

EGGNEST™ PROTECT

User and Service Manual



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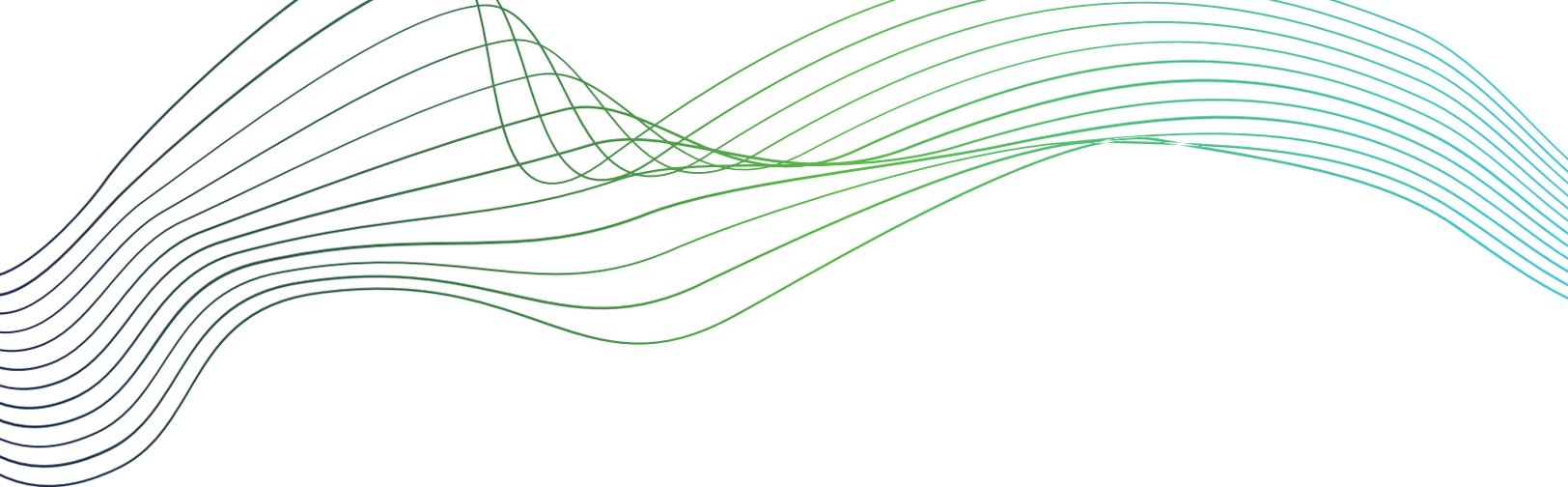
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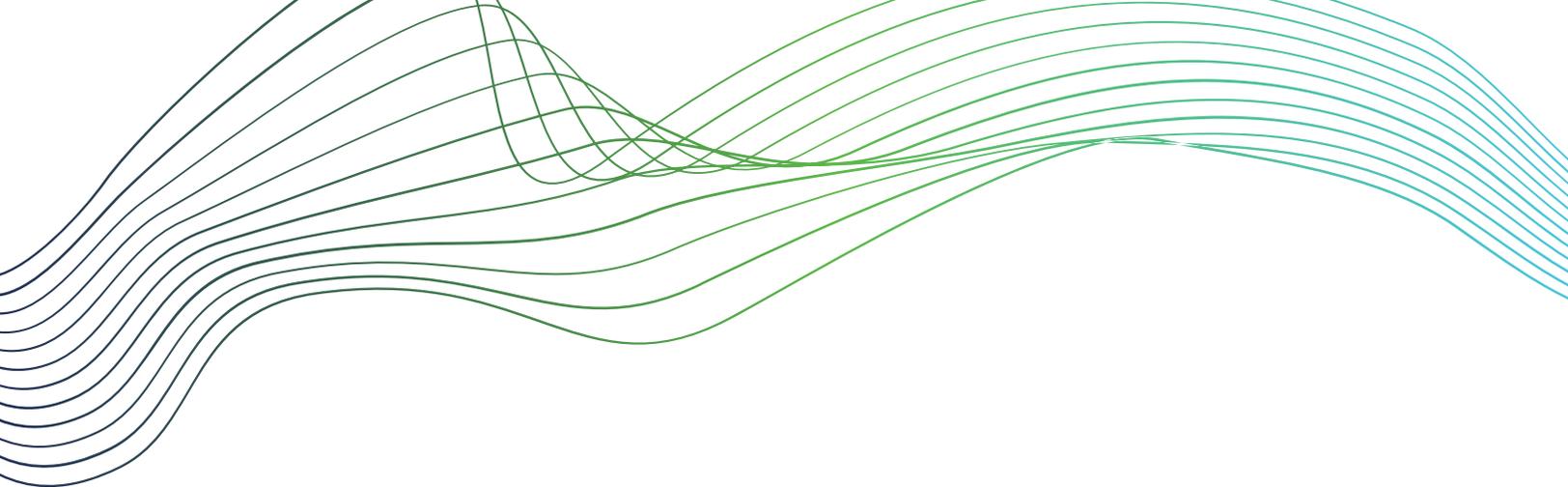
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Our goal at Egg Medical is to reduce the scatter radiation exposure of physicians, nurses, technicians and others who use X-ray imaging to perform life-saving diagnostic and therapeutic procedures for patients.

Please contact us at info@eggmedical.com.
Visit <https://eggmedical.com> to access the most up-to-date manuals and additional information.



EGG **NEST**™
PROTECT

CONTENTS

Description of EggNest™ Protect.....	8
EggNest Protect Scatter Radiation Protection Platform.....	8
Components of the EggNest Protect.....	8
Base Platform.....	9
Side Flex Shields.....	9
Head Flex Shields.....	9
Table Skirt & Hip Check Shields.....	13
Arm Positioning System.....	14
Side Flip Shields.....	15
Head Flip Shields.....	16
Workbench.....	17
Telescoping Hip Shield System.....	17
Clear Spot Shield.....	18
Optional Anesthesia Hoop.....	18
Optional Mattress Extender.....	19
Installation of the EggNest Protect System.....	20
Step 1: Prepare the X-ray table.....	20
Step 2: Place the EggNest Protect Base Platform on the X-ray table.....	20
Step 3: Secure the EggNest Protect Base Platform to the X-ray table.....	20
Step 4: Place Mattress Topper on top of Base Platform.....	21
Step 5: Attach the Side Flex Shields.....	21
Step 6: Attach the Head Flex Shields.....	22
Step 7: Attach the Workbench to Side Rail.....	23
Step 8: Mount the Clear Spot Shield.....	23
Step 9: Install the Side Flip Shields.....	23
Step 10: Install the Head Flip Shields.....	24
Step 11: Install the Arm Positioning System.....	25
Step 12: Install the Telescoping Hip Shield.....	26
Step 13: Install the Patient Strap.....	26

