Supplement

Zeus Infinity Empowered

WARNING

To properly use this medical device, read and comply with the instructions for use and this supplement.

Anesthesia workstation system
Software 2.n
Supplement to the instructions for use

<table>
<thead>
<tr>
<th>Instructions for use</th>
<th>Part number</th>
<th>Edition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeus IE SW 2.n</td>
<td>9054908</td>
<td>1 – 2015-02 and higher</td>
</tr>
</tbody>
</table>

- Keep this supplement with the instructions for use.

This supplement updates the information on reprocessing the anesthesia machine in the following chapters of all instructions for use and all supplements for Zeus IE.

NOTE
The names of the chapters in the referenced documents may differ.

Information about this document

Trademarks

The following trademarks have been added or replace existing trademarks.

Trademarks owned by Dräger

<table>
<thead>
<tr>
<th>Trademark</th>
<th>Trademark owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>WaterLock®</td>
<td></td>
</tr>
</tbody>
</table>

The following web page provides a list of the countries in which the trademarks are registered: www.draeger.com/trademarks

 Trademarks owned by third-party manufacturers

<table>
<thead>
<tr>
<th>Trademark</th>
<th>Trademark owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismozon®</td>
<td>BODE Chemie</td>
</tr>
<tr>
<td>Mikrobac®</td>
<td></td>
</tr>
<tr>
<td>Neodisher</td>
<td>Dr. Weigert</td>
</tr>
<tr>
<td>Mediclean®</td>
<td></td>
</tr>
</tbody>
</table>

Trademark Trademark owner

- acryl-des® Schülke & Mayr
- Mikrozid®
- Perform®
- Actichlor® Ecolab USA
- Incidin®
- Oxycide®
- BruTab 65® Brulin
- Dispatch® Clorox
- Klorsept® Medentech
- Descogen® Antiseptica
- Oxygenon®
- SteriMax® Aseptix
- Cleanisept® Dr. Schumacher
Reprocessing

Safety information

Appropriate reprocessing

**WARNING**
Risk due to inappropriately reprocessed products

Reusable products must be reprocessed, otherwise there is an increased risk of infection.
- Follow the infection prevention policies and reprocessing regulations of the health-care facility.
- Follow the national infection prevention policies and reprocessing regulations.
- Use validated procedures for reprocessing.
- Reprocess reusable products after every use.
- Follow the manufacturer’s instructions for cleaning agents, disinfectants, and reprocessing devices.

**CAUTION**
Risk of failure of flow measurement

Improper reprocessing and soiling, such as deposits or particles, may damage the flow sensor:
- No machine cleaning or disinfection of the sensor insert
- No plasma sterilization or radiation sterilization
- No water jets, compressed air, brushes, or similar to be used on the sensor insert
- No ultrasonic bath
- Clean and disinfect the flow sensor in accordance with the corresponding instructions for use.
- For disinfecting the flow sensor use only clean disinfectant solutions.

**WARNING**
Risk due to faulty products

Signs of wear, e.g., cracks, deformation, discoloration, or peeling, may occur with reprocessed products.
Check the products for signs of wear. Replace them if necessary.

**WARNING**
Risk of fire

Residual vapors of highly flammable disinfectants (e.g., alcohols) and deposits that were not removed during reprocessing may ignite when the flow sensor is in use.
- Ensure particle-free cleaning and disinfection.
- After disinfection, allow the flow sensor to air for at least 30 minutes.
- Before inserting the flow sensor check for visible damage and soiling, such as residual mucus, medication aerosols, and particles.
- Replace flow sensors when damaged, soiled, or not particlefree.
WARNING
Risk of injury to patients due to failure of accessories

Disposable products have been designed, tested, and manufactured exclusively for single use. Reuse, reprocessing or sterilization can result in failure of the accessory and injury to the patient.

Do not reuse, reprocess, or sterilize disposable products.

