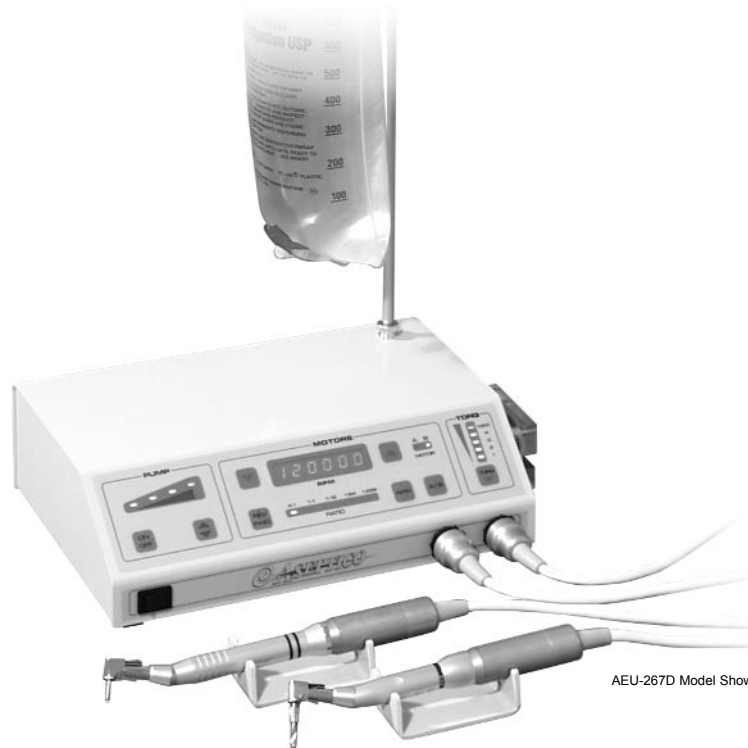


OPERATION and MAINTENANCE INSTRUCTION MANUAL

AEU-267S/D Implant & Surgery System



AEU-267D Model Shown



TABLE OF CONTENTS:

Introduction	1
Package Contents	1
Setting Up the Unit	2
Operation Functions	4
Operation	7
Sterilization & Maintenance	8
Troubleshooting	9
Warranty	Back Cover

SPECIFICATIONS:

Console Size: 7.5" x 12" x 3.25"
(19 cm x 30 cm x 8.25 cm)

Console Weight: 6 lbs (2.7 kg)

Power Source: 120 V or 220-240 V

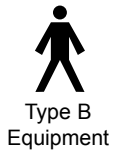
Max. Power
Consumption: 132 W



P.O. Box 1548
Woodinville, WA 98072
(425) 487-3157
(800) 426-5913
www.aseptico.com

EU Authorized Representative:
Advena Ltd.
Horsham RH12 2BT
United Kingdom

SYMBOL DEFINITIONS:



Type B
Equipment



Type BF
Equipment



Dangerous
Voltage



Attention - Consult
Accompanying
Documents

Your new Aseptico AEU-267 Implant/Surgery System is one of the finest motor/handpiece combinations available to the medical profession.

The system features two available variable torque brushless motors with digital R.P.M. readout, self contained irrigation pump, and torque control circuit.

These features combine to make a superior surgical motor and irrigation system for implant and other bone surgeries.

Congratulations

This system is engineered to provide many years of reliable service. Please read the instructions provided in this manual to receive the best and longest service from your Aseptico equipment.

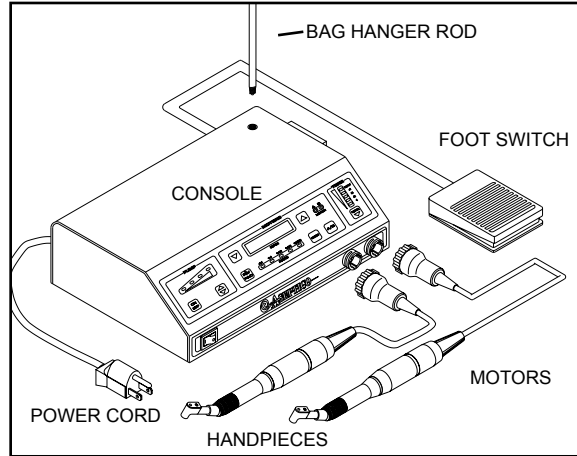
Separate manuals may be provided to cover the operation and maintenance of handpieces or other accessories for your unit.