CONTENTS

Use of the EggNest™ Protect System.....	27
Loading the Patient.....	27
Draping the Clear Spot Shield.....	27
Operation during Procedure.....	28
Precautions.....	29
Scatter Radiation Protection.....	29
Patient Loading.....	29
Patient Stability on the EggNest Protect.....	29
Contact with the X-ray System.....	29
Safely Using the Clear Spot Shield.....	30
Pinching Hazards.....	30
EggNest Protect Compatibility.....	31
Table Tilt.....	31
Patient Weight.....	31
Flex Shield Positioning.....	31
X-ray System Collision with EggNest.....	31
3D Acquisition / Cone Beam CT.....	32
Imaging Artifact.....	32
Patient Table Weight Management.....	33
Care and Maintenance.....	35
Cleaning.....	35
Periodic X-ray examination.....	36
Product Disposal.....	36
Egg Medical Product Warranty.....	37
EggNest Protect Component Weights.....	38



LIST OF SYMBOLS

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

Description of EggNest™ Protect

EggNest Protect Scatter Radiation Protection Platform

The EggNest Protect is an integrated scatter radiation protection shielding system. The intended purpose of the EggNest Protect is to protect all healthcare workers in the X-ray procedure room from scatter radiation during medical procedures employing imaging in the range of 70-100 keV energy levels [1], as well as to limit radiation exposure to the head of the patient during cardiac procedures.

The effectiveness of the EggNest Protect in blocking scatter radiation depends on proper use of the shielding system. The EggNest Protect 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 can be reduced by more than 89% to the staff on average (up to 98% for some positions) in the procedure room.

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



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

Components of the EggNest™ Protect

Base Platform

The Base Platform sits on the X-ray table in place of the existing patient mattress. The Base Platform is comprised of a series of carbon fiber plates with integrated rails and receivers for the attachment of shielding around the system. The Base Platform is covered with a detachable vinyl-covered mattress that provides for patient comfort. See Figure 1 for an image of the EggNest Protect Base System.



Figure 1: Base Platform

A detailed description of the components are as follows:

- I. The upper carbon fiber base is a composite of three sheets of carbon fiber. The upper and lower carbon fiber sheets encapsulate a shaped middle sheet that can move relative to the other two components. This movement allows for repositioning of attached shielding during procedures to enhance anatomic imaging.
- II. Carbon fiber tubes are mounted to the underside of the patient left and right sides of the upper base system. These slotted tubes are used to contain connectors that attach to the flex shielding below the table.
- III. The lower carbon fiber base is a single carbon fiber sheet to which a series of rails are mounted. Polymeric rails on the left and right side of the lower base unit are connected as well to the upper base unit at installation.
- IV. The rails provide for attachment points for the Arm Positioning System, the Workbench, the Sliding Hip Shield System and the Clear Spot Shield rail system.

Side Flex Shields

The Side Flex Shields are vinyl-covered curtains that contain material that has the radiation-shielding equivalent of 0.5mm lead. These shields are mounted to connectors that reside within the carbon fiber tubing of the Base System upper half as shown in Figure 2.

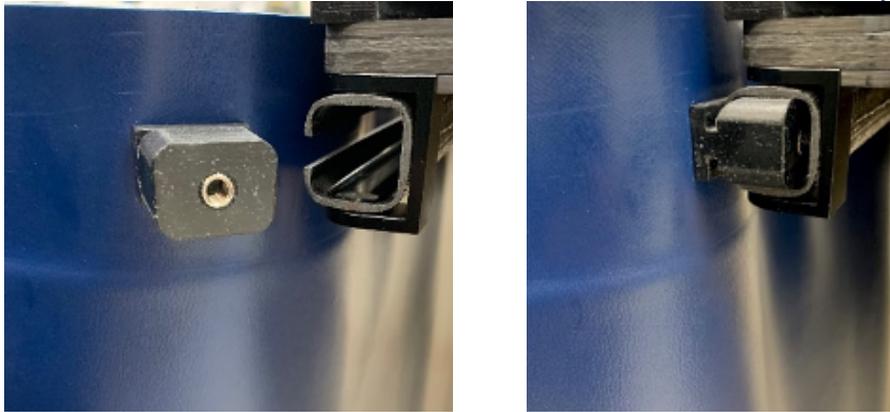


Figure 2: Side Flex Shield Connectors

The Side Flex Shields are designed to be flexible in order to move with the motion of the X-ray gantry to allow for imaging angles. The shields contain semi-flexible stays that maintain the shape of the shielding and prevent them from impinging on the X-ray emitter and blocking the X-ray images of the patient.

The Side Flex Shields have two additional features that provide for outstanding imaging access while continuing to afford good scatter radiation protection.

I. Flex Shield retraction: If steep X-ray angles, lateral imaging or rotational angiography is desired, the Flex Shields are designed to be retracted to move out of the way of the X-ray unit. The shielding is unlatched from the base unit using the rubber connector at the head of the table as shown in Figure 3 and the Side Shields unbuckled from the Head Flex Shields.



Figure 3: Shield Unlatched



Figure 4: Shielding Unlatched

The Side Shield can then be slid towards the waist of the patient as shown in Figure 5.



Figure 5: Side Flex Shields retracted

Using the buckles on either end of the shield, they can be buckled to themselves to bundle the shielding and prevent it from moving during the procedure as shown in Figure 6.



Figure 6: Retracted shields buckled

When the need for steep angled imaging is complete, the shields can be unbuckled and returned to their fully deployed configuration to provide maximum scatter radiation protection.

II. Arm imaging: If imaging of the patient arm is desired during right arm access, the shielding can be moved away from the side of the patient to allow for the desired visualization. The upper base system contains a drawer that can be accessed by gently pulling on the lower end of the carbon fiber tubing beneath the table near the waist of the patient as show in Figure 7.



Figure 7: Opening radial drawer

⚠ CAUTION - Pulling the drawer out from the sled increases the amount of scatter radiation that can be emitted from below the table. Only pull out the drawer when needed for imaging radial access and push the drawer closed for the remainder of the procedure to reduce overall scatter radiation exposure.

Head Flex Shields

The Head Flex Shields are also vinyl-covered curtains that contain material that has the radiation-shielding equivalent of 0.5mm lead. These shields are mounted to a base plate that is designed to mount to connector recesses in the base system upper half as shown in Figure 8.



Figure 8: Placement of Head Flex Shields

The Head Flex Shields are buckled to the Side Flex Shields during normal use to maintain the integrity of the continuous shielding around the head of the patient table. The Head Flex Shields are designed with a split in the center of the shielding to allow the X-ray unit to be easily moved into position under the patient from the head of the table at the start of the procedure.

Table Skirt Shield

The Table Skirt Shield is a vinyl-covered curtain that contains material to provide 0.5mm lead-equivalent shielding. This shield is designed to mount to the table rail on the x-ray system, with a version design for both the left and the right side of the table. The Table Skirt Shield can articulate to conform to the shape of the C-arm table to eliminate shielding gaps and can be pivoted to allow for steep angulation of the C-arm.

