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# INSTALLATION MANUAL

RT-4550FE

QUANTUM™ CT Overlay for  
Fujifilm FCT Embrace®



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# GENERAL PRECAUTIONS

## WARNING STATEMENTS

**! WARNING ! NO MODIFICATION OF THIS EQUIPMENT IS ALLOWED. IF ANY PART OF THIS DEVICE EXPERIENCES A CATASTROPHIC LOAD, APPEARS DAMAGED OR FUNCTIONS IMPROPERLY, DISCONTINUE USE IMMEDIATELY AND CONTACT QFIX AT +1 484-720-6054 OR TECHSUPPORT@QFIX.COM.**

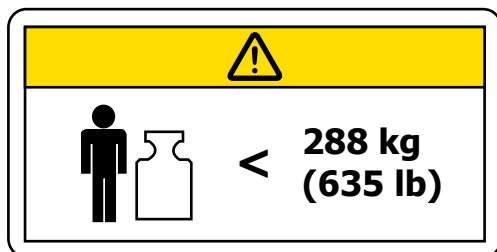
## ADDITIONAL WARNINGS

- DO NOT exceed pedestal manufacturer's load rating.
- Maximum patient weight of 288 kg (635 pounds) or pedestal load rating, whichever is less.
- Pinch points may exist and are indicated on CT Overlay.
- Attention is necessary when moving the cradle and CT Insert into the Gantry Bore to ensure that pinch point risk to hands and fingers are avoided.
- Use of this product in a manner not specified in the User Manual or Installation Manual may be unsafe and is not recommended.
- Use of unapproved devices or attachments may be unsafe and is not recommended.

# GENERAL PRECAUTIONS

## WARNING LABELS & DESCRIPTIONS

Refer to [Qfix.com](http://Qfix.com) for a listing of symbols and their definitions.



### LOAD RATING

DO NOT exceed 288 kg (635 lb) uniformly distributed load.

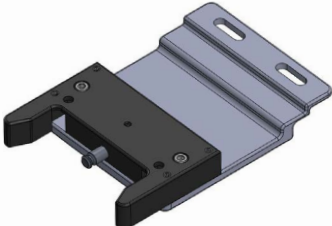
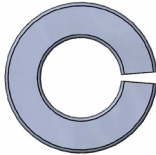


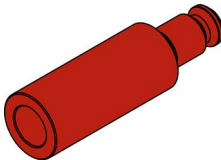


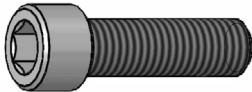


### PINCH POINTS

Pinch points may exist and are indicated by one of these symbols.

# INSTALLATION

## PARTS PROVIDED: RT-4550FE

 <p>(1) Foot Latch Assembly</p>	 <p>(2) M8 Split Lock Washer</p>
 <p>(2) Qfix Locating Bar</p>	 <p>(2) 1/4-20 x 1.125" SHCS SS</p>
 <p>(1) Alignment Pin</p>	 <p>(2) 1/4-20 x 1.25" SHCS SS (extra if needed)</p>
 <p>(2) Spacer</p>	 <p>(2) M8 x 80 mm SHCS SS</p>
<p><b>TOOLS REQUIRED (not provided):</b></p> <ul style="list-style-type: none"> <li>6 mm Allen Wrench</li> <li>2.5 mm Allen Wrench</li> <li>3/16 inch Allen Wrench</li> <li>1/8 inch Allen Wrench</li> </ul>	

