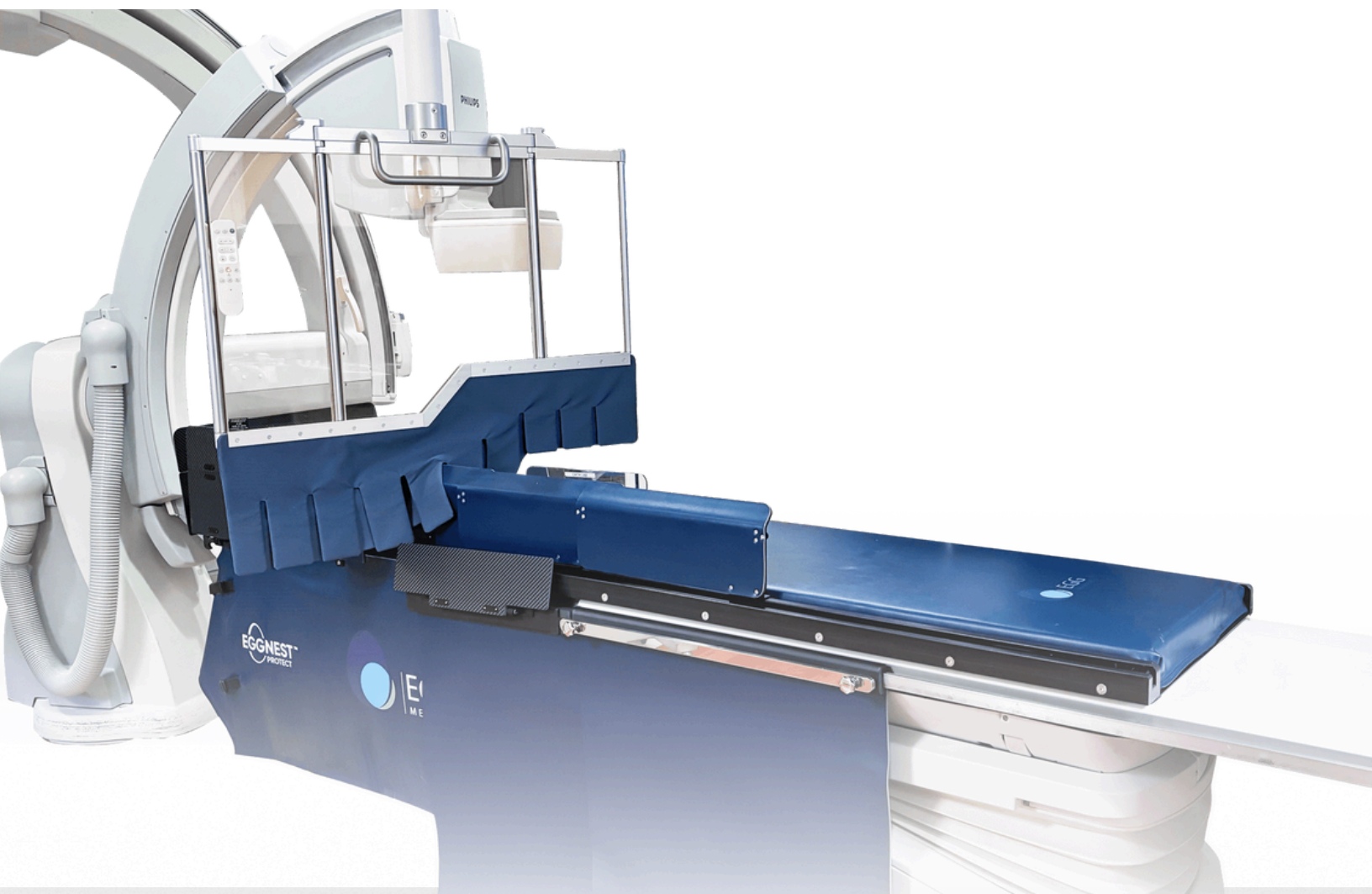




EGGNEST™ COMPLETE

User and Service Manual



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Patents

Aspects of this device may be covered by certain patents. See <https://eggmedical.com/patents> for details.