The Table Skirt Shield is designed with an external rail component to provide for the attachment of accessories that would typically be mounted to the table rail such as C-arm system controls. The Table Skirt Shield can be used in place of any OEM shielding attached to the C-arm table rail if already present on the system.

Hip Check Shield

The Hip Check Shield is a vinyl-covered curtain component that contains material to provide 0.5mm lead-equivalent shielding. This shield is attached to the Workbench rail on a sliding mount and drapes over the top of the Table Skirt Shield to provide protection for any gaps at the table edge and is designed to stay in position on the outside of the Table Skirt Shield when the Table Skirt Shield is pivoted.

The Hip Check Shield configuration is based on the make and model of the C-arm table to avoid interfering with C-arm controls mounted on the Table Skirt rail. The shield can be repositioned up and down the Workbench rail in an instance where it needs to be moved for access or imaging. The Table Skirt Shield and Hip Check Shield are shown in Figure 9 below.



Figure 9: Table Skirt Shield with Hip Check Shield Installed

Arm Positioning System

The Arm Positioning System is designed to hold the right arm of the patient during procedures that require radial, ulnar, brachial or axillary access. This system is designed to reside upon the rail of the upper base system as shown in Figure 9 using the channel components on the underside of the system.

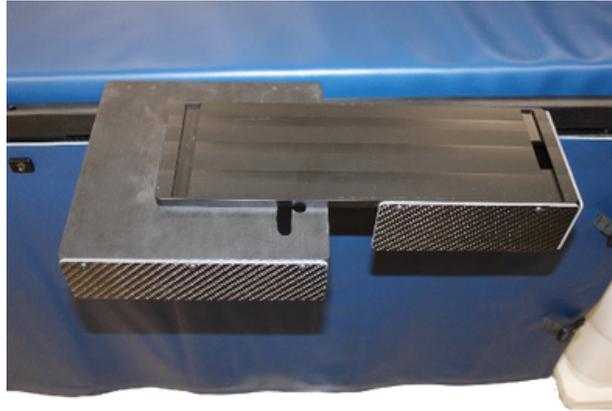
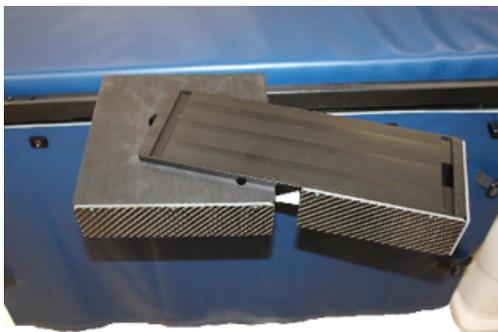
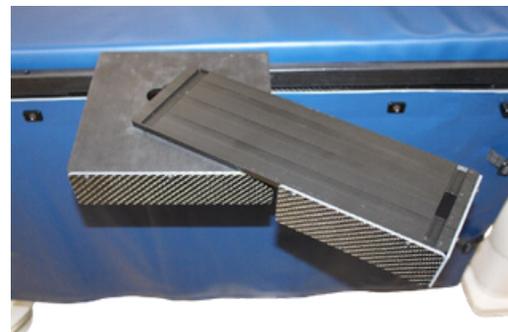


Figure 10: Arm Positioning System Base

The Arm Positioning System is used to maintain the position of the patient arm at the desired angle for the physician to access it during the procedure. The system has five prescribed angles at which it can be locked – 0° to 60° in fifteen-degree increments. See Figure 11.



15° angulation



30° angulation



45° angulation



60° angulation

Figure 11: Arm Positions

The Arm Positioning System has an optional Arm Holder that can be used to support the wrist of the patient in an extended position to facilitate radial artery access. This Arm Holder latches into the base of the arm positioning system as shown in Figure 12. If the Arm Holder is not needed for a procedure, it can be removed and the patient arm placed directly on the Arm Positioning Base.

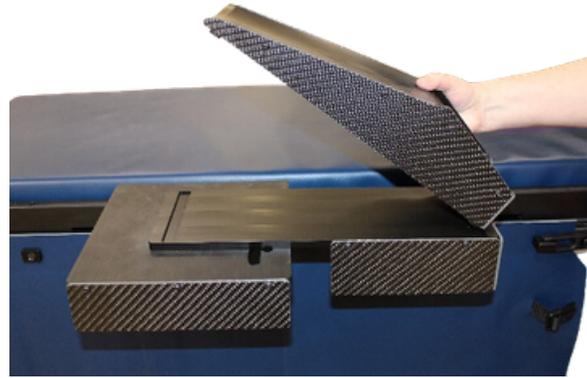


Figure 12: Removable arm holder

Components of the Arm Positioning System contain shielding material to reduce the scatter radiation that can be emitted at or near the patient arm. The shielding is designed to avoid interference with arm imaging in the PA projection.

Arm Positioning System disassembly for cleaning. The articulating Arm Positioning Base can be removed from the Base Connector as shown in Figure 13.

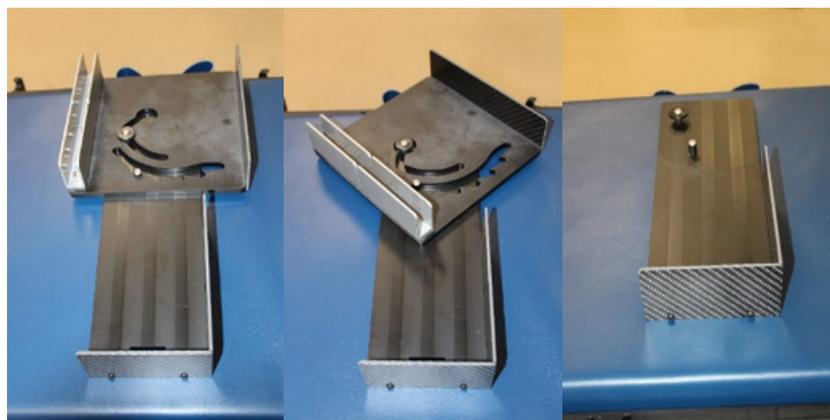


Figure 13: Arm Positioning System Disassembly

Side Flip Shields

The Side Flip Shields are components that can be placed on both the patient left and right sides of the table. They each consist of a radiolucent carbon fiber jam board that is designed to slide under the patient mattress and a shielding flip board that is connected to the jam board with a pair of friction hinges that maintain the shielding position when placed as shown in Figure 14.