Information on reprocessing

Follow the national infection prevention policies and reprocessing regulations.

Follow the infection prevention policies and reprocessing regulations of the health-care facility (e.g., concerning the reprocessing cycles).
Classifications for reprocessing

Classification of medical devices

The classification depends on the intended use of the medical device. The risk of infection transmission through the application of the product to the patient without proper reprocessing is the basis of the Spaulding classification.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-critical</td>
<td>Components that come into contact only with skin that is intact</td>
</tr>
<tr>
<td>Semi-critical</td>
<td>Components that carry breathing gas or come into contact with mucous membranes or pathologically altered skin</td>
</tr>
<tr>
<td>Critical</td>
<td>Components that penetrate skin or mucous membranes or come into contact with blood</td>
</tr>
</tbody>
</table>

Classification of device-specific components

Follow the instructions for use for the components.

The following classification is a recommendation from Dräger.

Critical

The device does not contain any components classified as critical.

Non-critical

– Device surface including screen
– Trolley and holders
– Removable parts of the main device
– Breathing system mount

Semi-critical

– Breathing system
  – Housing (upper part and lower part)
  – Expiratory port, inspiratory port
  – APL valve
  – Additional air valve
– Flexible breathing bag arm (option)
– TurboVent 2 blower module
– Absorber container and absorber insert
Before reprocessing

Observe before disassembly
1  Switch off the device and all devices connected to it.
2  Disconnect all power plugs.

Patient-specific accessories and consumables

The patient-specific accessories and consumables must be removed from the device and, if necessary, disassembled.

Reusable products:
- If the reusable product has its own instructions for use, perform reprocessing in accordance with the separate instructions for use.
- If no separate instructions for use are available for the reusable product, perform reprocessing in accordance with the instructions in this supplement.

Disposable products:
- Dispose of the disposable products.

Removing patient-specific accessories and consumables
Remove the following accessories:
- Breathing hoses
- Breathing bag
- Filters
- Water traps

Removing the filter
- Remove the filter (A) from the nozzle on the Y-piece, inspiratory port, or expiratory port.

Removing the breathing bag
Remove the breathing bag and hose (B).
Removing the breathing hoses

- Remove the breathing hoses (C) from the ports on the breathing system.

**NOTE**
Do not damage the breathing hoses.
When attaching or removing the breathing hoses always hold them at the connection sleeve and not at the spiral ribbing. Otherwise the spiral ribbing can become detached from the sleeve. Breathing hoses with damaged spiral ribbing can get kinked and interrupt ventilation.

Removing the sample lines

- Disconnect the sample line (D) from the CO2 water trap (E) and from the filter on the Y-piece.
- Remove the internal sample line (G) on the Protect water trap (F).

**WARNING**
Risk of infection
Breathing gas, in which there may be infectious agent, flows through the sample line.
- If there is no bacterial filter used between the sample line and the patient, the sample lines must not be reused and must be replaced after each patient.
- Observe the replacement intervals of the water traps.
- Replace the bacterial filter in the sample gas return line in accordance with the intervals listed in the information in the "Maintenance" chapter.

**WARNING**
Material damage due to disinfectants
When the sample line is disinfected and residues of the disinfectant remain in the sample line, these residues can get into the water trap and the patient-gas measurement module later. This may result in faulty measurements.
Sample lines are disposable products. Disposable products must not be disinfected.
**Removing the water traps**

1. Follow the instructions for use for the water traps.

Zeus iE is equipped with 2 water traps to protect the device monitoring system:

- **Protect**: Water trap for the internal sample line
- **CO₂**: Water trap for the patient sample line

1. Pull off the CO₂ water trap (E) towards the front.
2. Pull off the Protect water trap (F) towards the front.
Device-specific components

The device-specific components must be removed from the device and, if necessary, disassembled.