PACKAGE CONTENTS

- Electric Control Console
- Remote Power Cord
- Autoclavable Brushless Micro Motors
 - One (1) included with AEU-267S
 - Two (2) included with AEU-267D
- Autoclavable Motor Holder
- AE-7P On/Off Foot Switch (971-S)
- Irrigation Bag Hanger Rod
- Irrigation Tubing Set
 - AE-20 included with AEU-267S
 - AE-20D included with AEU-267D
- "E" Type Handpieces (purchased separately)

SETTING UP THE UNIT:

1. Unpack the console and verify voltage is correct for the country of usage and carries the proper certification markings. Correct power cord is shipped with the console.
2. Attach the remote power cord to the back of the console and plug into a grounded electrical receptacle.
3. Connect one or both motors to the receptacles on the lower front panel of the console. If only one motor is used, connect to the Primary (A) Motor Receptacle.
4. Attach the appropriate "E" Type handpiece to each motor.
5. Insert bag hanger rod into holder on the top of the unit. Thread into place.
6. Attach the supplied foot control to the connector on the back of the unit marked 'Foot Switch'. An On/Off type (AE-7P) or a variable speed type foot control (AE-16A) may be used.



NOTE: The hand motor will remain sufficiently cool during the normal intermittent use (IEC 601 defined frequency of use) for which it was designed.

7. Follow steps *i-viii* to install irrigation set(s).

i. Remove the clear pump cover by unscrewing the thumb screw on top.

ii. Thread tubing through pump following the diagram below.

iii. Grasp the metal connector and tubing, stretching the tubing slightly. Insert into the slot on the top of the pump block, making sure to position the metal connector on the outside edge of the block as shown.

iv. Guide the tubing around the rollers with slight tension and insert into bottom slot on the pump block.

v. While maintaining tension on the tubing, check that tubing is centered on the rollers and is completely tucked into slots on pump block.

vi. Replace clear pump cover by sliding into position from front to back and securing with the thumbscrew.

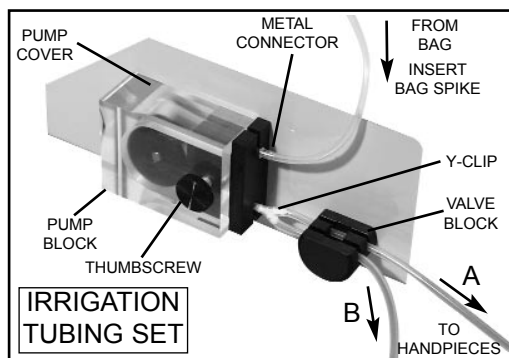
vii. a. If one handpiece is to be used (AE-20):

Route the remaining tubing to the handpiece and attach to the irrigation clips. Secure the tubing to the motor cords with the clip set provided.

vii. b. If two handpieces are to be used (AE-20D):

Gently pull tube tight. Attach the end of the tube to the Y-clip. Attach the handpiece tubes to the remaining two holes in the Y-clip. Push the handpiece tubes into the spaces on the top of the Valve Block. Route the tube leading to Handpiece A (plugged in to the Primary (A) Motor Receptacle) through the inside (console side) channel. Route the tube for Handpiece B (plugged in to the Secondary (B) Motor Receptacle) through the outside channel. (See diagram) Route the remaining handpiece tubing to the handpieces and connect to the irrigation clips. Secure the tubing to the motor cords with clip sets provided.

viii. To complete setup, remove the protective cover from the irrigation bag and insert the bag spike into the I.V. port. Hang the bag from the bag hanger rod.



CAUTION: Never connect or disconnect the bag spike to the irrigation bag over the console. Water spilled onto the console can damage the unit. This will void the warranty.

OPERATION FUNCTIONS:

- 1. Power Switch** - Controls power on/off to console. When turned on, console display should light.
- 2. RPM** - Controls speed of motor and handpiece. Push the up arrow to increase speed and the down arrow to decrease speed. A visual display shows the actual RPM. For complete accuracy, the Ratio Indicator must exactly match the ratio of the handpiece being used. All settings are held in memory even after the unit is turned off.
- 3. Forward/Reverse** - Determines the rotation of the motor and handpiece. A red L.E.D. light and audible beeper indicate when rotation is reversed.
- 4. Handpiece Ratio Selector** - Calibrates the RPM display to read accurately for up to five different handpiece ratios. Push the ratio up/down arrow until the indicator light matches the handpiece ratio you are using. Different handpiece ratios are required to obtain different low speed ranges used in endodontic procedures.
- 5. Motor Selector** - Activates the desired motor for use. The AEU-267 can be switched between Motor A and Motor B on demand during operation. Press the Motor Selector button to toggle between the two motors.
- 6. Irrigation Pump** - Controls irrigant flow to the selected handpiece. Irrigation will flow to the Primary (A) Handpiece when the Motor Selector is set to "A". Irrigation will flow to the Secondary (B) Handpiece when the Motor Selector is set to "B". To activate pump, press the Pump Flow On/Off Switch. To adjust the flow level, press the Pump Flow Level Selector. The flow level can be adjusted to 4 settings.