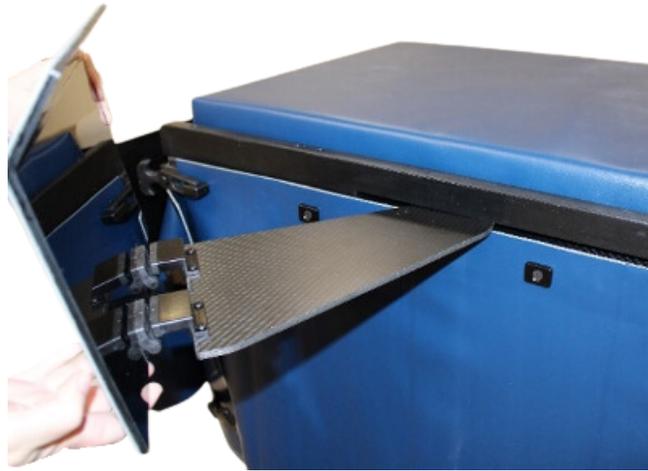


Figure 14: Side Flip Shield Placement

The shielding flip board consists of X-ray shielding material that is laminated between thin sheets of carbon fiber.

The jam board is placed under the patient mattress through a slot in the upper base table rail and can be used in conjunction with other system components such as the Arm Positioning System. The Side Flip Shields are most effective when placed close to the patient, but can be pulled outward from the patient as needed to accommodate patient body habitus.

Head Flip Shields

The Head Flip Shields are similar components constructed of X-ray shielding material laminated between two sheets of carbon fiber. The head flip shields at each of the patient shoulders are mounted to brackets that are designed to recess in matching receiver slots in the upper base rail. These Head Flip Shields are hinged to be allowed to fold down for patient transfer and folded up into position for the procedure in order to protect staff at either side of the head of the patient. See Figure 15.



Figure 15: Head Flip Shield Placement

The Head Flip Shield at the top of the table is mounted to a specially-designed jam board intended to be slid under the mattress and held in position by grooves at the base of the upper sled rails. This Head Flip Shield component is hinged to the radiolucent base plate and is raised into position to protect staff positioned at the patient head.

Workbench

The Workbench is a tool designed to provide a working surface for the physician who is utilizing the Arm Positioning System for patient arm access. The Workbench is a flat surface that allows for catheters and wires to extend from the arm access site without having to rest across the legs of the patient. See Figure 16.

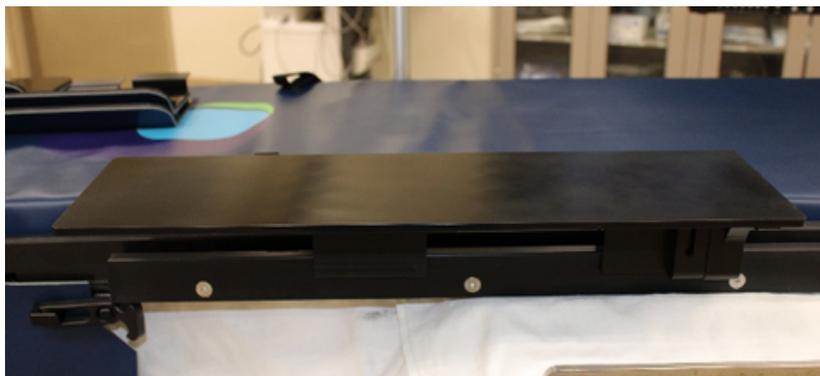


Figure 16: Workbench Placement

The Workbench is mounted to the rail of the Base System as shown in Figure 17. It can be moved up and down the rail into optimal position by simply actuating the lever and sliding the Workbench on the rail.



Figure 17: Workbench Latch Mechanism

Telescoping Hip Shield System

The Telescoping Hip Shields are an interconnected series of rigid shields that are intended to be deployed along the right side of the patient in front of the physician. The shields are constructed of plastic and laminated with X-ray shielding material and vinyl. Designed to ride along the inner rail on the patient right side of the EggNest™ Protect system as shown in Figure 18, they provide the greatest protection when fully extended and moved up into the armpit of the patient under the sterile drape.





Figure 18: Telescoping Hip Shield

They may be slid down the rail and nested at the foot of the table at the end of the case for patient transfer. Alternatively, they may be removed from the table by simply lifting them off of the rail.

Clear Spot Shield

The Clear Spot Shield is a translucent acrylic shield that contains X-ray shielding material connected to an articulating arm. See Figure 19. This arm is connected to a receiver mounted on a slide within a rail on the patient left side of the table as shown and is designed to be moved up and down the table on the slide to provide protection to the physician in a number of different positions. The Clear Spot Shield may be removed from the system by pulling the Clear Spot pole from the receiver.

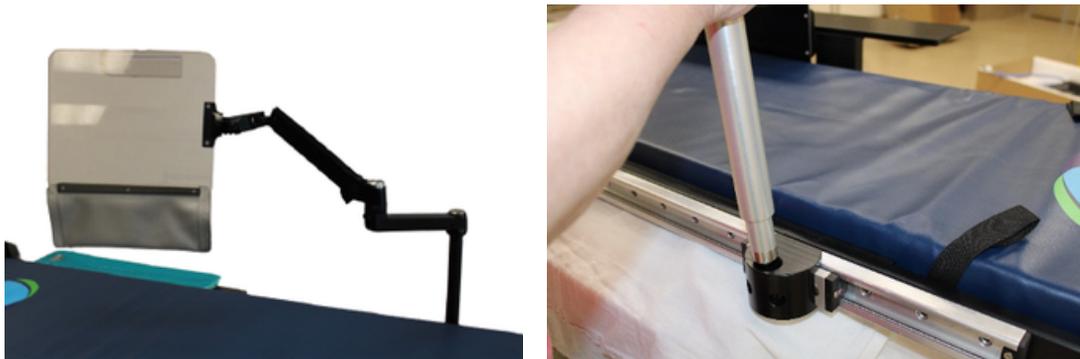


Figure 19: Clear Spot Shield

⚠ CAUTION - Care must be taken to prevent the Clear Spot Shield from swinging during installation and removal, as the acrylic material may be damaged if impacted.

Optional Anesthesia Hoop

The Anesthesia Hoop is an optional component that is used to control the sterile drape over the head of the patient during procedures that require general anesthesia. The Anesthesia Hoop is a flexible gooseneck design that can be shaped into a preferred geometry to cover the appropriate portion of the patient anatomy, connected to the EggNest™ Protect using two receiver slots built into the Base System Rail near the shoulders of the patient. See Figure 20.



Figure 20: Anesthesia Hoop

Optional Mattress Extender

The Mattress Extender is an optional component used to extend the working surface of the mattress beyond the length of the EggNest™ Protect Base System. This mattress component is mounted to the table in the X-ray laboratory in a position caudal to the end of the EggNest Protect Mattress.

Installation of the EggNest™ Protect System

The EggNest Protect is designed to rest on a standard X-ray table by replacing the OEM patient mattress.

Step 1: Prepare the X-ray table

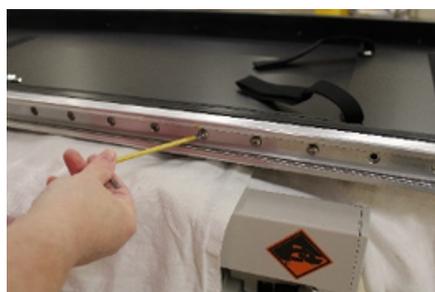
Remove existing X-ray table mattress and thoroughly clean the table surface.

