

Maintenance and Cleaning. Instructions for the Synthes Pen Drive Systems.

Cleaning Chart



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Manual Precleaning

This information is provided in accordance with ISO 17664:2004 and ANSI/AAMI ST81:2004.



1 Rinse

Rinse device under running cold tap water for a minimum of two minutes. Use a sponge, soft lint-free cloth or soft bristled brush to assist in removing gross soil. Clean all cannulations, Drive Unit and attachments with a cleaning brush.



2 Manipulate moving parts

Manipulate all moving parts such as the triggers, release sleeves for attachments, mode switch, etc. under running tap water to loosen and remove gross debris.



3 Spray with solution

Spray and wipe device using a neutral pH enzymatic solution for a minimum of two minutes. Follow the enzymatic detergent manufacturer's directions for correct temperature, water quality (i.e. pH, hardness) and concentration/dilution.



4 Clean

Clean device manually under running warm water using a neutral enzymatic detergent for a minimum of five minutes. Manipulate all moving parts under running water. Use a soft-bristled brush and/or soft lint-free cloth to remove all visible soil. Follow the enzymatic detergent manufacturer's directions for correct temperature, water quality (i.e. pH, hardness) and concentration/dilution.



5 Rinse thoroughly

Rinse device thoroughly using running cool to lukewarm tap water for a minimum of two minutes. Use a syringe or pipette to flush lumens and channels. Do not damage the electrical contacts on the Drive Unit and cables when using the cleaning brush. Do not hold the cable contacts directly under running water.



6 Inspect

Visually inspect device. Repeat Steps 1 through 6 until no visible soil remains.

Note: Manual precleaning as described above must be followed by a mechanical washing/disinfection procedure.

Note: Do not use pointed or sharp objects for cleaning.

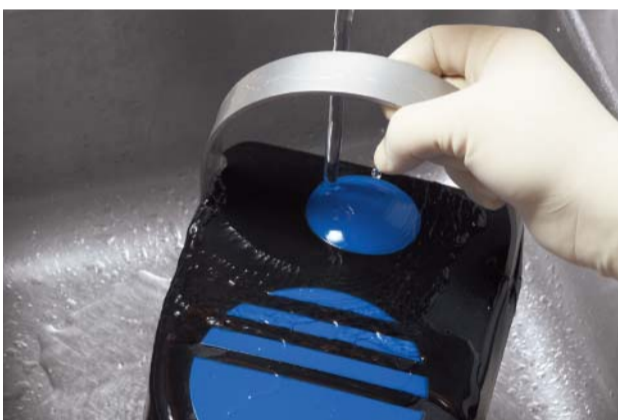
Cleaning the Console and Foot Switch



1 Clean Console

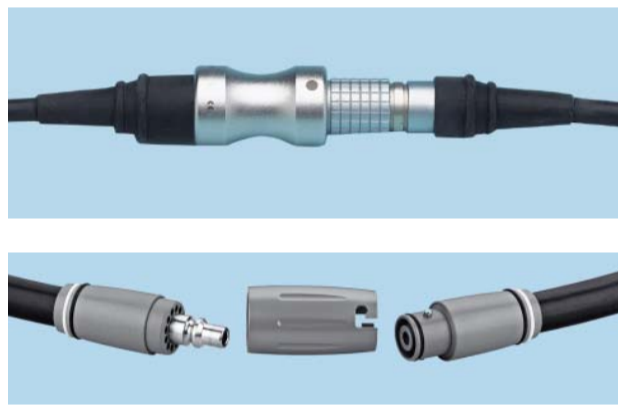
Disconnect all cables and turn the Console OFF. Wipe the Console with a soft cloth moistened with a disinfectant. The Console must not be immersed or cleaned under running water.

Note: Do not sterilize the Console or Foot Switch.



2 Clean Foot Switch

Wipe the Foot Switch with a soft cloth moistened with a disinfectant. The Foot Switch may be cleaned under running water if necessary. Make sure that the ventilation holes on the bottom plate face downward during cleaning. Do not immerse. Allow to dry after cleaning.



3 Seal cable

For automatic washing of the Electric Pen Drive, use the Seal Nipple to seal both ends of the Cable for the Drive Unit. For Air Pen Drive, use the Seal Nipple for Double Air Hose and the Protective Cap for the Pen Drive Unit.

Mechanical Cleaning Cycle Process Parameters

This information is provided in accordance with ISO 17664:2004 and ANSI/AAMI ST81:2004.

Cycle	Minimum Time (minutes)	Temperature / water	Type of detergent
Rinse	2	Cold tap water	N/A
Prewash	1	Warm tap water (40°C)	Neutral pH enzymatic cleaner
Cleaning	2	Warm tap water (45°C)	Neutral pH detergent
Rinse	5	DI (Deionized) water	N/A
Thermal disinfection	5	Hot DI water (93°C)	N/A
Dry	40	90°C	N/A

Remove all devices from washer. Inspect cannulations, coupling sleeves, etc. for visible soil. If necessary, repeat the manual preclean/mechanical cleaning cycle.

Maintenance Station Instructions

Synthes recommends the use of the Maintenance Station after each use to ensure optimum operation of the system.



1 Open release ring

Open the release ring for the attachment on the Drive Unit. Insert the release ring into the far left fitting and push lightly. The Drive Unit will automatically lock into place.

Use the Synthes Adaptor for Maintenance Station for Air Pen Drive to attach the Air Pen Drive Unit to the Maintenance Station.



2 Push attachment into fitting

The other fittings are for attachments. Carefully push the attachment coupling into a fitting and turn the attachment counterclockwise to lock it in place.

Burring attachments should be in the "lock" position for oiling.



3 Close lid and start

Close the lid and push the START button to start the oiling process. The procedure will take about 3 minutes when all fittings are occupied. The READY LED will light when the oiling cycle is complete.

4 Remove Drive Unit

Remove the Drive Unit by turning the release ring to detach from the fitting.

5 Remove attachments

Remove the attachments by turning them clockwise and carefully pulling them off the fittings.

For more details on the Synthes Maintenance Station, please refer to the User's Manual.

Manual Oiling Instructions



1 Connect attachment to adaptor

After each use, oil the attachments with the Synthes Pen Drive Spray fitted with the Adaptor for Attachments. Connect the attachment to the Adaptor for Attachments and activate the spray for 1 second. Wrap the attachment with a clean cloth, or hold it over a sink or basin to catch excess oil. Wipe attachment with a clean cloth when finished to remove excess oil.



2 Connect Drive Unit to adaptor

Connect the Drive Unit to the Adaptor for the Pen Drive and spray for 1 second. Wrap the Drive Unit with a clean cloth, or hold it over a sink or basin to catch excess oil. Wipe the Drive Unit with a clean cloth when finished to remove excess oil.

Electric Pen Drive: Oil the attachment coupling

Air Pen Drive: Oil the air hose coupling



3 Alternative: Synthes Oil

The Drive Unit can also be lubricated using Synthes Oil. Apply 2–3 drops into the cannulated shaft of the Drive Unit (1) and blow in with compressed air. Apply a drop of oil between the mode switch and the body of the Drive Unit (2) and between the release ring and the body of the Drive Unit (3).

Note: Use only Synthes Maintenance Spray (05.001.098) or Synthes Pen Drive Oil (05.001.095). Use of other oils will void the warranty and may damage the equipment.

Oil movable parts of the Air Pen Drive Foot Switch if the connection for air hoses and irrigation do not move smoothly. Add 2 drops of Synthes Oil onto each connection and move them to spread the oil.



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