Disclaimer

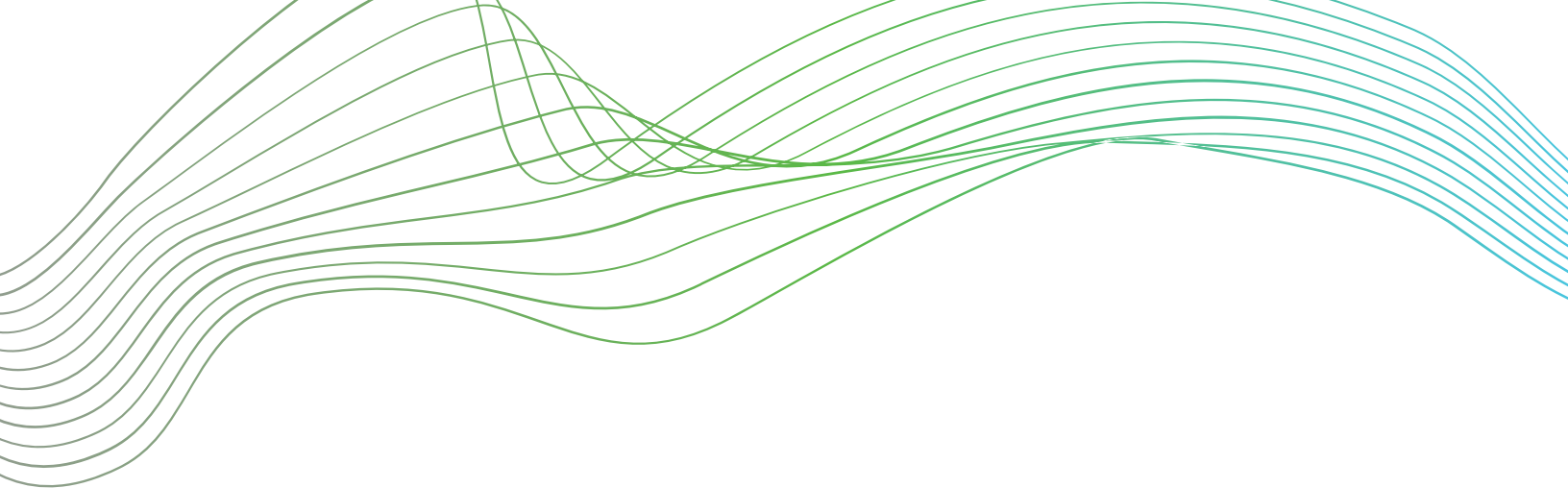
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Our goal at Egg Medical is to reduce the scatter radiation exposure of physicians, nurses, technicians and others who use X-Ray imaging to perform life-saving diagnostic and therapeutic procedures for patients.

Please contact us at <https://eggmedical.com/info> or email us at info@eggmedical.com.









Please see <https://eggmedical.com> to access the most up-to-date manuals and additional information

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LIST OF SYMBOLS

	Caution		Manufacturer
	CE Mark		Date of Manufacture
	Part Number		Consult Instructions for Use
	Lot Number		Serial Number

Description of EggNest™ Complete Shield

The EggNest Complete Shield is a scatter radiation protection shielding system. The intended purpose of the EggNest Complete Shield is to protect healthcare workers that are behind the shield in the x-ray procedure room from scatter radiation during medical procedures employing imaging in the range of 70-100 keV energy levels [1].

The effectiveness of the EggNest Complete Shield in blocking scatter radiation depends on proper use of the shielding system. The EggNest Complete Shield should be configured for best operation in the x-ray laboratory environment in which it is used. When used properly, testing has shown that scatter radiation behind the shield can be reduced by >99%.



Figure 1: EggNest Complete Shield shown with EggNest Protect base system

The EggNest Complete Shield is designed and manufactured by Egg Medical, Inc.

[1] The EggNest System is not intended for use to protect users from radiation with energies >120 keV or in the gamma radiation range

Components of the EggNest™ Complete Shield

Shield Assembly

The Shield Assembly is primarily constructed of panels of an acrylic resin impregnated with lead oxide, resulting in a lead equivalency of 1mm Pb. The panels are framed with a series of stainless steel and aluminum components that protect the acrylic from damage while allowing for attachment of the system to a boom arm.

Shield Fringe

The Shield Fringe is a soft shielding component attached to the lower edge of the Shield Assembly to allow for conformance to patient anatomy.

Shield Adapter

The Shield Adapter is designed to attach the EggNest Complete Shield to a ceiling-mounted boom arm. This connector is attached to the boom arm using two 8mm shoulder bolts.

Shield Handle

The Shield Handle is designed to provide a location to grasp the Complete Shield and manipulate it into position.