Step 2: Place the EggNest Protect Base Platform on the X-ray table

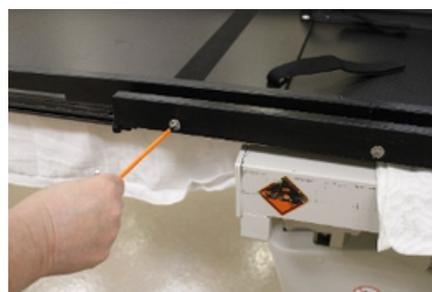
Place the upper and lower halves of the Base Platform on the X-ray table at their respective ends of the table. Abut the inner edges of the two halves of the platform and align the polymer rails. Attach the two halves together using the provided four M4 screws from the underside of the system using Loctite 425 or Vibra-Tite VC-3 Threadmate, three M6 screws in the patient left-side rail with Loctite 263 and one M8 screw on the patient right-side rail using Loctite 425 or Vibra-Tite VC-3 Threadmate. See Figure 21.



4 x M4 Screws
Underside



3 x M6 Screws Left Side



1 x M8 Screw Right Side

Figure 21

Step 3: Secure the EggNest Protect Base Platform to the X-ray table

The EggNest Protect should be centered on the table with approximately 2cm-4cm of the Base Platform overhanging the head of the table. Thread the Table Strap through the outermost slot on each side of the Base Platform upper half as shown in Figure 22. Connect the Velcro strap on the upper surface of the base platform beneath the mattress by affixing the “loop” layer against the “hook” layer.



Figure 22: Table Strap Placement



Step 4: Place Mattress Topper on top of Base Platform

Once the Base Platform is secured on the X-ray table, place the Mattress on the Base Platform. Ensure that the Velcro strips on the underside of the Mattress align with the Velcro strips on the Base Platform. See Figure 23.

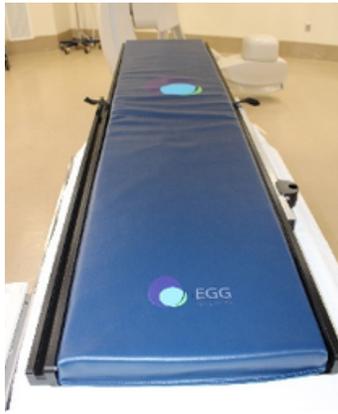


Figure 23: Mattress Placement

Step 5: Attach the Side Flex Shields

The Left- and Right-Side Flex Shields are installed by sliding the shield connectors through the slotted carbon fiber tube on the Base System as shown in Figure 24.



Figure 24: Side Flex Shield placement

Advance the shields through the tube until the proximal latch mechanism can be attached at the end of the tube as shown in Figure 25.



Figure 25: Proximal Latch

Insert the connector stop on the head end of the tube and attach the distal latch mechanism as shown in Figure 26.



Figure 26: Connector and Distal Latch

Step 6: Attach the Head Flex Shields

The Head Flex Shields are installed by aligning the tabs on the Head Flex Shield hardware with the slots in the head of the Base System and dropping them into place. See Figure 27.



Figure 27: Head Flex Shield placement

The Head Flex Shields are attached to the Side Flex Shields using the buckles on either end of both shields as shown in Figure 28.



Figure 28: Shield Buckling

Step 7: Attach the Workbench to the Side Rail

The Workbench is mounted to the outer Side Rail on the patient right side of the table. Installation is performed by depressing the lever arm beneath the right side of the Workbench and placing the Workbench clips on the rail before releasing the lever. See Figure 29.



Figure 29: Workbench placement

The Workbench may be moved up and down the rail by depressing the lever and sliding the Workbench to the desired position.

Step 8: Mount the Clear Spot Shield

The Clear Spot Shield is mounted to the EggNest™ Protect by inserting the cylindrical base of the pole into the receiver mount found on the slide rail attached to the patient left side of the system as shown in Figure 30. Once the Clear Spot Shield is mounted on the system, ensure that the slide is functional by moving the Clear Spot Shield up and down the left side of the table.

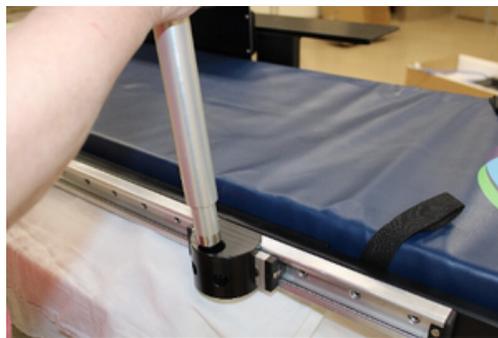


Figure 30: Clear Spot Placement

Step 9: Install the Side Flip Shields

The Side Flip Shields are removable shields that are placed in the slot found at the base of the rail in the upper half of the Base System. Insert the carbon fiber component of the Side Flip Shield in the slot so that the carbon fiber component slides between the Mattress and the carbon fiber base sheet as shown in Figure 31.



Figure 31: Side Flip Shield Insertion

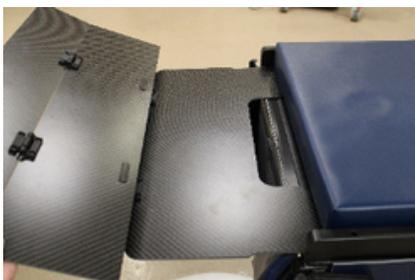
These shields can be flipped down for patient transfer and back up for clinical use, or removed from the table for patient transfer if desired.



Figure 32: Side Flip Shield articulation

Step 10: Install the Head Flip Shields

The Head Flip Shields are removable shields that are placed around the head of the patient. The Head Flip Shield at the top of the table is placed by inserting the carbon fiber base plate under the patient mattress in the receiver slots at the bottom of the left- and right-side rails. These shielding panels can be rotated up for protection at the head of the table. See Figure 33.



Insertion of Head Flip Shield



Head Flip Shield deployed



Head Flip Shield lowered

Figure 33

The Head Flip Shields at the sides of the patient head are placed by aligning the mounting clips into the receiving locations on the left and right side rails. These shields may also be rotated up to provide protection around the sides of the patient head during procedures. See Figures 34 and 35.

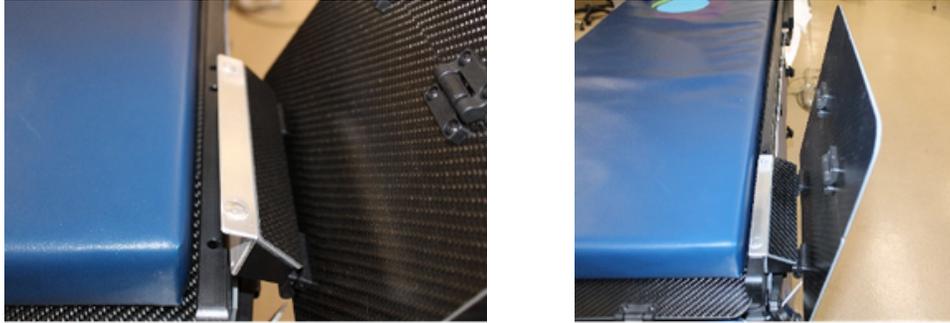


Figure 34: Installation of Side Head Flip Shields



Figure 35: Side Head Flip Shields partially and fully lowered

Step 11: Install the Arm Positioning System

The Arm Positioning System is used when right arm access is desired for the procedure. The Arm Positioning System base is installed by placing the clips on the underside of the base onto the right-side rail of the Base System as shown in Figure 36. The Arm Positioning System may be used with or without the Arm Support component.



