powder seal.**

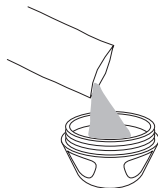
- 6) Hold the chamber unit downward and the powder cap upward as shown in the illustration. Turn the powder cap in the direction of the arrow in the illustration until it stops.



Confirm the powder stirring cap is attached in place.



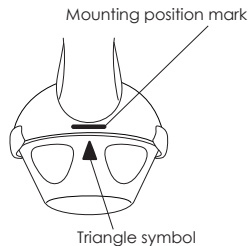
Remove water, oil, and powder.



Fill the powder into the powder cap.



- 7) Confirm the powder cap is firmly attached and the triangle symbol on the powder cap lies the inside of the mounting position mark. If the triangle symbol on the powder cap lies outside of the mounting position mark, replace the powder seal with a new one according to “10.4 Replacement of powder seal”.



CONTRAINDICATION AND RESTRICTION

- 1) Use sodium hydrogen carbonate powder for dental prophylaxis only. Other powder (for example, alumina powder) will cause a decrease in cleaning efficiency, powder clogging, or damage to the handpiece.
- 2) Do not reuse the powder.
- 3) The powder must be filled into the powder cap. Filling into the powder chamber may cause powder scattering due to early thread wear and sealing failure.

 **CAUTION**

- 1) The Powder cap and powder seal must be attached firmly. An unstable attachment will invite injury due to coming off the powder cap, or powder scattering.
- 2) Make sure the powder stirring cap is attached in place. An improper attachment will lower the cleaning efficiency.
- 3) Remove powder remaining in/on the threads of the powder chamber, powder cap, and surface of the powder seal. If the powder adheres firmly and is hard to remove, clean the remaining powder according to “8.1 3) Cleaning and disinfection”. Early thread wear or sealing failure due to the remaining powder may cause powder scattering.
- 4) Before use, check if the threads of the powder chamber and powder cap have any damage such as wear, crack, deformation, etc. If the powder chamber or powder cap has a damage, do not use and ask your dealer for repair.
- 5) If the triangle symbol on the powder cap lies outside of the mounting position mark while the handpiece is in operation, this may cause trouble like crack, damage, or early thread wear of the powder chamber and powder cap.

 **ATTENTION**

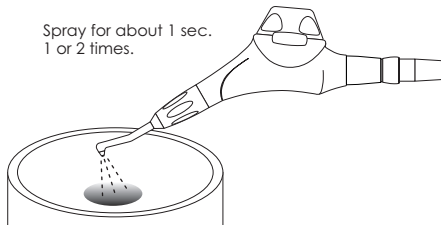
- 1) Remove water, oil, or powder remaining in/on the head, chamber unit coupling, powder chamber, and powder cap. Otherwise, the powder will become damp and cause clogging.
- 2) Do not fill the powder more than the prescribed quantity.
- 3) Do not shake the handpiece after filling powder. The powder may leak from the nozzle.
- 4) Always use dry compressed air and powder. Using air and powder containing moisture or oil will cause powder clogging.

7.8 Confirming correct operation and water volume

- 1) Connect your polisher to your coupling and then to your turbine hose (for SJX-K/W/S/B/N) or to your turbine hose (for SJX-4H/2H) according to “7.5 Connecting to dental unit”.
- 2) Direct the nozzle to your cuspidor.
- 3) Depress the foot control of your dental unit one or two times for about one second and confirm if:
 - air, water, and powder are sprayed,
 - water is sufficient,
 - no leak of air, water, and powder from the handpiece.
- 4) If you have trouble, refer to “11. TROUBLESHOOTING”.

For water adjustment, use the water volume control of your dental unit.

Spray for about 1 sec.
1 or 2 times.



CAUTION

- 1) When connecting your coupling to the handpiece, confirm the connection is fixed firmly after hearing a locking sound (for SJX-K/W/S/B/N). When connecting the handpiece to your turbine hose, confirm the connection is fixed firmly (for SJX-4H/2H). Confirm the head and powder cap are fixed firmly. An unstable attachment will invite injury due to fall of the parts, or powder scattering.
- 2) Confirm no damage, cracks, breakage, or major corrosion is present on the handpiece and it is safe to use.