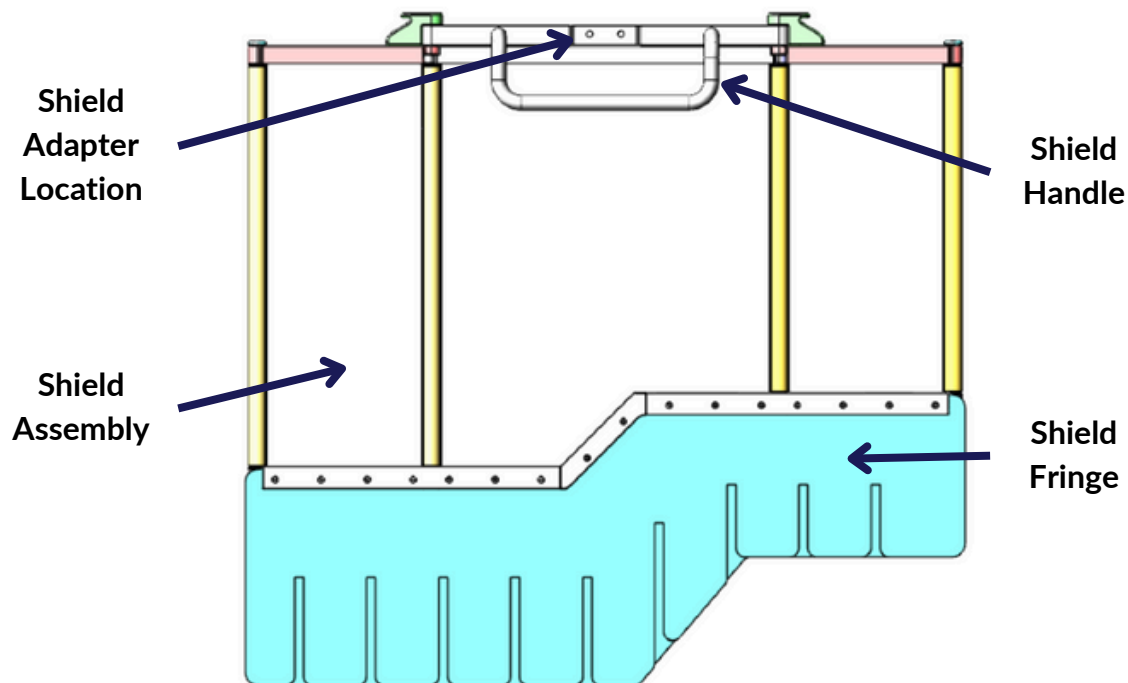


Figure 2: EggNest Complete Shield Components

Installation of the EggNest™ Complete Shield System

The EggNest Complete Shield is designed to connect to a ceiling-mounted boom arm.

Step 1: Connect the Complete Shield Adapter to the Boom Support Tube

The Complete Shield Adapter is attached to the Boom Support Tube of the existing ceiling-mounted boom using three screws provided by the boom manufacturer. Install in place after placing the included Loctite thread locking compound on the screw threads.

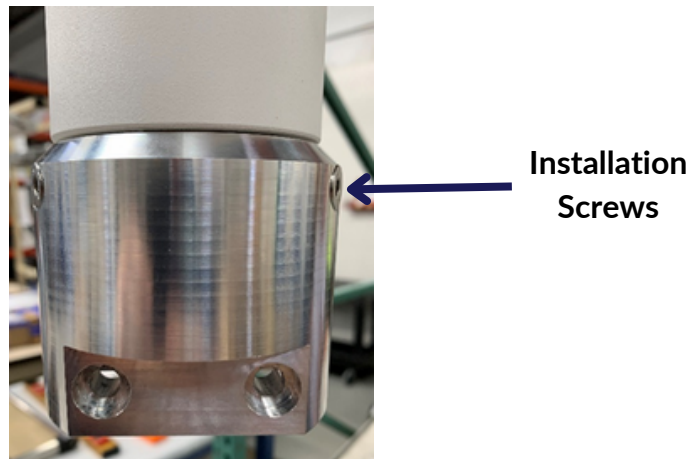


Figure 3: Attach Adapter to Boom Arm Vertical Support Tube

Step 2: Connect the EggNest Complete Shield to the Complete Shield Adapter

The EggNest Complete Shield is lifted into place with the Adapter over the mating slot in the Complete Shield upper rail. Attach the Shield to the Adapter using the two included M6 stainless steel shoulder bolts with the included Loctite thread locking compound on the bolt threads.