Figure 36

Step 12: Install the Telescoping Hip Shield

The Telescoping Hip Shield is installed on the inner rail on the patient right side of the Base Assembly. All three clips must be engaged with the rail to allow for correct component performance. The Telescoping Hip Shield panels can slide up and down the rail and move relative to one another in order to optimize shielding use and placement. Full extension of the telescoping shields maximizes shielding coverage along the patient right side of the table. See Figure 37.

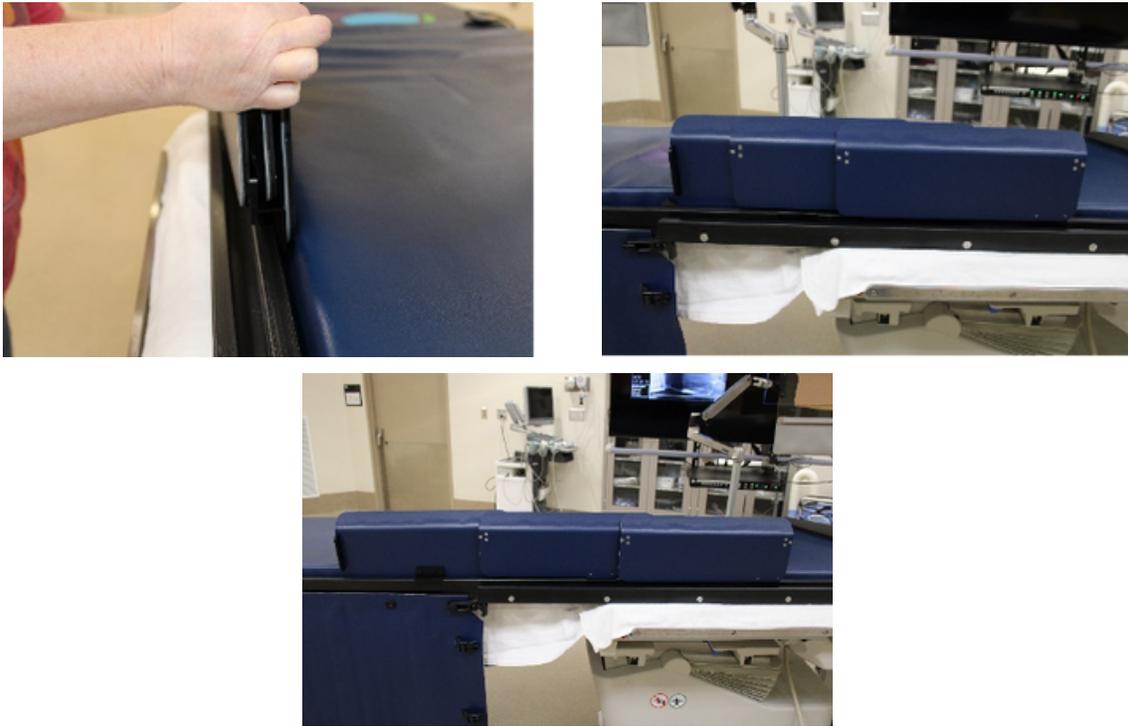


Figure 37: Telescoping Hip Shields

Step 13: Install the Patient Strap

There are two anchor strap loops installed in the Base System beneath the patient mattress. These loops are intended for use to install a Patient Strap based on hospital recommendations. Egg Medical provides a Velcro strap that can be used for securing the patient to the table by threading the strap through the loops as shown in Figure 38. The anchor strap loops are designed to work with many other versions of patient straps to allow for the selection of a preferred strap for your institution.

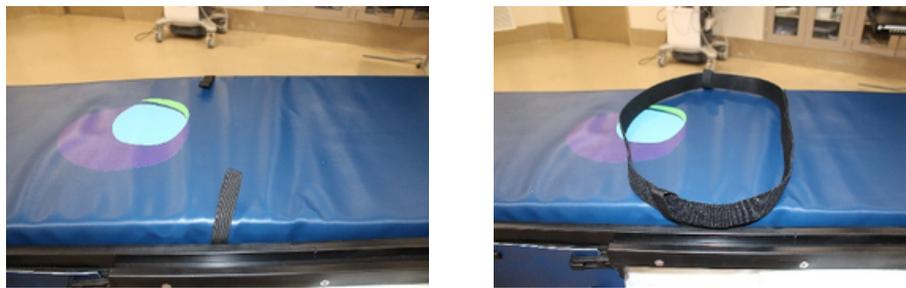


Figure 38: Anchor Strap loops with patient strap



Use of the EggNest™ Protect System

Loading the Patient

Prepare the EggNest™ Protect for patient loading as follows:

1. Make sure that the EggNest Protect has been wiped down according to hospital policy to remove foreign or biological material and that the EggNest Protect is attached to the X-ray table
2. Fold the Head Flip shields down
3. Slide the telescoping Hip Shields down to the foot of the table or remove from the EggNest Protect if loading the patient from the patient right side of the table
4. Remove the Arm Positioning System from the EggNest Protect if loading the patient from the patient right side of the table
5. If loading from the patient left side of the table, move the Clear Spot Shield to the end of the rail or remove and stow
6. If loading from a patient bed, slide the bed next to the EggNest Protect
 - a. Using a sliding board or hover mat, move the patient from the bed to the EggNest Protect
 - b. Take care that neither the patient bed or the EggNest Protect move as the patient could fall through the gap
7. With the patient on the EggNest Protect, attach the Patient Safety Strap as directed by your hospital policy
8. If a radial approach is anticipated, position the Arm Positioning System as desired
9. Before covering the patient with a sterile drape, raise all of the Head Flip Shields, place the side flip shields and slide the telescoping Hip Shield as far up into the armpit of the patient as practical.
10. After the sterile drape is in place, the Clear Spot Shield sterile drape can be placed over the Clear Spot Shield and the Clear Spot Shield can be placed over the patient abdomen to align with the room hanging shield.

Draping the Clear Spot Shield

To maximize radiation protection, it is important to use the Clear Spot Shield during the procedure as this provides significant protection to the head and upper body of the operator. Proper technique is required to drape the Clear Spot Shield correctly and maintain the sterile field.