# INSTALLATION

## INSTALL FOOT END ASSEMBLY

1. Open cradle back cover (Fig. 1 and Fig. 2).

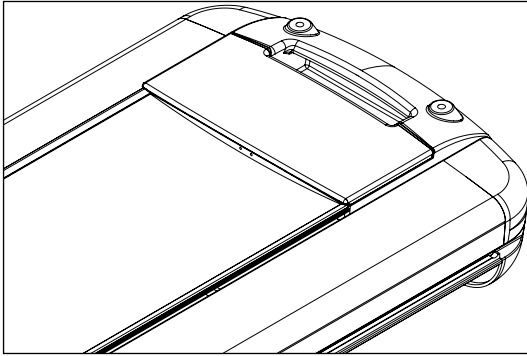


Fig. 1

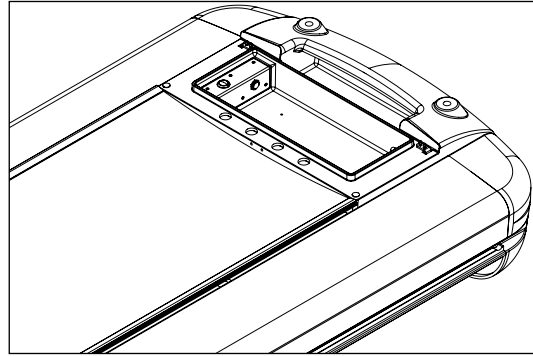


Fig. 2

2. Insert two spacers into the two middle holes on the cradle (Fig. 3 and Fig. 4).

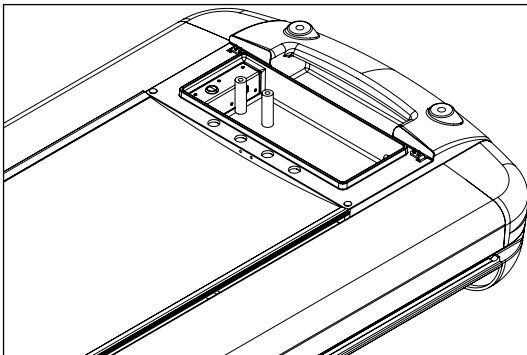


Fig. 3

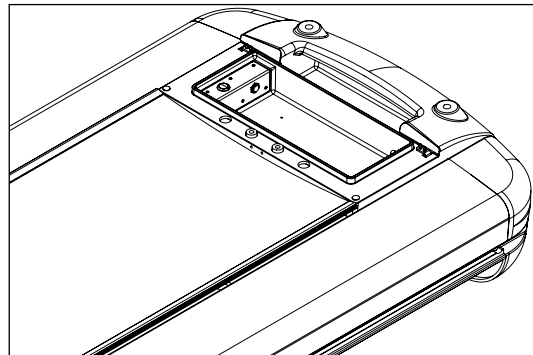


Fig. 4

3. Secure the Foot Latch Assembly to the cradle using (2) M8 Split Lock Washers and (2) M8 bolts into the CT Cradle (Fig. 5 and Fig. 6).

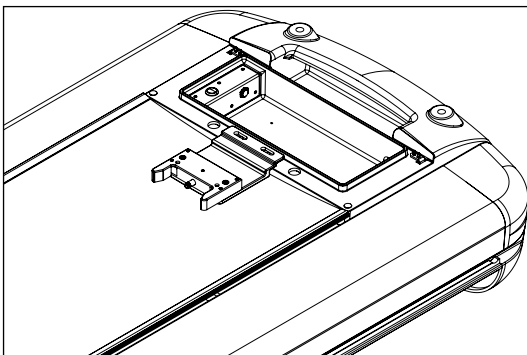


Fig. 5

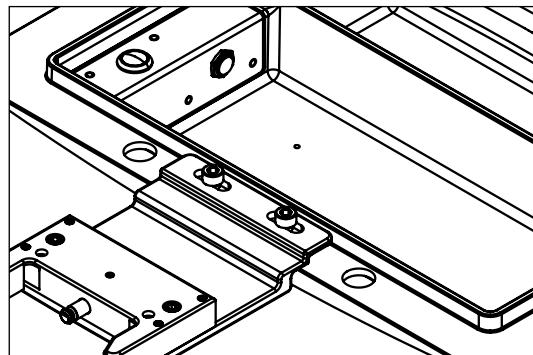


Fig. 6

# INSTALLATION

## ADJUST HEIGHT OF FOOT END MOUNTING BLOCK

Steps 1–8, shall verify the Red Alignment Pin, inserted on the CT cradle, can slide freely onto the Foot Latch Mounting Block without binding (Fig. 7).

