

BencoDental Push&Swivel^{PLUS} High Speed Fiber Optic Handpiece

KaVo Style (4046-131)



Read this Operation Manual carefully before use and keep it in a safe place for future reference.

ISO 15843 AUTOCLAVABLE
(PUSH&SWIVEL) Rev 01

⚠ Caution

- When operating the handpiece always consider the safety of the patient.
- Prior to each use, ensure that all instruments and accessories are in proper conditions before operation as per instructions enclosed.
- The handpiece is designed only for dental clinical use.
- Do not attempt to disassemble the handpiece nor tamper with the mechanism.
- Use only the ISO standard burs within the manufacturer's specified maximum allowable speed range. Bent, damaged, or deformed burs with non-ISO shanks, as well as those extended from the handpiece during use, pose a risk of bending, breaking, or flying away.
- Always keep the bur shank clean. Entry of debris into the chuck could cause bur run-out and the bur could not be mounted in most.
- Avoid impact on the handpiece. Do not drop the handpiece.
- Check for vibration, noise and overheating outside the patient's mouth. If any abnormalities are found do not operate. Contact your authorized dealer for service.
- If any abnormalities are found in use, stop using immediately and contact your dealer.
- Depressing the push-button while the bur is rotating could result in OVERHEATING of the handpiece head. Caution must be exercised during use to keep cheek tissue away from the push-button. Contact with cheek tissue may cause the push button to depress and injury to the patient may occur.
- Do not operate the handpiece without inserting a bur or test-bur into the chuck.
- Do not extend burs outward from handpiece head. Extended burs could result in bent burs, inadequate cooling or personal injury due to bur ejection.
- Remove the bur only after the handpiece has completely stopped rotating.
- After extended use the handpiece may become noisy, replace the cartridge with a new one manufactured by Benco. Failure to replace the cartridge may cause accidents or impair operator's hearing.
- Use only the genuine Benco-turbine cartridge. Do not use repaired or re-built Benco turbine cartridge. Non-conformance to this shall immediately void the manufacturer's warranty, and the manufacturer shall have no liability to the user and the patient for any incident that may arise from use of such turbine cartridge.
- Benco turbines should not be rebuilt or recycle by unqualified Benco technician.
- Do not wash, soak, or wipe off the handpiece with/in the oxidation potential solution, (strong acid, superacid solution or sterilized solution).
- Refer to the coupling manual for connecting it to the handpiece hose.

1. Specifications

Model	[4046-131]
Head Type	Mini Head
Allowable speed	380,000 - 400,000
Drive Air Pressure	42PSI or 3 Bar
Burs	ISO1797-1 Type 3 1.59 - 1.6mm Diameter
Optics	Cellular Glass Rod
Head Size Diameter x Height	12.45mm x 10.50mm
Weight	55 Grams
Connection	Kavo MULTIFLEX LUX Type
Power	23 Watts

*Speed may slightly vary depending on the back-end configuration and type of hose used.
*KaVo[®] and MULTIFLEX[®] are registered trademarks of Kaltenbach & Voigt GmbH & Co., Germany.

2. Connection / Disconnection to the coupling

Make sure the manufacturer's coupling is firmly attached to the handpiece tubing and the drive air pressure is correct.

(1) CONNECTION

To connect the handpiece to the coupling, align the handpiece and coupling then push together. (For detail, refer to manufactures instruction). (Fig.1)

(2) DISCONNECTION

Release the handpiece from the coupling (For detail, refer to manufactures instruction) and remove the handpiece.



Fig. 1

⚠ Caution

- Do not remove the handpiece while the turbine is in motion.
- Do not exceed the recommended air pressure to prevent premature turbine ball bearing failure.

3. ⚠ Cautions on Burs

- Always use ISO standard burs, the shank diameter of which is $\phi 1.59 - \phi 1.60$ mm.
- Do not use bent, worn, damaged, or non-concentric burs. Such burs can cause damage to the handpiece.
- Always use within the bur manufacturer's recommended allowable speed.
- Always use clean burs. Uncleaned burs may allow debris to build up inside chuck, causing weak bur retention or premature chuck wear.
- Do not use short shank burs.
- Insert the bur all the way into the chuck until it stops with the push-button fully depressed.