1. Open sterile pouch and set in the sterile field
2. Clear Spot Shield arm should be slightly extended for ease of draping



3. Rotate the Clear Spot acrylic panel so that the soft shield is positioned at the top of the shield
4. Using proper sterile technique, cover the Clear Spot Shield with sterile drape
5. Fully extend sterile pouch to the base of the pole
6. Rotate the Clear Spot Shield back into ready position

Operation During Procedure

ⓘ Raise all Flip Shields and place the Telescoping Hip Shield before draping the patient

In general, the EggNest™ Protect 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 Protect Flex Shields when rotated out of the PA projection. The lower part of the gantry will push the Flex Shields away as the gantry turns.

The shielding on the system is modular and easily adjusted during the procedure if needed. The Flip Shields and Telescoping Hip Shield may be moved during the procedure under the sterile drape if needed to accommodate access and optimize shielding protection.

The Clear Spot Shield provides greatest protection when placed as close to the X-ray detector as possible without interfering with the procedure. Placement of the draped soft shielding component of the Clear Spot Shield directly on the draped patient will reduce the scatter radiation emanating from the patient towards the operator.

Precautions

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

Scatter Radiation Protection

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

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

Patient Loading

Like all patient transfers, transferring a patient from a bed or gurney to the EggNest Protect has a risk of patient injury due to falling or pinching during transfer. To minimize the risk of transfer, use care in patient movement and minimize the gap between the EggNest Protect and the transfer device. Use of auxiliary transfer aids such as a hover mat or a slide board can make the transfer easier and safer. Be sure that the EggNest Protect is firmly attached to the X-ray table and does not move during transfer.

WARNING: Cover the EggNest Protect with a sheet or a paper drape prior to loading patient.

WARNING: Failure to secure the EggNest Protect Base Platform can lead to a patient fall or staff injury.

Patient Stability on the EggNest Protect

It is important to properly position the patient on the EggNest Protect. The patient should be positioned with the head about 3-4 inches from the top of the EggNest Protect and centered on the mattress from left to right. For more safety from roll-off accidents, the use of the accessory Patient Safety belt is recommended, consistent with hospital regulations.

WARNING: Failure to secure the patient on the EggNest Protect can lead to a patient fall.

Contact with the X-Ray System

If the shields or other EggNest Protect components come 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 systems.

It is expected that the lower X-ray c-arm will push the Flex Shielding to the side when the gantry is rotated. If the positional detector (also referred to as a collision detector) on the X-ray tube housing is activated, DO NOT continue to rotate the c-arm or move the table in a manner that will cause further interference. Instead, check the position of the X-ray tube housing and c-arm relative to the EggNest Protect to ascertain the cause of the problem.





If the Flex Shielding or another component of the EggNest™ Protect is in contact with the X-ray tube housing, move the table or the X-ray gantry in order to disengage the systems. If the Flex Shielding is stuck on the c-arm, gently lift the Flex Shielding to disengage. In any case, DO NOT force the EggNest Protect or c-arm components past each other.

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

Safely Using the Clear Spot Shield

The Clear Spot Shield should always be sterilely draped and rotated with care. Be sure that the Clear Spot Shield is properly mounted in the receiving hole.

CAUTION: Proper placement and usage of the Clear Spot Shield is required. Failure to do so may result in the Clear Spot Shield falling on staff or the patient, leading to injury or breakage of the Clear Spot Shield.

The Clear Spot Shield is manufactured from a polymer that may contain lead oxide. If the Clear Spot 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 Protect. Keep fingers or skin folds away from moving edges and areas of movement. Keep fingers and skin folds away from the edges of rotating surfaces.

EggNest Protect Compatibility

Considerations for use with the following systems from GE HealthCare: Innova IGS Systems, Discovery IGS Systems, Allia IGS Systems and Allia Pulse IGS Systems

Table Tilt

Table tilt testing was not conducted on the Innova IQ table with the EggNest™ Protect system.

WARNING: Table tilt on the Innova IQ table must not be used with the EggNest Protect system installed.

Patient Weight

The EggNest Protect system resides on the surface of the GE table, reducing the weight capacity of the system. Care must be taken to ensure that the table weight capacity is not exceeded. The EggNest Protect is a modular system, allowing for individual components to be removed as needed to ensure safe weight limits are maintained.

WARNING: EggNest Protect system weight must be considered in conjunction with patient weight. See Patient Weight Configuration Tables on subsequent pages for recommended shielding configurations to reduce table weight.

Flex Shield Positioning

The below-table Flex Shields are designed to allow the X-ray tube to pass under the table at the beginning and end of the patient procedure. It is important to ensure that the X-ray tube is between the shields and under the patient at the start of the procedure.

WARNING: Verify that the Flex Shields are around the tube before performing X-rays.

X-Ray System Collision with EggNest

The addition of the EggNest Protect system on the table may increase the risk that the X-ray system can collide with the EggNest.

WARNING: Collision may happen and remains the operator responsibility: GE recommends orienting the X-ray gantry at +90 degrees or -90 degrees during procedure.





3D Acquisition / Cone Beam CT

The EggNest™ Protect system is designed to work with 3D acquisition, though accommodations must be made to shield configuration to ensure appropriate imaging.

CAUTION: 3D acquisition (CBCT) not recommended with full shielding installed. Remove lateral shielding in the acquisition area prior to imaging.

Imaging Artifact

The EggNest Protect system is designed to be radiolucent to allow for imaging through the system. Depending on system configuration, some components of the system may be denser than others, leading to potential visibility of EggNest components in the imaging view.

CAUTION: Various shielding support shapes may be visible in images and are not to be confused with artifacts.