ATTENTION

A lot of powder might be sprayed immediately after filling the powder. Before using on a patient, spray into your cuspidor one or two times for one second to confirm it is operating normally.

7.9 Treatment

1) Patient, operator, and assistant protection

- (a) Operators and assistants must wear protective eyewear and anti-dust masks.
- (b) Protect the patient's face with towels or protective eyewear.

*** If the patient wears contact lenses, the patient must remove them before treatment.**

- (c) When spraying around soft tissues such as gingiva, protect it with cotton in advance.



CAUTION

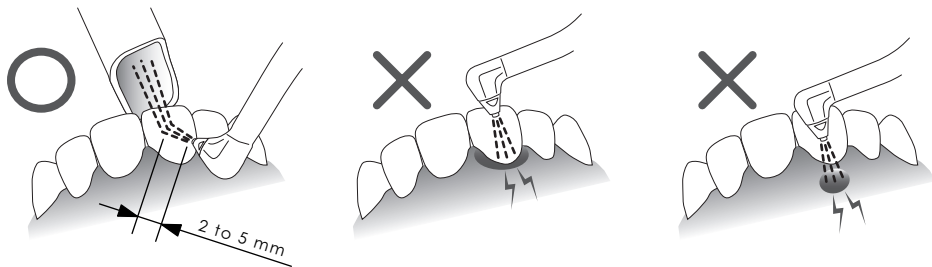
- 1) When using, the operator and assistant(s) must wear protective eyewear and anti-dust masks. If the powder gets into their eyes, wash their eyes with plenty of water and consult an eye doctor.
- 2) During treatment, protect the patient with towels or protective eyewear, so that the powder does not enter mucous membrane (eyes, nose, tracheae) other than oral cavity.

2) Spraying

Use your vacuum suction system to remove the scatter powder. Direct the nozzle to tooth surface and depress the foot control of your dental unit to start spraying.

* **The prevention ability of tooth discoloration is decreased after treatment. Instruct the patient not to smoke or have foods or beverages with strong discoloring effect such as tea and coffee for two or three hours after treatment.**

- When using for the first time, grasp the spraying area and cleaning effect by spraying an extracted tooth or tarnished coin.
- Keep the nozzle 2 to 5mm away from the tooth surface.
- Spray the powder from gingival margin to occlusal surface. Collect the powder with your vacuum suction system to avoid damaging soft tissues.



- When cleaning a large area, move the nozzle finely.
- The powder may be sprayed for a few seconds after releasing the foot control of your dental unit due to the residual pressure in the powder chamber. Collect the powder with your vacuum suction system to avoid damaging soft tissues.
- Have the patient wash his/her mouth as needed or after treatment.



CONTRAINDICATION AND RESTRICTION

1. Non-eligible patients

- 1) Never use StormJet X on patients;
 - on a low salt diet (due to hypertension, hypernatremia, edema, pregnancy toxemia, etc.),
 - having a serious ulcer in digestive organs,
 - having a renal dysfunction,
 - having cardiac dysfunction,
 - having asthma or chronic pulmonary disease,
 - having electrolyte abnormality due to hypochloric alkalosis.
- 2) Avoid using StormJet X on patients below, other than those stated in above 1);
 - having an intraoral injury or disease,
 - having a hyperemia, inflammation, or bleeding in the intraoral cavity,
 - easily getting oral mucosa inflammation or bleeding,
 - having allergies,
 - wearing contact lenses.
- 3) Depending on the patient physical conditions, allergy symptoms, or stomatitis may seldom occur. In such a case, stop using StormJet X.

2. Usage

- 1) Never spray into the subgingival, root canal, or extraction socket. It may cause accidental symptoms such as emphysemas.
- 2) Never spray directly into the intraoral soft tissues (gingiva, mucosa). It may cause accidental symptoms such as surface damage.