7. **Torque Control** - Allows the user to adjust the torque limit from minimum to maximum levels. Aseptico's state-of-the-art AEU-267 implant unit provides excellent torque control. Five (5) progressively reduced torque settings are provided, ranging from full to minimal torque. The table on the right provides general guidance in selecting torque settings. These settings are based on the average torque value for ideally maintained handpieces.

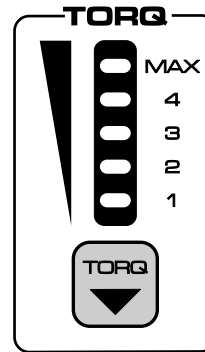
TORQUE LIMITS

1:256 handpiece ratio

Speed 10 - 40 RPM

Average torque values

Torque Level	Stall Torque
1	10 N cm
2	20 N cm
3	35 N cm
4	55 N cm
Max	160 N cm

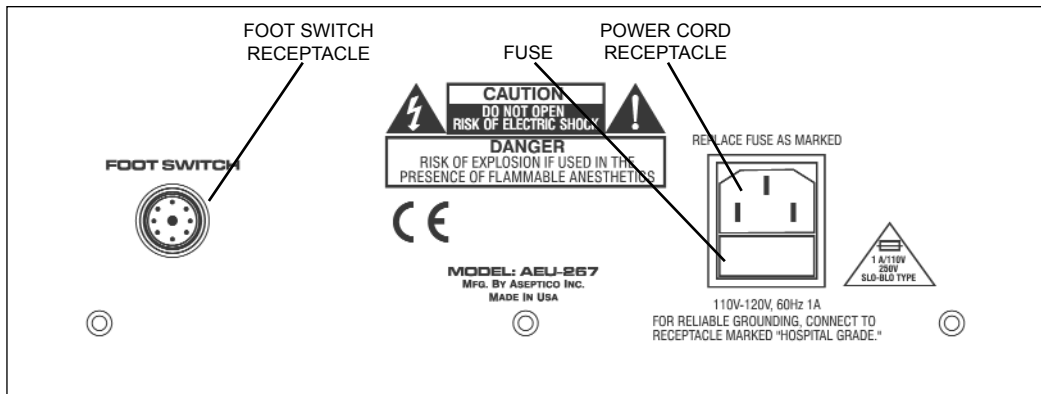
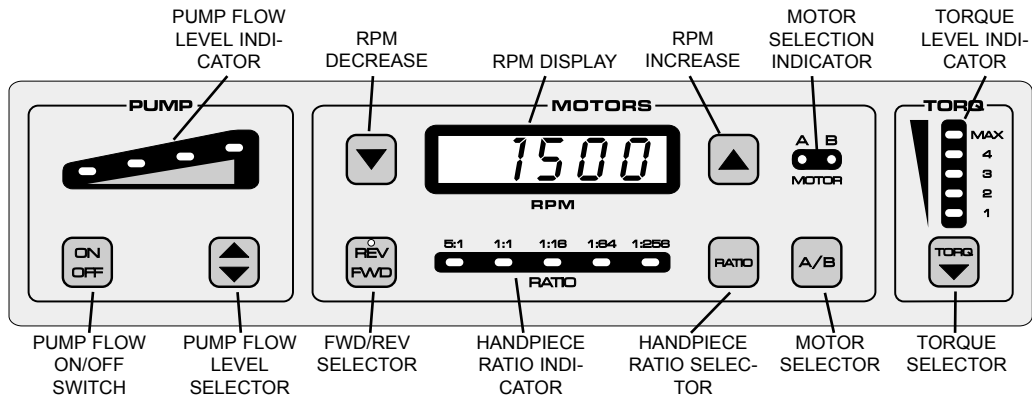


The maximum speed ranges with a 30K motor are shown in the adjacent chart.

NOTE: Top speed ranges will be reduced when using torque levels 1 and 2. Full speed ranges are achieved in torque levels 3, 4, & MAX.

