Cleaning and Sterilization

Cleaning

Use the recommended method to clean the ABS the parts. See “Cleaning agents” for a list of cleaning agents that have been tested and found to not cause harm to ABS parts.

Autoclaving

The ABS can be loaded into standard sterilization trays. Do not exceed the maximum load of the sterilization tray. The approximate weight of the breathing system is 4 kg (9 lb). All parts must be free of visible contaminants prior to autoclaving. Do not block any ports of the ABS when placing parts in the sterilization tray. Steam should be able to freely enter all components during autoclaving.

Read and understand the manufacturer’s instruction manual for the autoclave equipment prior to use.

CAUTION

Only autoclave parts marked 134°C.

Do not autoclave the circuit O2 cell, O2 cell cable, or the plastic flow sensors.

⚠️ Do not autoclave disposable absorber canisters.

1. Disassemble the breathing system. Leave the bellows assembly intact. See the “Breathing system removal” and “Simple breathing system disassembly” procedures.
2. Visually inspect the parts. Wipe clean any visible contaminants using a disposable cloth and an approved disinfectant.
3. Set the Bag/Vent switch to Vent.
4. Wrap the parts in standard packaging material for autoclaving.
5. Put the bellows assembly into the sterilization tray upside-down so that the bellows is extended.
6. Put the empty reusable absorber canister into the sterilization tray upside-down.
7. Put the condenser, with the reservoir removed and the EZchange canister module attached, into the sterilization tray at a downward angle.
8. Put the remaining parts into the sterilization tray.
9. Vacuum autoclave at 121°C for 20 minutes minimum. Do not exceed 134°C.
10. Pulse dry the parts for 35 minutes.
11. Allow parts to cool and dry completely before reassembling the breathing system.
12. In accordance with application requirements, store the sterilized parts in a sterile container or in protective packaging to guard against dust.
Automated washer

The ABS components can be cleaned using an automated washer. It is recommended to remove all visible contaminants from the parts prior to automated washing.

Read and understand the manufacturer's instruction manual for the automated washing equipment prior to use.

Cleaning kits are available to enhance the cleaning of the breathing system parts in an automated washer.

CAUTION

Do not clean the circuit O2 cell or flow sensors in an automated washer.

1. Disassemble the breathing system. See the "Breathing system removal" and "Disassemble the breathing system" procedures.
2. Empty the reusable absorber canister.
3. Put the parts into the automated washer. Position the parts for proper drainage.
4. Follow the automated washing equipment manufacturer's instructions to wash the parts.
5. Remove the parts from the washer and empty any water.
6. Allow parts to cool and dry completely before reassembling the breathing system.
Cleaning and Sterilization

Cleaning agents

The cleaning agents listed have been tested and found to not cause harm to the breathing system parts. Read the material safety data sheet (MSDS) for each cleaning agent.

The cleaning agents listed may not be available or approved for use in all countries. Follow hospital guidelines for cleaning and cleaning agent use.

CAUTION Cleaning solutions not shown in the cleaning agents list must have a pH of 7.0 to 10.5. Organic, halogenated or petroleum-based solvents, anesthetic agents, glass cleaners, acetone, and other harsh cleaning agents are not recommended.

<table>
<thead>
<tr>
<th>Cleaning agent</th>
<th>Concentration</th>
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</thead>
<tbody>
<tr>
<td>Surface cleaning</td>
<td></td>
</tr>
<tr>
<td>Acticlor</td>
<td>7 tablets to 1 l of water</td>
</tr>
<tr>
<td>Bode kohrsolin FF 6 l</td>
<td>30 ml to 1 l of water</td>
</tr>
<tr>
<td>Cleanisept</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Cliniwipes</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Hibiscrub 4 x 500 ml</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Puraswab Cleaning Swabs</td>
<td>70% Ethanol in swab</td>
</tr>
<tr>
<td>Virkon</td>
<td>1 packet to 1 l of water (1%)</td>
</tr>
<tr>
<td>Flow sensor cleaning</td>
<td>Sekusept aktiv</td>
</tr>
<tr>
<td>Cidex 14 day mixture with activator vial</td>
<td>Full strength</td>
</tr>
<tr>
<td>Automated washer</td>
<td>Dr. Weigert NeoDisher Mediclean</td>
</tr>
</tbody>
</table>