CAUTION

- 1) Confirm the head and powder cap are fixed firmly before every treatment. Loosening of the head or powder cap during use will invite injury due to fall of the parts or powder scattering.
- 2) Avoid extended use. Have the patient wash out his/her mouth enough as needed.
- 3) Do not put the handpiece close to heat. It will cause damage and malfunction, and may invite injury or powder scattering during use.

⚠ CAUTION

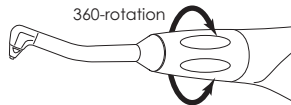
- 4) To avoid infection, wear suitable protective gears such as a mask, gloves and eyewear when using.

⚠ ATTENTION

- 1) Always use with sufficient water. If the water is insufficient, the powder will scatter and the cleaning efficiency will decrease.
- 2) Do not spray directly to restorations such as crowns. It may scratch restorations.
- 3) Collect the sprayed powder with your vacuum suction system during use.
- 4) The powder may be sprayed for a few seconds after releasing the foot control of your dental unit due to the residual pressure in the powder chamber. Collect the powder with your vacuum suction system to avoid damaging soft tissues.
- 5) Take care so that the patient does not swallow too much powder.
- 6) The tooth cuticle is removed during the cleaning procedure, and the prevention ability of tooth discoloration is decreased. The tooth cuticle will be re-created by protein contained in saliva.
To avoid discoloration, instruct the patient not to smoke or have foods or beverages with strong discoloring effect such as tea and coffee for two or three hours after treatment.

3) Turning the head

Rotate the head by turning the grip. The head rotates 360 degrees.



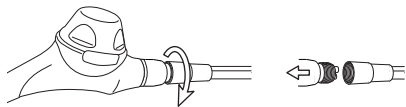
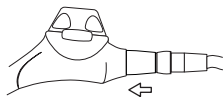
⚠ CAUTION

The head must be rotated by holding and turning the grip, not the head. Otherwise, the head will loosen and this may invite injury or powder scattering during use.

7.10 Other remarks on use

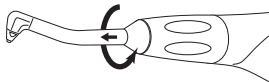
1) Disconnecting from the turbine hose

- (a) Detach the handpiece according to the instruction manual of your coupling (for SJX-K/W/S/B/N).
 - * When reconnecting, clean the coupling, turbine hose and the inside joint of the chamber unit in advance according to “7.5 1) Cleaning of coupling and turbine hose”.
- (b) Hold the handpiece at the joint. Rotate the ring nut to detach the handpiece (for SJX-4H/2H).
 - * When reconnecting, clean your turbine hose and the inside joint of chamber unit in advance according to “7.5 1) Cleaning of coupling and turbine hose”.



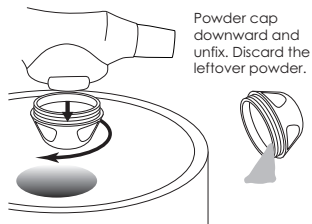
2) Detaching head

- (a) If the handpiece is connected to your turbine hose, disconnect it from the turbine hose.
- (b) Turn the head in the direction of the arrow in the illustration to detach.
- (c) When reattaching, clean the head and inside of the chamber unit in advance according to “7.3 Attaching head”.



3) Detaching powder cap

- (a) If the handpiece is connected to your turbine hose, disconnect it from the turbine hose.
- (b) Hold the handpiece keeping the powder cap downward. Turn the powder cap in the direction of the arrow in the illustration to detach. Detach the powder cap above your cuspidor, as the powder in the powder chamber may scatter when the powder cap is released.
- (c) Discard the leftover powder in the powder cap.
- (d) When refilling the powder and reattaching the powder cap, clean the inside of powder chamber and powder cap according to “7.7 Powder filling”.



ATTENTION

The leftover powder must be discarded after treatment. When the powder becomes damp, it will cause clogging.

8. MAINTENANCE AND CHECKS

8.1 Regular maintenance and checks

* Perform maintenance and checks as follows before sterilization and after clinic hours without fail.

ATTENTION

To use safely, check and maintain the handpiece daily after clinic hours according to “8. MAINTENANCE AND CHECKS”.