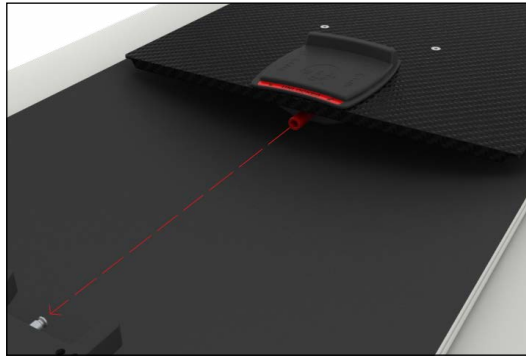


Fig. 7

1. Push the male end of the red Alignment Pin into the socket in the block on the underside of the CT Overlay (Fig. 8) until the handle on the topside reads “LOCKED” (Fig. 9).



Fig. 8



Fig. 9



# INSTALLATION

2. Place the CT Overlay on the CT cradle overhanging the head end by 3–4 inches (Fig. 10). Align the CT Overlay on the centerline of the CT cradle (Fig. 11).



Fig. 10



Fig. 11

3. Slide the CT Overlay toward the CT cradle foot end until the Red Alignment Pin is close to the metal pin on the Latch Block (Fig. 12).



Fig. 12

# INSTALLATION

4.
  - a. Begin by adjusting the height of the Latch Block on the existing CT, by loosening the Locking Screws (2) ¼-20 (Fig. 13).
  - b. Adjust the height of the Latch Block using the (4) Elevation Set Screws (found on the Latch block) using a ⅛ in. Allen Wrench. (Fig. 14).
  - c. Adjust the Elevation set screws as needed then engage the Latch Block Pin into the red Alignment Pin and retighten the Locking Screws while holding the Latch Block parallel, from side to side, to the CT Overlay bottom.
  - d. Lock the Latch Block by tightening the (2) ¼-20 Locking Screws using ⅜ in. Allen wrench.
  - e. Check that the Latch Block is parallel to the Mounting Block as the screws are tightened. If longer bolts are needed, two sets of longer ¼-20 Locking Screws are supplied.
5. Verify that the CT Overlay can be pushed on and off the Mounting Block Pin without binding by engaging and releasing the CT Overlay. Make sure the CT Overlay stays centered on the cradle while doing this. Verify that the Latch Block Pin is parallel to the Alignment Pin and at the correct height.
  - If the Alignment Pin is binding, you may adjust the tilt of the Latch Block by first loosening the Locking Screws, then equally adjust the two Elevation Set Screws up or down with a ⅛" Allen wrench to change the tilt until the Latch Block is level with the CT cradle. Gently re-tighten the two Locking Screws (DO NOT OVERTIGHTEN).
6. Remove the red Alignment Pin from the CT Overlay by pulling back on the release handle in the direction indicated by the unlock symbols.
7. Slide the CT Overlay all the way towards the foot end until the handle confirms it is locked. That is, when green "LOCKED" shows (Fig. 15).
8. To remove, pull/push on the handle to unlock to verify it functions properly (Fig. 16).