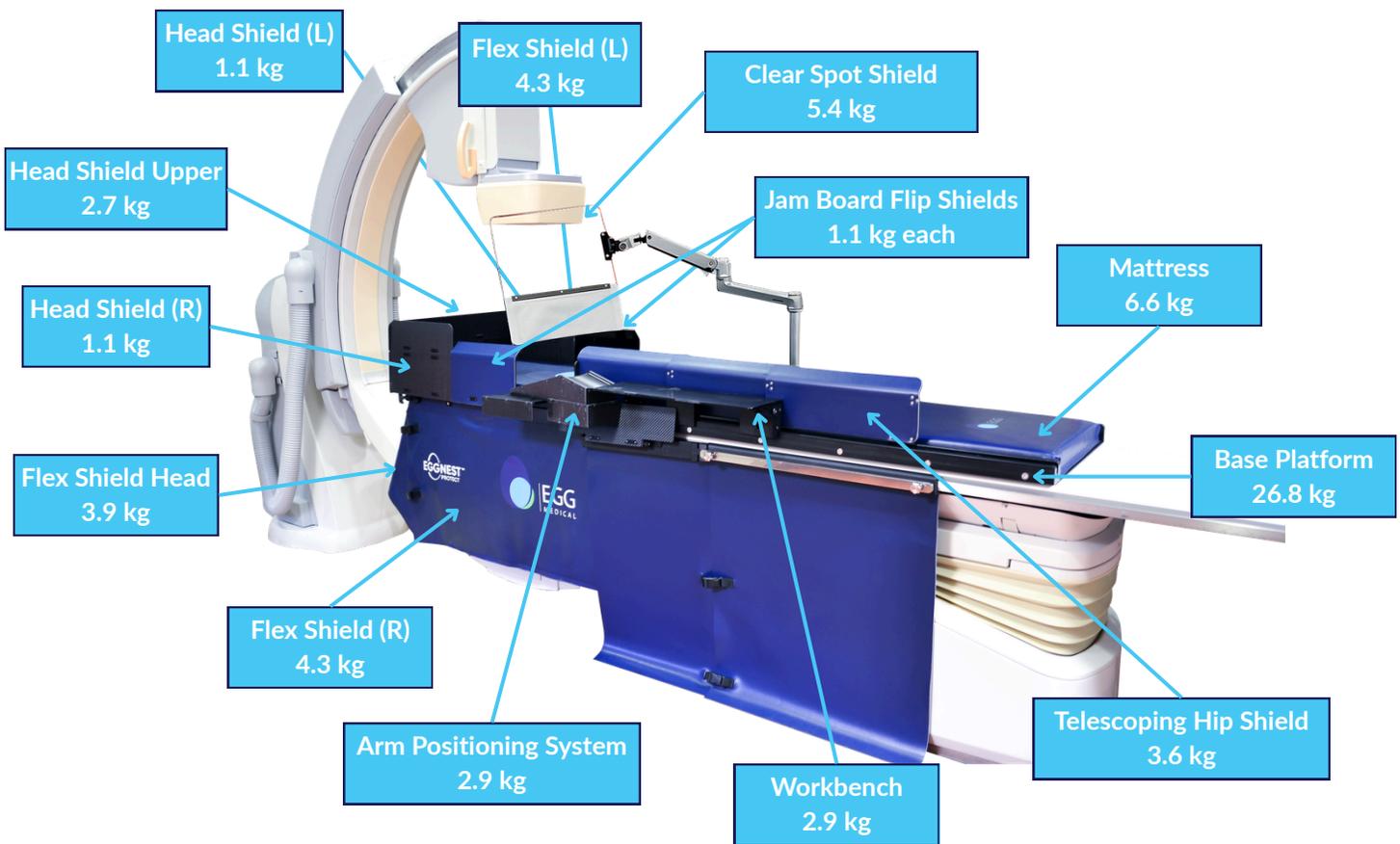
CAUTION: The carbon fiber structure of the EggNest base system may be visible in images and are not to be confused with artifacts.

Patient Table Weight Management

GE Innova IQ, Omega IV and Omega V

Maximum allowable patient weight on the GE table is decreased due to the weight of the installed EggNest™ Protect system. This weight can be reduced by removing individual components of the EggNest Protect system as shown in the image below.

When patients are being treated on a GE table with the EggNest system, use the following system configuration table to determine the appropriate shields to remove from the system to ensure safe weight limits are maintained while maximizing scatter radiation protection.



GE Omega IV and Omega V: Suggested EggNest™ Components to be Removed

Table Maximum Weight: 204 kg / 450 lb

Increased Weight on Table related to EggNest Protect: 66 kg / 146 lb

Patient Maximum Weight (full EggNest): 138 kg / 300 lb

Order	Component to remove	Component Weight		Patient Max Weight	
		(lb)	(kg)	(lb)	(kg)
1	Left Flex Shield	9.5	4.3	313	142
2	Clear Spot Shield	12	5.4	324	147
3	Left Jam Board Flip Shield	2.5	1.1	327	148
4	Left Side Head Flip Shield	2.5	1.1	329	149
5	Head Flex Shield	8.5	3.9	338	153
6	Top Head Shield	6	2.7	344	156
7	Right Jam Board Flip Shield	2.5	1.1	346	157
8	Right Side Head Flip Shield	2.5	1.1	349	158
9	All shielding removed			379	172

GE Innova IQ: Suggested EggNest Components to be Removed

Table Maximum Weight: 250 kg / 551 lb

Increased Weight on Table related to EggNest Protect: 58 kg / 150 lb

Patient Maximum Weight (full EggNest): 192 kg / 420 lb

Order	Component to remove	Component Weight		Patient Max Weight	
		(lb)	(kg)	(lb)	(kg)
1	Left Flex Shield	9.5	4.3	431	196
2	Clear Spot Shield	12	5.4	443	201
3	Left Jam Board Flip Shield	2.5	1.1	446	202
4	Left Side Head Flip Shield	2.5	1.1	448	203
5	Head Flex Shield	8.5	3.9	457	207
6	Top Head Shield	6	2.7	463	210
7	Right Jam Board Flip Shield	2.5	1.1	465	211
8	Right Side Head Flip Shield	2.5	1.1	467	212
9	All shielding removed			499	226



Care and Maintenance

Cleaning

The carbon fiber base system is made from materials similar to those used for many X-ray tables. The vinyl mattress is durable and cleanable, though it may become discolored if cleaned with an unapproved cleaning agent.

The EggNest™ Protect 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		Reprosol 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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Table 1: Cleaning solutions to be used on the EggNest

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

If the vinyl fabric develops a cut or a hole, notify Egg Medical for repair. Discontinuity of the vinyl surface can lead to an infection hazard by allowing biological materials to enter the fabric and foam. Discontinue use or apply an adhesive seal (e.g., 3M Tegaderm Transparent Film Dressing) to the area until the EggNest Protect is repaired.

Periodic X-Ray Examination

As with “lead aprons”, all flexible shielding should be periodically examined for cracks or discontinuity in the shielding. Please follow hospital policy regarding examination of shielding.

Egg Medical recommends that the integrity of the Flex Shielding be checked every six months or if there is visible damage. If on fluoroscopic examination there are cracks or holes, discontinue use of the shielding and contact Egg Medical for repair or replacement.

Product Disposal

If the EggNest™ Protect is to be removed from service at the end of useful life, it can be disposed in normal waste streams with the exception of the Clear Spot Shield which must be returned to Egg Medical for disposal.

Egg Medical Product Warranty

What the Warranty Covers

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

This includes:

- Discontinuity of the outer material coming into contact with the patient
- Structural defects in the sled or arm board components (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 contact us at customerfeedback@eggmedical.com. 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.



EggNest™ Protect Component Weights

Component	Weight (lb / kg)
Base Platform	59 / 26.8
Mattress	15 / 6.8
Jam Board Flip Shield	3 / 1.4
Head Flip Shield (R)	3 / 1.4
Head Flip Shield (L)	3 / 1.4
Head Shield Upper	5.5 / 2.5
Telescoping Hip Shield	8 / 3.6
Workbench	7 / 3.2
Clear Spot Shield	12 / 5.4
Flex Shield (R)	9.5 / 4.3
Flex Shield (L)	9.5 / 4.3
Flex Shield Head	9 / 4.1
Arm Positioning System	6.5 / 2.9