1) Powder disposal

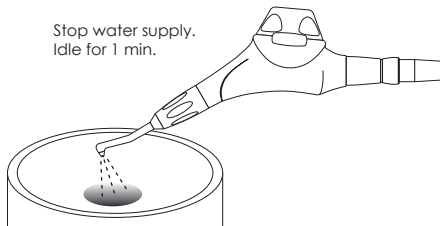
Detach the powder cap according to “7.10 3) Detaching powder cap”. Taking care of powder scattering, discard the leftover powder.

ATTENTION

The leftover powder must be discarded after treatment. When the powder becomes damp, it will cause clogging.

2) Removal of remaining powder in handpiece

- Attach the emptied powder cap to the chamber unit.
- Connect the handpiece to your turbine hose according to “7.5 2) Connection (for SJX-K/W/S/B/N)” or “7.5 3) Connection (for SJX-4H/2H)” according to the model you use.
- Direct the nozzle to your cuspidor. Depress your foot control without water from your dental unit. Run for 1 minute to remove the powder remaining in the circuits of the handpiece.
- Disconnect the handpiece from your coupling or turbine hose.



3) Cleaning and disinfection

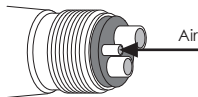
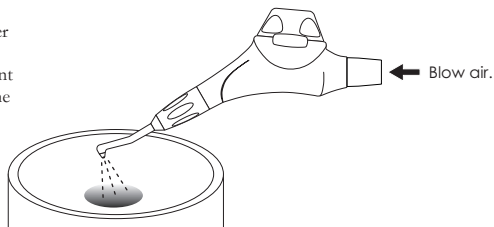
- (a) Remove the head and powder cap from the chamber unit.
- (b) Wash the chamber unit, head and powder cap with a tooth brush, etc. thoroughly under running warm water less than 38°C (100.4°F).
- (c) Rinse thoroughly till no debris or blood remains.
- (d) Remove remaining water by blowing air with a three-way syringe.
- (e) Wipe the chamber unit, head and powder cap with disinfectant alcohol.

 ATTENTION
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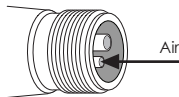
- | |
|--|
| <ol style="list-style-type: none">1) Do not use ultrasonic cleaners to clean the handpiece. This will cause malfunction or damage.2) Remove powder remaining inside and on the surface of the handpiece before every sterilization and after each treatment. The powder is easy to adhere and remain especially in the powder chamber, powder seal, and threads of the powder chamber and powder cap. Clean these parts carefully. If the powder becomes damp, it will cause powder clogging and adherence. |
|--|

4) Water draining

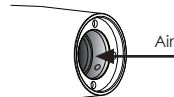
- (a) Attach the powder cap and head to the emptied chamber unit.
- (b) Direct the nozzle to your cuspidor. Blow air into the joint of the chamber unit with a three-way syringe to drain the water circuit.



SJX-4H



SJX-2H



Other models

ATTENTION

- 1) Drain the handpiece before every sterilization and after clinic hours.
- 2) Do not lubricate the handpiece. Lubricant will be mixed into the compressed air and cause powder clogging.

5) Checking your air compressor

Check your air compressor according to "7.1 4) Checking your air compressor".

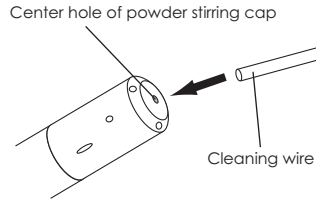
8.2 Cleaning at troubles in air and powder spray

In case of trouble in air and powder spray, clean each part of the handpiece. Cleaning must be done when the handpiece is disconnected from the coupling on your turbine hose.

1) Powder stirring cap cleaning (if the center hole of the powder stirring cap is clogged with powder)

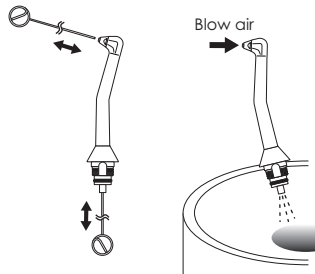
- Remove powder adhered on the center hole of the powder stirring cap with a cotton swab or dry cloth.
- Clean the center hole with the attached cleaning wire to remove the powder blocking the center hole.