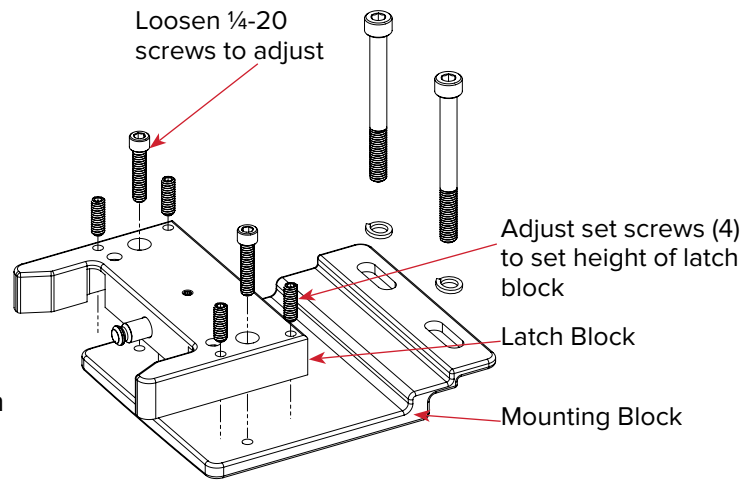


Fig. 13

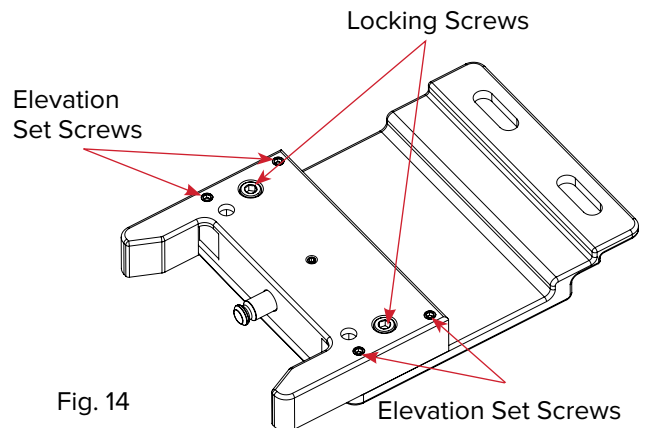


Fig. 14

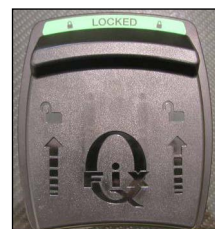


Fig. 15



Fig. 16

# INSTALLATION

## CT OVERLAY HEAD END ALIGNMENT

1. Ensure that the foot end of the overlay is locked onto the Latch Block.
2. Align the overlay on the cradle by tightening the  $\frac{3}{8}$ -16" set screws on both the left and right cams as needed using a  $\frac{3}{16}$  inch Allen wrench (Fig. 17 and Fig. 18).

Left Alignment Cam

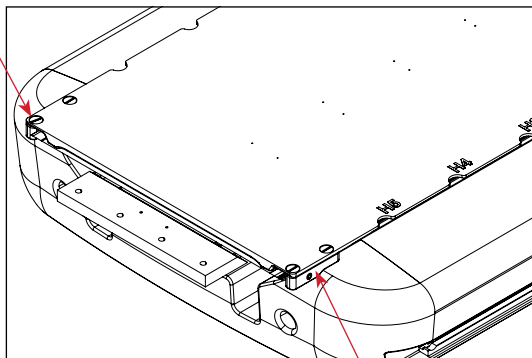


Fig. 17

Right Alignment Cam

Right Alignment Cam

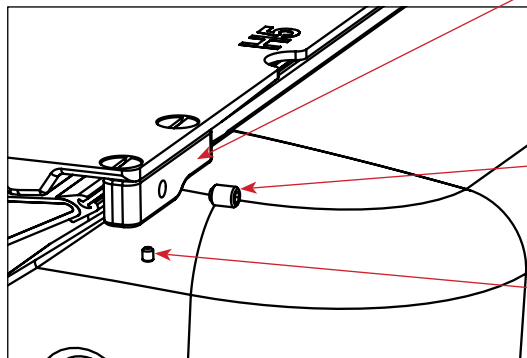


Fig. 18

3. When the proper alignment is achieved, lock the  $\frac{3}{8}$ -16" set screws by tightening the M5 set screws using a 2.5 mm Allen Wrench.