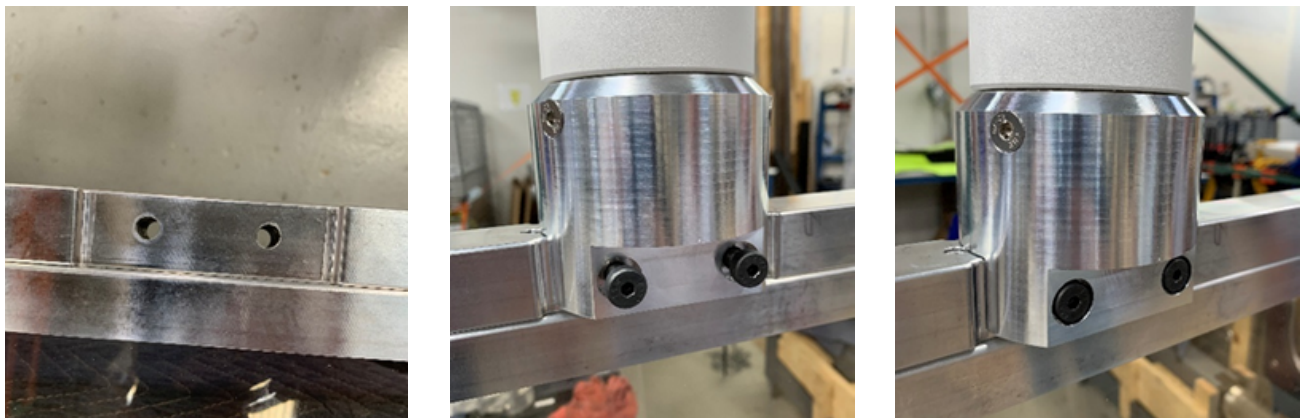


Figure 4: Connecting the Complete Shield to the Adapter

Step 3: Install the Complete Shield Handle on the Shield Assembly

The Complete Shield Handle is attached to the Shield assembly using the two included M8 flat head screws, with the screws placed so that the heads are flush with the face of the assembly. Use the included Loctite thread locking compound on the bolt threads.

Step 4: Remove Protective Film from the EggNest™ Complete Shield

The leaded acrylic panels of the Complete Shield are shipped with a protective paper film to prevent scratching or marring of the shield finish. Once the shield is fully installed, remove the film from the shield to allow for full visibility.



Figure 5: Removing Protective Film from Shield Assembly

Use of the EggNest™ Complete Shield

Loading the Patient

Prepare the EggNest Complete for patient loading as follows:

1. Move the EggNest Complete Shield away from the patient loading area to provide room for the patient to be transferred to the patient table.
2. Position the Shield in an area that is clear of any sterile preparation tables and position it for draping.

Draping the Complete Shield

1. Open sterile pouch and set in the sterile field.
2. The Complete Shield should be rotated with the handle facing the sterile operator.
3. Using proper sterile technique, cover the Complete Shield with sterile drape. A second non-sterile operator can be helpful for shield draping to assist in moving components into position and manipulating the sterile drape from the (non-sterile) inside of the drape.
4. Fully extend sterile drape to the upper edge of the Complete Shield. The hooks on the upper edge of the Complete Shield are intended to hold the elastic band of the drape to prevent the drape from bunching the Complete Shield Fringe.
5. Rotate the Complete Shield into position over the patient access site.

Operation During Procedure

In general, the EggNest Complete Shield operates passively during the procedure. The c-arm x-ray gantry can be rotated to achieve the desired radiographic views. The x-ray gantry may contact the EggNest Complete Shield when rotated out of the PA projection. The Complete Shield may be moved as needed to allow for this x-ray system movement.

The EggNest Complete Shield provides the greatest protection when placed as close to the x-ray detector as possible without interfering with the procedure. Placement of the draped Fringe component of the Complete Shield directly on the draped patient will reduce the scatter radiation emanating from the patient towards the operator.



Precautions

Safe operation of the EggNest™ Complete Shield depends on proper use of the system.

Scatter Radiation Protection

The most effective scatter radiation shielding depends on using the EggNest Complete Shield according to the directions.

CAUTION: Failure to adjust shields properly will result in less effective shielding.

Contact with the X-Ray System

If the EggNest Complete Shield comes into contact with the x-ray tube housing or detector, do not push or otherwise force the system. Instead, move the table or x-ray gantry in order to disengage the system or move the Complete Shield away from the x-ray unit.

CAUTION: If the x-ray detector comes into contact with the EggNest Complete Shield, move the x-ray table or the c-arm to disengage. DO NOT force the EggNest Complete Shield or c-arm components past each other.