(The cleaning wire does not pass through the center hole.)



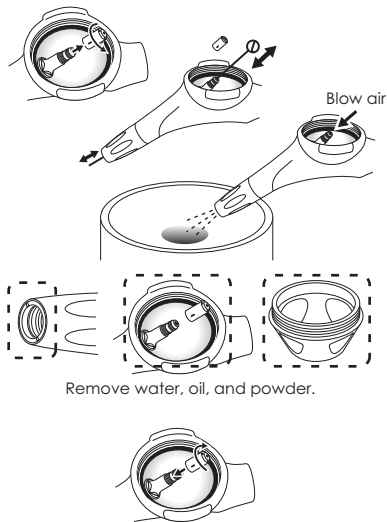
2) Head cleaning

- Remove the head from the chamber unit.
- Insert the attached cleaning wire into the spraying orifice of the nozzle and center hole of the head coupling. Remove powder remaining in the circuit using the cleaning wire.
- Blow air into the spraying orifice of the nozzle with a three-way syringe to remove powder remaining inside.
- If water, oil, or powder remains in the head, remove with a cotton swab or dry cloth.



3) Chamber unit cleaning

- (a) Detach the head and powder cap from the chamber unit.
- (b) Loosen the powder stirring cap from the powder pipe by turning in the direction of the arrow in the illustration and detach it.
- (c) Insert the attached cleaning wire into the powder pipe and remove powder remaining in the pipe.
- (d) Blow air into the powder pipe of the nozzle with a three-way syringe to remove powder remaining inside.
- (e) If powder remains the inside of the chamber unit coupling, remove with a cotton swab or dry cloth.
- (f) If water, oil, or powder remains in the inside of the chamber unit or the powder cap, remove them with a cotton swab or dry cloth.
- (g) Attach the powder stirring cap to the powder pipe by turning in the direction of the arrow in the illustration.



9. CLEANING AND STERILIZATION

9.1 Cleaning and disinfection

Clean polisher according to “8.1 Regular maintenance and checks 1) to 4)” before sterilization.

CAUTION

To avoid infection, wear suitable protective wears such as mask, gloves and eyewear when using.

9.2 Sterilization

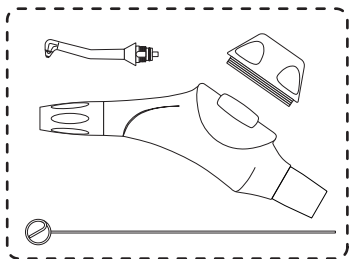
1) Sterilizability

The handpiece (the head, chamber unit, and powder cap) and cleaning wire are sterilizable in an autoclave.

2) Sterilization (Sterilization must be done after every patient.)

- Remove the head and powder cap from the chamber unit. Confirm no powder remains in the powder chamber.
- Put the chamber unit (with head and powder cap detached) into a sterilization bags and seal them.
- Place each component sealed in the sterilization bags on a sterilization tray to avoid direct contact with sterilizer's inner chamber surface, and put them into the autoclave.

The maximum sterilization temperature is 135°C (275°F). Sterilize at 134°C (273°F) for 3 minutes. Follow your local regulation for sterilization.



Sterilizable in autoclave

 **CAUTION**

- 1) Sterilization must be done after every patient in order to prevent direct and cross infection.
- 2) To avoid infection, wear suitable protective wears such as mask, gloves and eyewear.

