

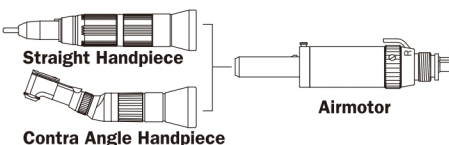
Operation Manual Airmotor Set

**ME-20MS, ME-20BS ME-30MS, ME-30BS ME-50MS, ME-50BS
ME-55MS, ME-55BS ME-80MS, ME-80BS ME-85MS, ME-85BS**

CAUTION This product is designed for dental use. Its operation and maintenance should be done under dentist's supervision.

Thank you for choosing our Airmotor Set. This set, carefully produced, based on both Japanese advanced technology and our experienced craftsmanship since its start in 1956, boasts of its high quality. Please read this manual well before use. We hope that our product with proper use meets your full satisfaction.

SET DESCRIPTION



Set Name	Straight H.P.	Contra Angle	Air-Motor
1. ME-20MS	ES-30A	EC-20L	ME-20M
2. ME-20BS	ES-30A	EC-20L	ME-20B
3. ME-30MS	ES-30A	EC-30BL	ME-20M
4. ME-30BS	ES-30A	EC-30BL	ME-20B
5. ME-50MS	ES-30A	EG-20L(EGC-20L)	ME-20M
6. ME-50BS	ES-30A	EG-20L(EGC-20L)	ME-20B
7. ME-55MS	ESG-30AR	EG-20L(EGC-20L)	ME-20M
8. ME-55BS	ESG-30AR	EG-20L(EGC-20L)	ME-20B
9. ME-80MS	ES-30A	EC-20L	ME-80M
10. ME-80BS	ES-30A	EC-20L	ME-80B
11. ME-85MS	ES-30A	EC-30BL	ME-80M
12. ME-85BS	ES-30A	EC-30BL	ME-80B

1. Rotation Direction	:Forward / Reverse
2. Rotation Speed	:ME-20M/B 500-25,000rpm (Air Pressure 2.0kg/cm ² 20,000rpm) :ME-80M 150-5,000rpm (4 to 1 Speed Reduction) ME-80B 200-5,500rpm (4 to 1 Speed Reduction)
3. Rotation Torque	:ME-20M/B 160g·cm ME-80M/B 480g·cm
4. Maximum Air-Pressure	:50psi (3.5kg/cm ²)
5. Maximum Air-Consumption	:60 L / min
6. Coupling with HP	:ISO Standard (E-type)
7. Connection with Hose	
ME-20M, ME-80M	:ISO Standard B-type (4-holes)
ME-20B, ME-80B	:ISO Standard A-type (2-holes)
8. Sterilization	:135°C autoclave for 20 min.

CAUTION Drop of Airmotor and Handpiece, or excessive force on the bur connected with Handpiece, could cause damage on internal structure or ball-bearing, which will lead to performance failure of the products.
If Airmotor and Handpiece start to make abnormal noise or vibration, stop their use immediately and hand them over for repair or replace them with the new ones. All the troubles could lead to serious damage on ears and/or hands.

1. Connection with Hose

Check the connection type of Airmotor matches that of hose. Screw tight a hose coupler at the back end of Airmotor. Make sure there is neither air- nor water-leak.

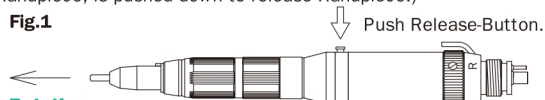
2. Coupling with Handpiece

Push the nose of Airmotor into the Handpiece to be coupled, all the way until it stops. Verify proper coupling by pulling the Airmotor and the Handpiece. Make trial run at low speed after connection.

3. Un-coupling of Handpiece

Pull out handpiece, with the release button on the Airmotor pushed down. (The stopper on Airmotor, hooked in the inside groove of Handpiece, is pushed down to release Handpiece.)

Fig.1



4. Forward / Reverse Rotation

Forward or Reverse rotation is selected by adjusting the screw head on Rotation-Ring at F or R each. By locating the screw head anywhere between F and R, the rotation speed is set less than maximum. The Screw-Head should usually be positioned at F. The rotation speed can be varied by changing push-force on foot controller, installed at dental unit.