4. Mounting / Removing bur

(1) Mounting Bur

Depress the Push-button and insert the bur into the chuck until it is secure. Release the button. (Fig.2)

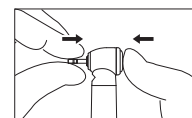


Fig. 2

(2) Removing Bur

Stop the handpiece rotation completely. Depress the Push-button firmly and remove the bur. (Fig.3)

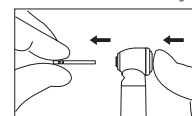


Fig. 3

⚠ Caution

- Test that the bur is secure by gently pulling and pushing the bur without depressing the Push-button. This action can also increase the chuck retention power.
- If removing the bur becomes difficult, depress the Push-button, grip the bur with fine pliers and gently remove the bur.

5. Lubrication

Supply lubricant after each use and/or before autoclaving.

Lubricating Procedure

- 1) Disconnect the handpiece from the coupling.
- 2) Mount the attached spray nozzle adapter to the spray can.
- 3) Shake the can well to mix the lubricant and the gas.
- 4) Hold the spray can upright.
- 5) Insert the attached spray nozzle adapter into the back end of the handpiece. Hold the handpiece and the can firmly, and spray into the handpiece for 2 - 3 seconds, or until the oil comes out of the handpiece head.
- 6) If brownish, or blackish oil comes out, unless the oil is in that color, repeat lubrication until clean oil comes out.

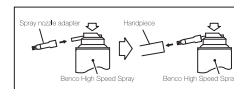


Fig. 4

*Benco High Speed Spray : Order No. 4055-845

⚠ Caution

- Be sure to hold the handpiece firmly to prevent the handpiece from slipping out of hand by the spray pressure when lubricating.
- Supply lubricant until it comes out of the handpiece head.
- Hold the spray can upright.

6. Sterilization

Autoclave sterilization is recommended.

Sterilization is required first time you use and after each patient as noted below.

Autoclave Procedure :

- 1) Scrub dirt and debris from the handpiece, and wipe clean with alcohol-immersed cotton swab or cloth. Do not use a wire brush.
- 2) Lubricate with Benco High Speed Spray. Refer to 5. Lubrication.
- 3) Insert into an autoclave pouch. Seal the pouch.
- 4) Autoclavable up to max. 135°C.
- ex.) Recommended Autoclave cycle - 6 minutes at 134°C.
- 5) Keep the handpiece in the autoclave pouch to keep it clean until you use it.

⚠ Caution

- Place the handpiece in the center or upper tray, as the heating element may be located at the bottom of the chamber and temperature at the bottom could exceed 135°C.
- Do not autoclave the handpieces, even though they are individually bagged, with other instruments, from which chemicals are not sufficiently cleaned.

7. Cleaning the cellular glass optic rod

Wipe clean the cellular glass optic rod exit point (Fig. 5) with an alcohol-immersed cotton swab. Remove all debris and oil.

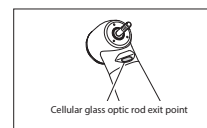


Fig. 5

⚠ Caution

Do not use a sharp tool to clean the cellular glass optic rod. It could damage the glass and reduce the light transmission. If illumination becomes dim please contact your dealer.

8. Changing Turbine Cartridge

- 1) Mount a dummy bur in the chuck.
- 2) Mount the Head Cap Wrench over the Head Cap, and remove the cap by turning it counter-clockwise.
- 3) Push up the dummy bur, and the Cartridge is easily removed from the head.
- 4) Clean the head interior with Spray Lubricant. Wipe dry.
- 5) Insert the new Turbine Cartridge into the cleaned head. Align the Alignment Pin on the Turbine Cartridge with the Slot in the head, and gently push it in. It is a snug fit.
- 6) Mount the Head Cap. First align the threads. Gently turn the Head Cap over the threads by fingers until finger tight. Use the Head Cap Wrench for final, secure turns. (Fig. 7).

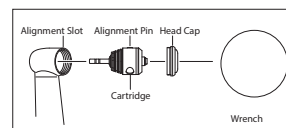


Fig. 6

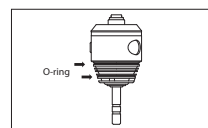


Fig. 7

⚠ Caution

- The Head Cap screw thread is very fine. To prevent it from breaking, use of the wrench from the first thread is not recommended.
- Before inserting a new Cartridge, clean the head interior.
- Make sure that two O-rings (Fig. 7) are in place on the Cartridge.

Distributed by

BencoDental

800.GO.BENCO • benco.com
295 CenterPoint Blvd., Pittston, PA 18640

Assembled in Canada

BENCO40500 Rev 01