 **ATTENTION**

- 1) To avoid trouble and damage on the handpiece, see “9. CLEANING AND STERILIZATION” when sterilizing.
- 2) The handpiece is autoclavable up to 135°C (275°F). Sterilize at 134°C (273°F) for 3 minutes. Follow your local regulations for sterilization.
- 3) Do not sterilize with powder remaining in the powder chamber.
- 4) Do not sterilize the handpiece with instruments on which some medicine or chemical agent remains.
- 5) Do not immerse the handpiece in disinfectant liquids.
- 6) Do not use alkaline disinfectant and oxidized water (hard acid water or super acid water) for disinfection.
- 7) Dry heat sterilizers generate high heat that exceeds the maximum sterilization temperature of the handpiece. Do not use them in order to avoid mechanical trouble or damage to the handpiece.
- 8) Depending on the conditions of your sterilizer or sterilizing methods, the handpiece may become discolored.
- 9) The chamber unit is made from a synthetic material and may rarely get fine scratches due to autoclave sterilization. Receiving maintenance after 250 autoclave cycles or once every two years is recommended for safety confirmation.

3) After sterilization

When the sterilization cycle is finished, take out the sterilized bags from the autoclave. Cool and dry naturally.

9.3 Storage

After sterilization, confirm no water beading remains in the sterilized bags. The powder is sensitive to heat and humidity. Store in a place of low temperature and humidity.

 **ATTENTION**

- 1) As for the storage place, see “9.3 Storage”.
- 2) The chamber unit and head must be dried completely before storage. If water remains, it may cause discoloration, rust, or powder clogging.
- 3) Store and take care of the handpiece properly to keep it away from unauthorized users.
- 4) Do not store the handpiece in a place where it may be exposed to water.
- 5) Keep the handpiece in a place where it is unaffected by barometric pressure, temperature, humidity, ventilation, strong sunshine, dust, salt, or sulfurous air.
- 6) Keep the handpiece in places without vibration or shock.
- 7) Do not store the handpiece in a place where chemical agents are kept, or some gas exists.

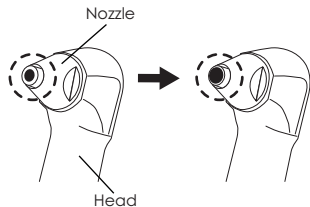
10. REPLACEMENT OF CONSUMABLE PARTS, DISPOSAL

* For disposal of used consumables, see “10.5 Disposal”

10.1 Replacement of head

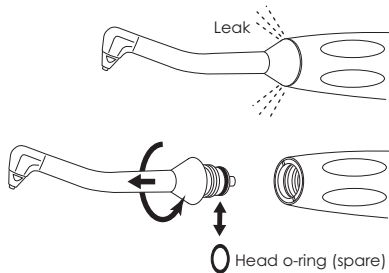
The nozzle of the head will wear out by usage. An expanded spraying orifice will decrease in cleaning efficiency and make it difficult to pinpoint-spray. When the spraying orifice has become larger as shown in the illustration, the work efficiency will be recovered by replacing the head (separately sold). Attach the new head properly according to “7.3 Attaching head” when replacing.

* The entire head must be replaced, not only the nozzle.



10.2 Replacement of head o-ring

In case the o-ring on the head coupling is damaged or worn or, air, water, or powder leaks from the joint, replace the used o-ring with the new head o-ring (attached as a spare part). Attach the new o-ring properly in place. Do not damage the surface of the o-ring when replacing.



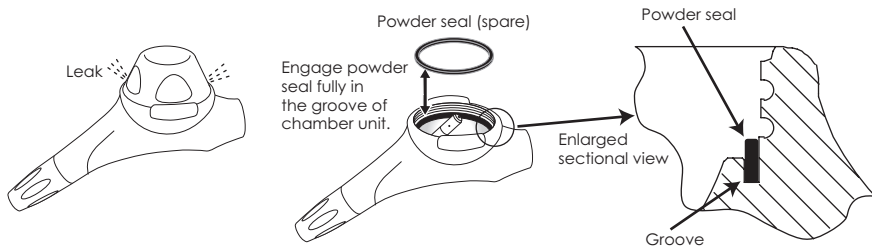
10.3 Replacement of powder cap

The transparency of the powder cap will lower by usage and may decrease in visibility of the inside of the powder cap. In case you cannot see the powder in the powder chamber, replace the powder cap (separately sold). Attach the powder cap properly according to “7.4 Attaching powder cap” when replacing it.