SPEED RANGES:

Handpiece Ratio	Torque Level 1	Torque Level 2	Torque Levels 3, 4, & Max
5:1	16,000 - 48,000	16,000 - 80,000	16,000 - 150,000
1:1	4,000 - 12,000	4,000 - 20,000	4,000 - 30,000
1:16	200 - 700	200 - 1,200	200 - 1,800
1:64	40 - 180	40 - 300	40 - 460
1:256	10 - 45	10 - 75	10 - 115



OPERATION:

After the unit has been set up and you have made yourself familiar with the operation functions, you are ready for operation as follows:

1. Turn the power switch on the lower left front of the console to the 'ON' position. The front panel display will light.
2. Attach a sterile handpiece to each motor and use the Motor Selector to activate the desired motor. Active motor will be displayed on the Motor Selection Indicator.
3. Use the Ratio Selector to match the gear ratio of the handpiece being used (i.e. 1:1 for a 1:1 handpiece, or 1:16 for a 1:16 reduction handpiece) as displayed on the Handpiece Ratio Indicator.
4. Adjust the up/down arrows on the RPM display to the desired operating speed on the RPM readout.

NOTE: The RPM Display indicates true instrument speed when the Ratio Selector is in the appropriate position. Make sure the ratio displayed on the Handpiece Ratio Indicator matches the actual handpiece ratio for RPM display accuracy.

5. Adjust the Torque Control to the desired operating level.
6. For irrigation, press the Pump Flow On/Off Switch to activate irrigation. Use the Pump Flow Level Selector to adjust the irrigant flow to the desired level.
7. Depress the foot control to activate motor and begin operation.


STERILIZATION AND MAINTENANCE:

HANDPIECES - Thorough cleaning and lubrication of handpieces after each use and before sterilization is very important to ensure proper operation and service life of the handpiece. Follow the instructions provided with the handpiece purchased for complete maintenance instructions.

MOTORS - The entire motor assembly supplied with your unit may be sterilized by steam autoclave or ethylene oxide gas processes. Follow the sterilizer manufacturer's recommended procedure.

Before autoclaving the motor and cord assembly the 'E' type coupling on the motor must be plugged. A plug with sealing o-ring is supplied with the motor. Remove the handpiece from the motor and install plug as shown below.

- Always install the autoclaving plug into motor and motor connector before autoclaving.



Turn black connector ring only

- If the autoclaving plug for the motor becomes difficult to remove or install, apply silicone grease or similar lubricant to the o-rings.
- Loosely coil the motor cord when autoclaving. Avoid crowding the motor when autoclaving.

CONSOLE - The exterior of the console may be cleaned by wiping with a soft cloth moistened with mild detergent or disinfecting solution.

The included motor/handpiece holding cradle is also fully autoclavable.

WARNING

- Do not attempt to disassemble the motor or motor connector.
- Do not oil or lubricate the motor.
- Do not attach a handpiece to the motor while the motor is running.
- Do not bend motor cord sharply.

Failure to comply with any of the above instructions may void your warranty



CAUTION FOR ALL STERILIZATION:

- Do not exceed 133° C or 275° F.
- Do not submerge in any solutions.
- Do not use ultrasonic cleaners.

TROUBLESHOOTING:

Problem:	Correction:
Console does not light when turned on:	Check console to power connection. Check that voltage is proper voltage. Check fuse. If blown, replace with 1.0A/250V slo-blo fuse for 110 volts, & 0.5A/250V slo-blo fuse for 220 volts.
Console lights when turned on, but handpiece does not turn:	Check motor plug connection. Check foot switch connection. Depress foot switch. Increase RPM. Check that an instrument is properly seated in the handpiece and the collet is closed.
Improper display:	Turn power switch off, wait 5 seconds, then turn back on to reset. Ratio setting does not match handpiece.
Motor slowing down or sluggish:	Dirty under lubricated handpiece. Handpiece lubricant is running into motor. After lubricating, set handpiece with head down to let excess lubricant drain out.



P.O. Box 1548
Woodinville, WA 98072
(425) 487-3157 (800) 426-5913
www.aseptico.com

WARRANTY

Aseptico warrants this product against defects in material or workmanship for a period of one year, from date of original invoice. Handpieces are warranted for 90 days under the same conditions. Expendable components such as light bulbs, are covered by shorter warranty periods, or have no warranty. Aseptico's sole obligation under product warranty is (at its sole option and discretion) to repair or replace any defective component or product in part or whole. Aseptico shall be the sole arbiter of such action.

In the event of alleged defect under warranty, the purchaser is to notify Aseptico's Customer Service Department promptly. Customer Service will provide instructions, usually directing that the product be returned for service. Shipment to Aseptico and the cost thereof is always the responsibility of the purchaser.

Accidental misuse, inappropriate installation, or failure to perform directed maintenance voids the warranty.

Aseptico does not assume, under this warranty, any risks or liabilities arising from the clinical use of its products, whether or not such use involves coincidental utilization of products manufactured by others.