Removing the CO2 absorber

1 Remove the CO2 absorber:
   – CLIC absorber (disposable)
   Or
   – Reusable CO2 absorber

CLIC absorber (disposable absorber)

   • Follow the instructions for use for the CLIC absorber.

   1 Press the release button (A). The CLIC adapter flips open.
   2 Pull the CLIC absorber (C) upwards out of the holder (B).
   3 Flip the holder back until it clicks into place.

Reusable absorber

   1 Unscrew the CO2 absorber (A) from the breathing system.
   2 Remove and dispose of the optional disposable dust filter (B).
   3 Empty the used soda lime. Dispose of according to the instructions for use for the soda lime.

   4 Remove the absorber insert (C) from the absorber container. The sealing ring (D) remains on the absorber insert.
   5 Prepare the CO2 absorber for cleaning and disinfection in the washer-disinfector.
Removing the breathing system

1. Release the two lateral twist locks (A).
2. Pull the breathing system out upwards by the handle (B).
3. Unscrew the CLIC adapter (optional).

NOTE
To prevent accidental penetration of soda lime into the breathing system, do not transport the breathing system with a filled reusable CO2 absorber.

Removing the flow sensors

Follow the instructions for use for the flow sensors.

1. Loosen the knurled nut on the expiratory port (A). Remove the port.
2. Loosen the knurled nut on the inspiratory port (B). Remove the port.
3. Remove the two flow sensors (C).

Removing the CLIC adapter (optional)

Follow the instructions for use for the CLIC adapter.
Disassembling the breathing system

1. Open the 5 quick-release screws (A) by turning them 90° counterclockwise. To do so, use a 6 mm hexagon socket screwdriver (included in the scope of delivery).
2. Remove the housing upper part (B).
3. Unscrew the additional air valve (C).
4. Prepare the housing parts for cleaning and disinfection in the washer-disinfector.

Removing the APL valve

WARNING
Risk of damage to breathing system
If the APL valve is not disassembled before the breathing system is reprocessed, this can lead to leakages in the breathing system.
Always remove the APL valve prior to reprocessing.

1. Loosen the knurled nut (A).
2. Pull off valve (B).

Removing the flexible arm and breathing bag (optional)

1. Loosen the knurled screws (A) on the connector on the arm.
2. Pull the arm off the breathing system.
Removing the TurboVent 2 blower module

1. Using a suitable aid (e.g., a coin), release the 2 quick-release screws (A) by turning them 90° counterclockwise.
2. Remove the blower module (B) from the breathing system mount (C).

Removing the anesthetic gas receiving system

- Follow the instructions for use for the anesthetic gas receiving system.

1. Disconnect the suction hose (A) from the receiving system on the back of Zeus IE.
2. Remove the transfer hose (B).
3. Remove the anesthetic gas receiving system (C).
Validated reprocessing procedures

Overview of the reprocessing procedures of the components

<table>
<thead>
<tr>
<th>Components</th>
<th>Surface disinfection with cleaning</th>
<th>Machine cleaning with thermal disinfection</th>
<th>Description of the procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Device surface including screen</td>
<td>Yes</td>
<td>No</td>
<td>See page 14</td>
</tr>
<tr>
<td>– Trolley and holders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Removable parts of the main device</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Breathing system mount</td>
<td>Yes</td>
<td>No</td>
<td>See page 15</td>
</tr>
<tr>
<td>– Breathing system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Housing (upper part and lower part)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Expiratory port, inspiratory port</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– APL valve</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Additional air valve</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Flexible breathing bag arm (optional)</td>
<td>No</td>
<td>Yes</td>
<td>See page 16</td>
</tr>
<tr>
<td>– TurboVent 2 blower module</td>
<td></td>
<td></td>
<td>See pages 17 and 17</td>
</tr>
<tr>
<td>– Absorber container and absorber insert</td>
<td></td>
<td></td>
<td>See pages 17 and 18</td>
</tr>
</tbody>
</table>
Surface disinfection with cleaning

Components:
- Device surface including screen
- Trolley and holders
- Removable parts of the main device
- Breathing system mount

Prerequisites:
- The surface disinfectant has been prepared in accordance with the manufacturer’s instructions.
- The manufacturer’s instructions, e.g., regarding shelf life or application conditions, are observed.
- An almost sterile lint-free cloth soaked in surface disinfectant is used for the cleaning surface disinfection.