Fig.2



How to use

5. Spray Attachment

- CA Spray Attachment : Clip the spray attachment on the neck of Contra-Angle Handpiece, in the way that sprayed water is aimed at the tip of bur. Connect the tube with the spray pipe on 2 hole Airmotor.
- ST Spray Attachment : Clip the spray attachment on the nose of Straight Handpiece. Connect the tube with the spray pipe on 2 hole Airmotor.
- 4 hole Spray Attachment : For 4 hole Airmotor, connect 2 tubes of 4-holes spray attachment with spray pipes on Airmotor. Then, join the CA Spray tube or the ST Spray tube to the attachment. (The 4 hole spray attachment is not included in the set of 2-hole Airmotor.)

6. Use of Straight Handpiece

- Refer to the instruction manual of ES-30A, attached.

7. Use of Contra Angle Handpiece

- Refer to the instruction manual of EC-20L, attached.

Fig.3



Maintenance

CAUTION To keep Airmotor and Handpiece under good condition, lubricate oil specifically made for dental handpiece should be used. Use the spray as instructed by its manufacturer. Lubrication should be done every day.

1. Lubrication on Airmotor

Be sure to lubricate before autoclave, and in the case that water and / or dust gets inside. Spray lubrication could also make inside cleaning. It should be done twice each time. Spray lubricate oil in the drive-air tube at the back end of Airmotor. (It has the same effect with spray lubrication that air, with the hose attached, is supplied after 2 drop of lubricate oil is placed at the drive air tube.)

CAUTION Without being held firm by hand, Airmotor could be pushed away by air-pressure of spray. Accidental drop of equipment could cause damage on it.

2. Lubrication on Straight Handpiece

Refer to the instruction manual of ES-30A, attached. Spray twice each time.

3. Lubrication on Contra Angle Handpiece

Refer to the instruction manual of EC-20L, attached. Spray twice each time.

4. Surface Cleaning

Clean with brush and wipe off by cloth. Lubrication should be done every time after surface cleaning. Although it has effect to apply a little alcohol on the cloth, excessive amount, by seeping inside Airmotor, could take off the lubricate oil on ball-bearing. In that case, lubricate again.

5. Inside Cleaning

Take the same steps with the process of spraying lubricate oil. Operate trial run at low speed every after lubrication. In order to drive dirt out of exhaust air tube, repeat the process at least twice. Do the cleaning once a day.

6. Drain and Air-filter

Airmotor and Handpiece are precision equipment. Supplied air and water must be both dried and purified through fine filter. To keep obtaining clean air, drive water out of the drain device installed at dental unit and the compressor once a week.

CAUTION Fine dust particle and moisture, if included in supplied air, could cause damage on ball-bearing.

CAUTION Do not put Airmotor through ultrasonic disinfection solution cleaning procedure. Do not use cold sterilization or dry heat.

- Clean with brush and wipe off by cloth. Refer to the section, MAINTENANCE, 4. Surface Cleaning.
- Lubricate with Spray. Refer to the section, MAINTENANCE, 1-3, Lubrication on Airmotor, Straight Handpiece, Contra Angle Handpiece.
- Autoclave at the temperature 130 - 135°C (2Mpa) for 20min.
Note : Prevent the bur on Handpiece from hitting others in time of autoclave.
- Take Handpiece and Airmotor out of the Autoclave and dry them in room temperature.

CAUTION Do not operate Autoclave dry cycle at the temperature higher than 135°C.

- After Handpiece and Airmotor are completely dried, lubricate them twice. Refer to the section, MAINTENANCE, 1-3, Lubrication on Airmotor, Straight Handpiece, Contra Angle Handpiece.

Trouble, which occurs due to material defect or despite with correct use as the instruction manual states, during the period specified below, is covered under warranty by the manufacturer. Quality deterioration caused by drop of Airmotor will be excluded from warranty coverage.

Airmotor:1 year Straight handpiece:1 year Contra Angle:6 months Spare Head of Contra Angle:3 months

Sterilization

Warranty

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