Safely Using the Complete Shield

The Complete Shield should always be sterilely draped and rotated with care. Movement of the Complete Shield in the laboratory must always be performed with careful intent in order to avoid collisions with monitors and other equipment in the room.

CAUTION: Proper placement and usage of the Complete Shield is required. Failure to do so may result in the Complete Shield colliding with other objects in the room.

The Complete Shield is manufactured from a polymer that may contain lead oxide. If the Complete Shield is damaged, do not use the shield and contact Egg Medical for instructions on proper disposal, repair or replacement.

Pinching Hazards

CAUTION: Pinching can occur between surfaces and components of the EggNest Complete Shield. Keep fingers or skin folds away from moving edges and areas of movement.

Care and Maintenance

Cleaning

The EggNest™ Complete should be cleaned between uses with one of the following cleaning solutions:

Cleaning Agent	Manufacturer	Rating		Cleaning Agent	Manufacturer	Rating
303 Fabric/Vinyl Cleaner	303 Products Inc.	4.5		Hydrogen Peroxide Cleaner Disinfectant Wipes	The Clorox Company	4.5
All Purpose Vinyl Cleaner	CMIV Clean	4.5		Lysol Foaming Disinfectant Cleaner	Brand, IC	4
Asepticare TB + II	Ecolab	4.5		Oxivir TB Wipes	Diversey, Inc.	4.5
Bio Kleen Amazing	BioKleen Products, Inc.	4.5		Oxycide Diluted	Ecolab	4.5
Caviwipes XL Packed	Metrex	4		Reposolv Diluted	American Continental Technolabs	4.5
Clorox Healthcare Bleach Germicidal Wipes	The Clorox Company	4.5		Sanicloth AF 3	PDI	4.5
Crystal Simple Green	Sunshine Makers, Inc.	4.5		Simple Green Towels	Simple Green	4.5
Coverage Plus Germicidal Wipes	Spray Nine	4.5		Sodium Hypochlorite Disinfectant/Disinfectant Cleaner Diluted	Process Cleaning Solutions	4.5
Dispatch	Caltech Industries, Inc.	4.5		Stride Floral Neutral Daily Cleaning	Diversey, Inc.	4.5
Fantastik Antibacterial All Purpose Cleaner Heavy Duty	S.C Johnson and Sons, Inc.	4.5		Super Sani-Cloth	PDI	4.5
Formula 409 Antibacterial All Purpose Cleaner	The Clorox Company	4.5		Virex II 256	Diversey, Inc.	4.5
Glance NA Diluted	Diversey, Inc.	4.5		Virex 5 Rtu	Diversey, Inc.	4.5
GP Forward Diluted	Diversey, Inc.	4.5		Wex Cide 128	Wexford Labs, Inc.	4.5

Cleaning agents are rated on a scale of 1-5	1-3: Causes discoloration. Not recommended	4-5: Recommended for use
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Figure 6: Cleaning Agents

Be sure to clean all surfaces in order to prevent transmission of infectious agents or biohazardous materials to staff or between patients.

Product Disposal

If the EggNest Complete is to be removed from service at the end of useful life, it must be returned to Egg Medical for disposal.



Egg Medical Product Warranty

What the Warranty Covers

Egg Medical guarantees that the EggNest™ product you purchased is free of defects in workmanship for one year after purchase.

This includes:

- Structural defects in the EggNest Complete Assembly (not caused by misuse)
- Material defects in the radiation blocking material

What the Warranty Does Not Cover

Egg Medical products are intended to be used in high flow areas of the hospital. We do not warranty defects that arise from repetitive use and normal “wear and tear.” This includes cosmetic defects, stains, structural failure due to misuse (such as breaking the sled or arm boards from inappropriate movement of the x-ray gantry or dropping the unit on the floor)

Repetitive flexing of any radiation blocking material may result in fractures of the material. The integrity of the shield should be tested periodically in accordance with hospital and local regulatory policies. If the material fails in the warranty period, it will be repaired or replaced by Egg Medical.

Period of Coverage for this Warranty

This warranty extends coverage for 1 year from the date of purchase.

What Egg Medical Will Do to Correct Problems

Egg Medical will replace or repair your product within 30 days of notification of a covered problem. It may be necessary for you to send the defective unit back to Egg Medical. You will be provided with shipping instructions.

Service Contact

To report a Warranty issue or concern, please go to the website <https://eggmedical.com> and click the “Contact Us” tab. Alternatively, you can call 612-916-6616 during business hours (8:00 AM to 5:00 PM Central Time, Monday through Friday).

Egg Medical® reserves the right to change the method of contact.