<table>
<thead>
<tr>
<th>Components</th>
<th>Surface disinfectant</th>
<th>Manufacturer</th>
<th>Concentration</th>
<th>Contact time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device surface</td>
<td>Dismozon</td>
<td>Bode Chemie</td>
<td>1.6 %</td>
<td>15 min</td>
</tr>
<tr>
<td>including screen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trolley and holders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Removable parts of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the main device</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breathing system</td>
<td>Mikrobac Tissues</td>
<td>Bode Chemie</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>mount</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Surface disinfection

3 Wipe cleaned surfaces again to visibly wet all surfaces to be disinfected with surface disinfectant.
4 Wait for the surface disinfectant contact time.
5 At the end of the contact time, moisten a new almost sterile lint-free cloth with water (at least drinking water quality).
6 Wipe all surfaces until no remains of the surface disinfectant, such as foam residues or streaks, are visible.
7 Wait until the surfaces are dry.
8 Check the surfaces for visible damage and, if necessary, replace the product.

Cleaning

1 Wipe off obvious soiling using a disposable cloth (or a similar cloth) soaked in surface disinfectant and dispose of this.
2 Wipe all surfaces. After that, there must no longer be any soiling visible.

WARNING

Risk due to penetrating liquid

Penetrating liquid may cause the following:
- Damage to the device
- Electric shock
- Device malfunctions

Ensure that no liquid penetrates the device.
Supplementary information
Breathing system mount

Perform the following steps:
1. Use a cloth dampened with disinfectant or a disposable cloth that is ready for use.
2. Perform the surface disinfection of the breathing system mount by wiping it back and forth at least 3 times. In particular, disinfect the optically highlighted connections (A).
Repeat steps 1 and 2 four times respectively. Use a new cloth for each repetition of steps 1 and 2.

**NOTE**
- Do not use any alcohol-based disinfectants.
- Remove deposits.
- Ensure lint-free cleaning and disinfection.
- Do not allow fluid to get inside.

**Prerequisite:**
- The breathing system has been removed.

**WARNING**
Risk due to penetrating liquid
Penetrating liquid may cause the following:
- Damage to the device
- Electric shock
- Device malfunctions

Ensure that no liquid penetrates the device.
Machine cleaning with thermal disinfection

Use a washer-disinfector that meets the requirements of the standard ISO 15883. Dräger recommends the use of a load carrier for anesthesia accessories and ventilation accessories. Follow the manufacturer's instructions for the washer-disinfector.

Components:
- Breathing system
  - Housing (upper part and lower part)
  - Expiratory port, inspiratory port
  - APL valve
  - Additional air valve
- Absorber container
- Absorber insert
- TurboVent 2 blower module
- Flexible breathing bag arm (optional)

<table>
<thead>
<tr>
<th>Step</th>
<th>Agent</th>
<th>Manufacturer</th>
<th>Concentration</th>
<th>Temperature</th>
<th>Contact time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning</td>
<td>Neodisher</td>
<td>Dr. Weigert</td>
<td>According to the manufacturer's instructions</td>
<td>Min. 55 °C (131 °F)</td>
<td>Min. 10 min</td>
</tr>
<tr>
<td>Disinfecting</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>Min. 90 °C (194 °F)</td>
<td>Min. 5 min</td>
</tr>
<tr>
<td>Drying</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>Drying time de- pends on the load</td>
</tr>
</tbody>
</table>

Prerequisites:
- The washer-disinfector has been prepared in accordance with the manufacturer's instructions.
Positioning the components in the load carrier

Depending on the equipment level of the device, not all components may be present.