10.4 Replacement of powder seal

In case the powder seal attached into the thread of the powder chamber is damaged or worn, or air or powder leaks between the powder cap and powder seal, replace the used powder seal with the new powder seal (attached as a spare part). Follow the procedure below:

If powder or something remains in the groove of the powder chamber, in which the powder seal is attached (see the illustration below), remove it by blowing air with a three-way syringe. Clean the groove and attach the powder seal properly, so that the powder seal fully seats in the groove (see the illustration below). Do not damage the surface of the powder seal when replacing.



CAUTION

When replacing the o-rings and powder seal, be careful about the correct mounting position and direction. Incorrect mounting may cause injury due to disconnection of the head or powder cap, powder scattering, leakage of air, water, or powder during use.

10.5 Disposal

Dispose of the handpiece according to your local rules and regulations.

11. TROUBLESHOOTING

If the handpiece does not operate as stated in this instruction manual, check your problem according to the list below. If your trouble is not corrected, or if your trouble is not listed below, contact your dealer.



CONTRAINDICATION AND RESTRICTION

The handpiece must not be repaired by yourself in case of malfunction. Contact your dealer for repair.

Symptoms	Possible causes	Countermeasures
1) No powder spray. Low cleaning efficiency.	<ul style="list-style-type: none"> * The center hole of the powder stirring cap is clogged with powder. * Powder clogging within the circuits. * The powder stirring cap is not attached properly. * No air. * Low air pressure at the coupling. * The control system of your dental unit does not work. 	<ul style="list-style-type: none"> * Clean the powder stirring cap according to “8.2 1) Powder stirring cap cleaning”. * Clean the head and chamber unit according to “8.2 2) Head cleaning” and “8.2 3) Chamber unit cleaning” * Attach the powder stirring cap properly according to “8.2 3) Chamber unit cleaning”. * Set the coupling pressure between 0.25 and 0.4MPa. * Set the coupling pressure between 0.25 and 0.4MPa. * Check the control system using other handpieces or three-way syringe.
2) No water.	<ul style="list-style-type: none"> * Water supply system of your dental unit is shut off. * Water does not reach turbine hose. * The handpiece water circuit is clogged. * O-ring(s) on your coupling is/are damaged. 	<ul style="list-style-type: none"> * Activate the water supply system of your dental unit. * Check the water supply system of your dental unit. * Ask your dealer for repair. * Replace the o-ring(s) on your coupling (separately sold).

Symptoms	Possible causes	Countermeasures
3) Leak (air, water, and powder) from powder chamber coupling.	<ul style="list-style-type: none"> * The head is not firmly attached. * The o-ring on the head is worn or damaged. 	<ul style="list-style-type: none"> * Attach the head firmly according to “7.3 Attaching head”. * Replace with the new head o-ring according to “10.2 Replacement of head o-ring”.
4) Air and/or powder leak from near of the powder chamber.	<ul style="list-style-type: none"> * The powder cap is not firmly attached. * The powder seal is not properly attached in the powder chamber. * The powder seal is worn or damaged. * Powder adheres to the sealing surface (of the powder seal and/or powder cap). 	<ul style="list-style-type: none"> * Attach the powder cap firmly according to “7.4 Attaching powder cap”. * Attach the powder seal properly according to “10.4 Replacement of powder seal”. * Replace with the new powder seal according to “10.4 Replacement of powder seal”. * Fill the powder into the powder cap properly according to “7.7 Powder filling”.
5) Water leak from around the coupling of the turbine hose.	<ul style="list-style-type: none"> * O-ring(s) on the coupling is/are damaged (for SJX-K/W/S/B). * O-ring(s) on the joint of the handpiece is/are damaged (for SJX-N). 	<ul style="list-style-type: none"> * Replace the o-ring(s) on your coupling (separately sold). * Replace the o-ring(s) on the joint (separately sold).
6) Water leak from around the turbine hose.	<ul style="list-style-type: none"> * Seal on the joint of the handpiece is damaged (for SJX-4H/2H). 	<ul style="list-style-type: none"> * Replace the seal on the joint (separately sold).
7) The handpiece cannot be connected to the coupling of your turbine hose.	<ul style="list-style-type: none"> * The handpiece is not compatible with the coupling of your turbine hose. * The light cover at the front of the coupling of your turbine hose is loose (if you use coupling with light). 	<ul style="list-style-type: none"> * Use the handpiece compatible with the coupling according to “7.5 Connecting to dental unit”. * Turn the light cover at the front of the coupling to fix firmly.

