

PAT. 043-2047 Hygiene Handpiece

Operation Manual

135°C
555 : AUTOCLAVABLE

OM-MK038E Rev.A

⚠ Caution before use

- The Patterson brand Hygiene Handpiece is intended for use by dental professionals only.
- Read this Operation Manual carefully before using the handpiece. Be sure to follow all the operating instructions, including all cautions and warnings.
- Keep this Operation Manual for future reference.

1. Specifications

Back-end configuration	Applicable to ISO standard 4-hole connector
Nose configuration	Applicable to U-type prophy/contra angles
Chuck configuration	Applicable to ISO standard 2.35 dia. spindle
Maximum speed	5,500rpm at drive-air of 2.0 kgf/cm ² (28psi)
	6,000rpm at drive-air of 2.5 kgf/cm ² (36psi)

Note:

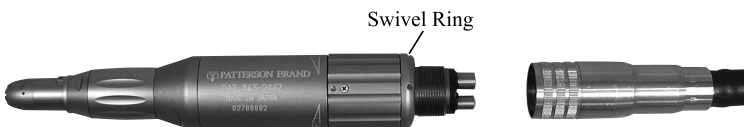
The maximum speed may vary slightly depending on the type of tubing connected to the handpiece.

2. Installation/Removal of Handpiece onto/from Tubing Connector

● Installation:

1. Make sure that the tubing connector is ISO standard 4-hole.
2. Align the air/water inlet ports at the handpiece back end with the corresponding holes of the tubing connector.
3. Holding the swivel ring of the handpiece with fingers, tighten the nut of the tubing connector by turning it clockwise.

- **Removal:** Holding the swivel ring, remove the handpiece from the tubing connector by turning the nut counterclockwise.



⚠ Caution

- Never operate the handpiece if it rattles after connection to the tubing connector or if any abnormality is sensed. In such a case, consult the Patterson Service Center.
- Never attempt to forcibly connect the handpiece to the tubing connector when the screw-in of the handpiece to the tubing connector is too tight. Never use pliers or any other tools for the installation.

3. Installation/Removal of Prophy/Contra Angle or Bur (Attachment) onto/from Handpiece

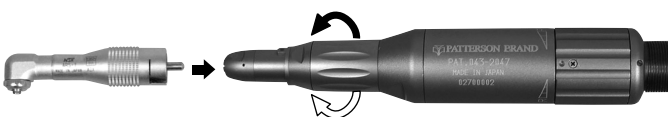
- **Removal of Bur Blank:** Holding the motor, twist the Bur Lock Ring in the direction indicated by the black arrow until the chuck clicks open and pull the bur blank out.

● Installation of Prophy/Contra Angle:

1. Make sure that the chuck is open.
2. Insert the spindle into the chuck all the way until the back end of the prophy/contra angle contacts the shoulder of the nose of the handpiece, aligning the slit at the back end of the prophy/contra angle with the protuberance of the nose of the handpiece.
3. Holding the motor, twist the nose in the direction indicated by the white arrow until the chuck clicks shut.
4. Before operation, pull the attachment to make sure that it is securely installed onto the handpiece.

● Installation of Bur:

1. Make sure that the chuck is open.
2. Insert the bur spindle into the chuck all the way until the spindle touches the back of the chuck.
3. Place the nose of the handpiece upward so that the bur inserted does not slide down, then twist the nose in the direction indicated by the white arrow until the chuck clicks shut.
4. Before operation, pull the attachment to make sure that it is securely installed onto the handpiece.



⚠ Caution

- Never install a damaged attachment onto the handpiece such as a worn-off bur, bur or prophy/contra angle with a bent spindle. Such attachments may not only injure patients, but critically damage the handpiece.
- Never install a non-ISO standard bur or prophy/contra angle with a non-ISO standard spindle.
- Never open/close the chuck without installing the attachment onto the handpiece, as the chuck holding power may be prematurely reduced.

4. Operation

- Set the air pressure gauge for 2.0 kgf/cm²(28psi).
- Before operation, be sure to make a trial run and make sure:
 1. The drive-air is not leaking from the connecting part of the handpiece back end and tubing connector.
 2. Changes in the rotating direction and rotating speed can be manipulated with the control ring as shown below:



- *When the ring is turned in "F" direction, the attachment installed onto the handpiece rotates clockwise.
 - *When the ring is turned in "R" direction, the attachment installed onto the handpiece rotates counterclockwise.
 - *The rotation is stopped at the center position between "F" and "R".
- Select the rotating direction and the speed by manipulating the ring according to the treatment purposes.

⚠ Caution

- **Never install/remove the attachment onto/from the handpiece while the handpiece is in operation.**
- **Never operate the handpiece without the attachment.**
- **Whenever any abnormalities in performance, sound level, heat level, function, etc. are sensed, stop the operation and consult the Patterson Service Center.**
- **Never keep the handpiece connected to the tubing connector.**

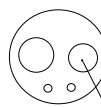
⚠ Warning

Never dismantle/alter the handpiece in any case.

5. Lubrication

- Use Patterson brand Handpiece Spray.
- The handpiece must be lubricated after each use and before autoclaving using the following procedures:
 1. Remove the attachment from the handpiece.
 2. Remove the handpiece from the tubing connector.
 3. Wipe off the saliva, prophy paste, etc. stuck to the surface of the handpiece with an alcohol-soaked soft tissue or cotton swab.
 4. Point the handpiece to the downward position and inject Patterson Handpiece Spray for three seconds into the drive-air port as illustrated below:
 5. Install the sterilized attachment onto the handpiece after spray injection and repeat the opening/closing of the chuck.
 6. Make a trial run for ten seconds with the attachment installed onto the handpiece, moving the control ring in "F" and "R" directions several times.
 7. Wipe down the excess lubricant on the surface of the handpiece with a soft tissue.

Midwest 4-hole



Drive Air Port

⚠ Caution

- **Never use a wire brush for surface cleaning.**
- **Never immerse the handpiece in water or disinfectant solution.**
- **Never keep the handpiece connected to the tubing connector after the trial run.**

6. Sterilization

- **Autoclave is recommended for sterilization.**
 1. Before sterilization, clean the surface of the handpiece and lubricate the handpiece.
 2. Lubricate the handpiece and make a trial run.
 3. Remove the attachment from the handpiece.
 4. Put the handpiece into a sterilization pouch. Do not combine it with others.
 5. Place the handpiece in the center or upper shelf of the autoclave chamber.
 6. Autoclave the handpiece at 275°F or 132°C for 20 minutes.

⚠ Caution

- **Never use dry heat sterilization, cold sterilization, etc.**
- **Never autoclave the handpiece together with others in a sterilization pouch.**
- **Never place the handpiece at the bottom of autoclave chamber, as the temperature at the bottom may rise above the actual setting temperature.**

7. Guarantee

Patterson guarantees the handpiece for 10 months subject to the observance of maintenance instructions, cautions, warnings and normal use.

Notes:

- Patterson reserves the right to analyze and determine the cause of any failure.
- Guarantee is void if the breakage, accident or any other issues are caused by the neglect of the daily maintenance, cautions, warnings and common sense in use.
- Dismantling or reassembling by any third parties other than the Patterson Service Center voids guarantee.


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