All components must be positioned firmly in the load carrier. Ensure the following:
- All surfaces and interiors can be completely rinsed.
- The water can drain off freely.

The following illustrations are non-binding recommendations for individual components. Depending on the washer-disinfector devices used, other positions can be used.

The connections shown are binding.

**Breathing system**

- Position the breathing system (A) and the housing cover (B) slightly tilted.

**Flexible breathing bag arm (optional)**

Required aids:
- Hose (diameter: 12 mm (0.47 in), length: max. 50 cm (19.7 in)) for connecting the breathing bag arm

1. Connect the flexible breathing bag arm (A) to the hose (B).
2. Place both of them in the load carrier.
3. Connect the other end of the hose to a suitable nozzle (C) on the load carrier.
Absorber insert

Required aids:
- Hose (diameter: 12 mm (0.47 in), length: max. 50 cm (19.7 in)) for connecting the absorber insert

1 Connect the absorber insert (A) to the hose (B).
2 Place both of them in the load carrier.
3 Connect the other end of the hose to a suitable nozzle (C) on the load carrier.

Absorber container

- Place the absorber container with the opening facing downwards on an injector nozzle.

TurboVent 2 blower module

Required aids:
- Adapter

A special holder is needed for the TurboVent 2 blower module. This holder must be mounted on a suitable flushing nozzle on the load carrier.

1 Fit the TurboVent 2 blower module (A) in the holder (B). Make sure the lock snaps audibly into place.
Put on cap (C).

At the end of the cycle, proceed as follows:

1. Remove the cap (C) from the TurboVent 2 blower module.
2. Release the lock (D). Remove the TurboVent 2 blower module.
3. Check all components for visible soiling.
4. Repeat the cycle, if necessary.

If necessary, fix the cap (C) on the holder (E).

Drying the TurboVent 2 blower module

The TurboVent 2 blower module can be dried using the following methods:

1. Remove the remaining liquid from the TurboVent 2 blower module.

2. Position the TurboVent 2 blower module (F) with the openings facing downwards until no liquid is left.
   - Place the TurboVent 2 blower module in a drying cabinet for 3 hours at 60 °C (140 °F).
   - Dry the TurboVent 2 blower module on a grid for 24 hours at room temperature. The grid allows air circulation.

At least 30 reprocessing cycles are possible.

Performing reprocessing

1. Select a cycle.
2. When the cycle has ended, check the components for visible soiling and repeat the cycle if necessary.
3. Check the components for visible damage and replace if necessary.
Storage and transport

After reprocessing, there are no special requirements for the storage and transport of the product. All other information in the instructions for use regarding storage and transport continues to apply. In addition, the requirements that prevent contamination or damage to the product must be met. These include, for example, dry and dust-free storage and avoiding damage during transport to the operating location.

Other agents and reprocessing procedures

Disinfectants

Use disinfectants that are nationally approved and are suitable for the particular reprocessing procedure.

Surface disinfectant

The manufacturers of the surface disinfectants have verified at least the following spectra of activity:

- Bactericidal
- Yeasticidal
- Virucidal or virucidal against enveloped viruses

Follow the manufacturer's instructions for surface disinfectants.
The following surface disinfectants were compatible with the material at the time of testing:

