

This section contains the following information on the general care, handling, cleaning, and storing of Philips transducers.

## Handling Transducers

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Although a transducer is designed for durability, use care when handling it. Dropping or banging the transducer can damage the acoustic lens and piezoelectric crystals. Cuts in the transducer cable or cracks in the housing can destroy the electrical safety features of the transducers. This damage is not covered by the warranty or your service contract.

When you are not using the transducer, place it in the transducer holder located on the side of your system to assure safe, convenient storage. For more information on storing transducers, see Storing Transducers.

**Caution:** When you are shaking an ultrasound gel bottle, be careful not to hit the transducer face with the tip of the bottle. Striking the transducer face with a hard object can damage the transducer. This damage is not covered by the warranty or your service contract.

## Inspecting Transducers for Damage

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All transducers are exposed to potentially damaging situations during use and cleaning. Before use, check each transducer for the following signs of damage:

- Cracks on the handle
- Cracks on the nose piece
- Cuts or gouges on the lens material
- Swelling of the lens material
- Cracks on or other signs of damage to the cable strain reliefs
- Cracks or other signs of damage to the connector
- Bent or damaged pins on the connector
- Signs of damage to the cable or inflexibility of the cable

### WARNINGS:

- Although no hazardous voltages are present during normal use, if there is a crack in the transducer, it is possible for the operator to feel a tingle that could result in a reaction and potential injury.
- Cracks also interfere with standard cleaning procedures.
- If you see any sign of damage to the transducer, immediately discontinue use of the transducer.

## Installing and Cleaning the Ergonomic Grip

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Repetitive ultrasound scanning has been associated with carpal tunnel syndrome (CTS) and repetitive strain injury. For more information, see the "Safety" section of your ultrasound user information.

Philips offers a slip-on reusable grip to provide alternative grip options for the s4, s8, S4-2, and PA4-2 transducers.

### ***To install the ergonomic grip***

1. Insert the cable through the slot in the grip.

2. Align the slot with the orientation indicator.
3. Slip the transducer head into the grip.

### ***To clean the ergonomic grip***

1. Wipe the grip with a dry or water-moistened soft cloth. You can use soapy water, a 70% isopropyl alcohol solution (rubbing alcohol), or a 10% bleach solution.
2. Remove any cleaning solution residue with a water-moistened soft cloth. Do not allow cleaning solutions to air dry on the grip.

## **Storing Transducers**

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This section provides information on storing transducers for transport, and daily and long-term storage.

### ***Transport***

If a carrying case is provided with your transducer, always use the carrying case to transport the transducer from one site to another. Follow these guidelines to properly store transducers for transport:

- Make sure that the transducer is clean and disinfected before placing it in the case to avoid contaminating the foam that lines the carrying case.
- Place the transducer in the case carefully to prevent kinking of the cable.
- Before closing the lid, make sure no part of the transducer is protruding from the case.
- Wrap the case in plastic material containing air pockets (such as "bubble wrap"), and pack the wrapped case in a cardboard carton.
- To avoid damaging the shaft or steering mechanism of TEE transducers, do not bend or coil the flexible shaft of the transducer in less than a 0.30-m (1-ft) diameter circle.

### ***Daily and Long-Term***

Follow these guidelines to protect your transducer:

- Always store transducers in the transducer holders on the side of your system or on a securely mounted wall rack when you are not using them.
- Make sure the transducer holders are clean before storing transducers. For details on cleaning the system, see *Cleaning the System and ECG Equipment*.
- Avoid storing transducers in areas of temperature extremes or in direct sunlight.
- Store transducers separately from other instruments to avoid inadvertent transducer damage.
- When storing transducers, use the cable-management clips to secure the transducer cable.
- Before storing transducers, make sure they are thoroughly dry.
- For TEE transducers, be sure the distal tip is straight and protected before storing the transducer.
- Never store a TEE transducer in the carrying case, except to transport it.