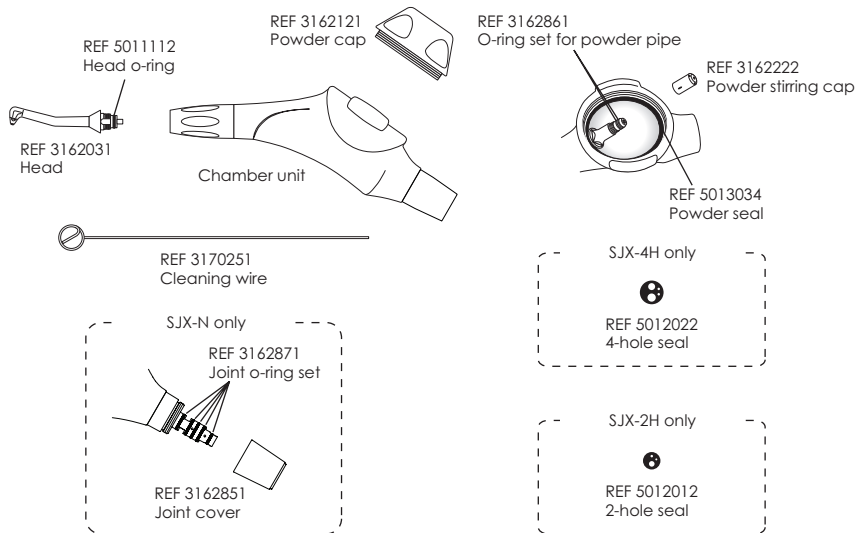
12. SPECIFICATIONS

ITEMS	SPECIFICATIONS			
Product name	StormJet X			
Model	SJX-K	SJX-W	SJX-S	SJX-B
Connection	Multiflex® coupling	Roto Quick® coupling	Sirona® Quick coupling	Unifix® coupling
Powder consumption volume	4g/min (at coupling air pressure 0.4MPa)			
Coupling air pressure	0.25 to 0.4MPa (36 to 58psi, 2.5 to 4.0bar, 2.5 to 4.1kgf/cm ²)			
Air consumption volume	10L/min (at coupling air pressure 0.4MPa)			
Water flow volume	40ml/min (at coolant water pressure 0.2MPa)			
Length	201mm (7.9inch)	200mm (7.9inch)	196mm (7.7inch)	196mm (7.7inch)
Weight (without powder)	142g (5.0oz.)	136g (4.8oz.)	137g (4.8oz.)	133g (4.7oz.)

ITEMS	SPECIFICATIONS		
Product name	StormJet X		
Model	SJX-N	SJX-4H	SJX-2H
Connection	Mach®/Phatelus® coupling	Midwest 4-hole	Borden 2/3-hole
Powder consumption volume	4g/min (at coupling air pressure 0.4MPa)		
Coupling air pressure	0.25 to 0.4MPa (36 to 58psi, 2.5 to 4.0bar, 2.5 to 4.1kgf/cm ²)		
Air consumption volume	10L/min (at coupling air pressure 0.4MPa)		
Water flow volume	40ml/min (at coolant water pressure 0.2MPa)		
Length	208mm (8.2inch)	207mm (8.1inch)	204mm (8.0inch)
Weight (without powder)	144g (5.1oz.)	143g (5.0oz.)	143g (5.0oz.)

Color versions: (IW) Ivory white, (MG) Mint green, (SB) Sky blue and (BK) Black

13. COMPONENT PARTS



Distributor:

Dr. Mayer

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Email: office@doctor-mayer.com

Website: doctor-mayer.com



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