<table>
<thead>
<tr>
<th>Class of active ingredient</th>
<th>Surface disinfectant</th>
<th>Manufacturer</th>
<th>Listing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine-releasing agents</td>
<td>BruTab 6S</td>
<td>Bruin</td>
<td>EPA(^1)</td>
</tr>
<tr>
<td></td>
<td>Clorox Professional Disinfecting Bleach Cleaner</td>
<td>Clorox</td>
<td>EPA</td>
</tr>
<tr>
<td></td>
<td>Dispatch Hospital Cleaner Disinfectant Towels with Bleach</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Klorsept 17</td>
<td>Medentech</td>
<td>EPA</td>
</tr>
<tr>
<td></td>
<td>Actichlor plus</td>
<td>Ecolab USA</td>
<td>EPA</td>
</tr>
<tr>
<td>Oxygen-releasing agents</td>
<td>Descogen Liquid</td>
<td>Antiseptica</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td>Descogen Liquid r.f.u.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oxygenon Liquid r.f.u.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dismozon plus</td>
<td>BODE Chemie</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td>Oxycide</td>
<td>Ecolab USA</td>
<td>EPA</td>
</tr>
<tr>
<td></td>
<td>Perform</td>
<td>Schülke &amp; Mayr</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td>SteriMax Wipes</td>
<td>Aseptix</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td>Incidin OxyWipes</td>
<td>Ecolab USA</td>
<td>CE</td>
</tr>
<tr>
<td>Quaternary ammonium</td>
<td>acryl-des(^2)</td>
<td>Schülke &amp; Mayr</td>
<td>CE</td>
</tr>
<tr>
<td>compounds</td>
<td>Mikrozid alcohol free liquid(^2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mikrozid alcohol free wipes(^2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mikrozid sensitive liquid(^2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mikrozid sensitive wipes(^2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cleanisept Wipes Maxi</td>
<td>Dr. Schumacher</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td>Surfa’Safe Premium</td>
<td>ANIOS Laboratories</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td>Wip’Anios Excel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tuffie 5</td>
<td>Vernacare</td>
<td>ARTG(^3)</td>
</tr>
</tbody>
</table>

1) United States Environmental Protection Agency
2) Virucidal against enveloped viruses
3) Australian Register of Therapeutic Goods

Dräger states that oxygen-releasing agents and chlorine-releasing agents may cause color change in some materials. Color change does not indicate that the product is not functioning correctly.

Other surface disinfectants are used at one’s own risk.
Reprocessing procedures

Steam sterilization

The following components can be steam sterilized:
– Breathing system
– Absorber container
– TurboVent 2 blower module

1 Sterilize the components (maximum 134 °C (273.2 °F), 5 min).
2 Check the components for visible damage and replace if necessary.

NOTE
Steam sterilization can reduce the life span of the TurboVent 2 blower module.
After reprocessing

Assembling and fitting device-specific components

Prerequisites:
– All components have been reprocessed and are dry.

Installing the TurboVent 2 blower module

1 Fit the TurboVent 2 blower module (B) in the breathing system mount (C).

2 Tighten the quick release screws (A) for the ventilator by turning them 90° clockwise.

Assembling the breathing system

CAUTION
Do not spray the nozzles on the breathing system with silicone spray! Silicone spray can get into the breathing system and cause the valves to stick.

1 Visual inspection of the surface seal and ceramic disks in the valves

2 Screw in the additional air valve (A).

3 Fit the housing upper part.

4 Tighten the five quick-release screws (B) by turning them 90° clockwise. To do so, use a 6 mm hexagon socket screwdriver (included in the scope of delivery).
Fitting the APL valve

1. Fit the APL valve (A) vertically on the upper part of the breathing system. The mark (B) must point in the direction of the user when the breathing system is installed.

2. Tighten the knurled nut (C) clockwise.

Installing the flow sensors

1. Insert both flow sensors (A) in the breathing system. Screw in place with the nozzles (only use the blue, non-rotatable connecting nozzles).

Fitting the flexible arm (optional)

1. If fitted: remove the bag elbow (A) for the breathing bag from the breathing system.

2. Position the connector on the arm (B) on the breathing system. Tighten it using the two knurled screws. Check to make sure the arm is secure.

WARNING
Risk of fire

Residual vapors of highly flammable disinfectants (e.g., alcohols) and deposits that were not removed during reprocessing may ignite when the flow sensor is in use.
- Ensure particle-free cleaning and disinfection.
- After disinfection, allow the flow sensor to air for at least 30 minutes.
- Before inserting the flow sensor check for visible damage and soiling, such as residual mucus, medication aerosols, and particles.
- Replace flow sensors when damaged, soiled, or not particle free.

NOTE

Depending on the date of manufacture, it is possible that the breathing system does not have threaded bushes for mounting the flexible breathing bag holder. In this case, assembly is only possible if a new breathing system with threaded bushings is used instead of the existing breathing system.
Fitting the CLIC adapter (optional)

1. Screw the CLIC adapter (A) onto the lower part of the breathing system.

2. Check the correct alignment of the CLIC adapter (A). Make sure that the release button (B) is visible and facing towards the user (forwards).

Fitting the breathing system

1. Fit the breathing system (A) on the receiving system (B) vertically from above.

2. Lock the breathing system with the two lateral twist locks (C) by turning them as far as they will go.

Fitting the CO₂ absorber

NOTE
Make sure the soda lime does not dry out.

Reusable absorber

1. Push the absorber insert (A) completely into the absorber container.

CAUTION
Fill the CO₂ absorber with fresh soda lime to the upper mark. Otherwise, operational reliability may be restricted.

Recommendation:
Use only Drägersorb 800 Plus or Drägersorb Free. Do not use any granular soda lime since an increased dust yield can impair the functionality of Zeus IE.

2. Insert the IBF absorber filter (B) in such a way that the writing is legible and the filter engages.

3. Insert the CO₂ absorber (C) in the breathing system from below and turn it clockwise as far as it will go.

NOTE
Make sure the soda lime does not dry out.

CAUTION
Fill the CO₂ absorber with fresh soda lime to the upper mark. Otherwise, operational reliability may be restricted.
CLIC absorber (disposable absorber)

1. To loosen up the soda lime, shake the disposable absorber before inserting it, e.g., by inverting it several times.

2. Remove the seal from the new disposable absorber.

3. Press the release button (A) on the CLIC adapter. The holder (B) flips open.

4. Push the new disposable absorber as far as possible into the holder (B). Swivel the holder back until it snaps audibly into place in the CLIC adapter.

Fitting the anesthetic gas receiving system

The anesthetic gas scavenging system (AGSS) must conform to ISO 8835-3 and ISO 80601-2-13.

**WARNING**

Risk of patient injury

If the side openings of the receiving system are covered, this may cause a negative pressure in the breathing system and in the patient’s lungs.

Always make sure that the side openings on the receiving system are not blocked.
Preparation before next use of device

Assembling and fitting patient-specific accessories and consumables

**WARNING**
Risk due to particles and dust

In order to protect the patient from particles and dust, a filter must be used between the inspiratory limb of the breathing system and the patient.

Use a filter on the Y-piece or the inspiratory port.

- Complete the device with the following accessories:
  - Breathing hoses
  - Breathing bag
  - Filters
  - Water trap
  - Sample line

**WARNING**
Risk of burns when using HF surgery equipment

Do not use any antistatic or conductive breathing hoses.

**NOTE**
Zeus IE is manufactured without natural rubber latex.

To minimize the risk of exposure to latex, use breathing bags and breathing hoses manufactured without natural rubber latex.

**CAUTION**
Do not put the device into operation without a water trap. Water and bacteria can get into the measuring system. The soiling affects the gas measurement process. It can lead to failure of the gas measurement. Risk of device contamination

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**CAUTION**
Do not spray the O-rings of the water trap holder with silicone spray. Silicone may get into the measuring cell and distort gas analysis.
Establish the Luer-Lock connection (D) of the sample line between the HME filter of the Y-piece and the CO2 water trap (E).

Connect the internal sample line (F) to the Protect water trap (G).

Checking the operational readiness

Prerequisites:
- The device has been assembled and prepared so that it is ready for operation.

Procedure:
- Check the operational readiness, see instructions for use, chapter "Getting started".
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