# INSTALLATION

## CENTERING CT INSERT ON THE CT CRADLE

1. Attach an Indexed Insert on the CT Overlay.
2. Set a Locating Bar on the Insert at the Head End of the CT.
3. Using the CT Laser alignment system, determine where the alignment beam hits the Centering mark on the Locating Bar (Fig. 19).

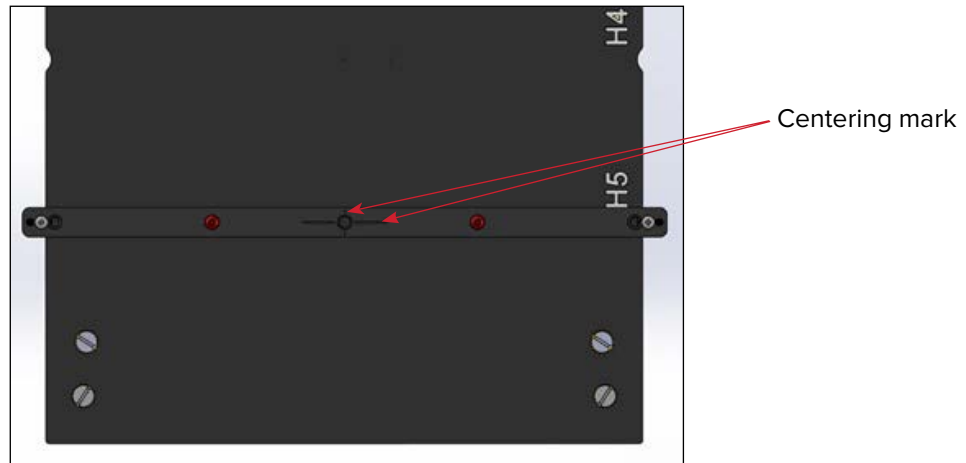


Fig. 19

4. Set the CT Overlay on Fujifilm CT cradle with the head of the CT Insert 3 in. forward of the final position and centered on the Fujifilm CT cradle (Fig. 20).

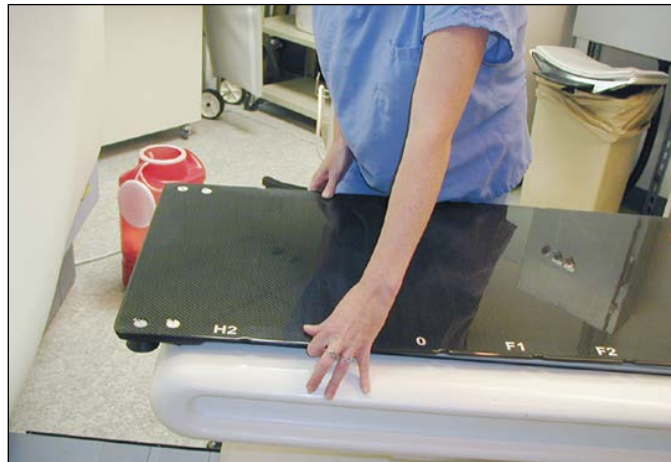


Fig. 20

# INSTALLATION

## CENTERING CT INSERT ON THE CT CRADLE, CONTINUED

5. Slide the CT Foot end engaging the Foot Latch Assembly. Do not lock the Latch Assembly.
6. Test the adjustments for fit, sliding action, and latching action.
7. If adjustment is needed, refer to Step 4 in CT Overlay Head Alignment Assembly Installation and Adjustment Section and step 2 of CT Overlay Head End Alignment section.

## INSTALLATION VERIFICATION

1. Verify the cradle can travel the full length of the “Z” axis without issue. Repeat for both mechanical and manual movement (Fig. 21).
2. Verify that the QA phantom holder can attach/detach to the CT without issue.
3. Verify the cradle can travel the full height of the ‘Y’ axis without issue (Fig. 21).

**! NOTE ! Qfix recommends running a test scan at iso-center following installation verification.**

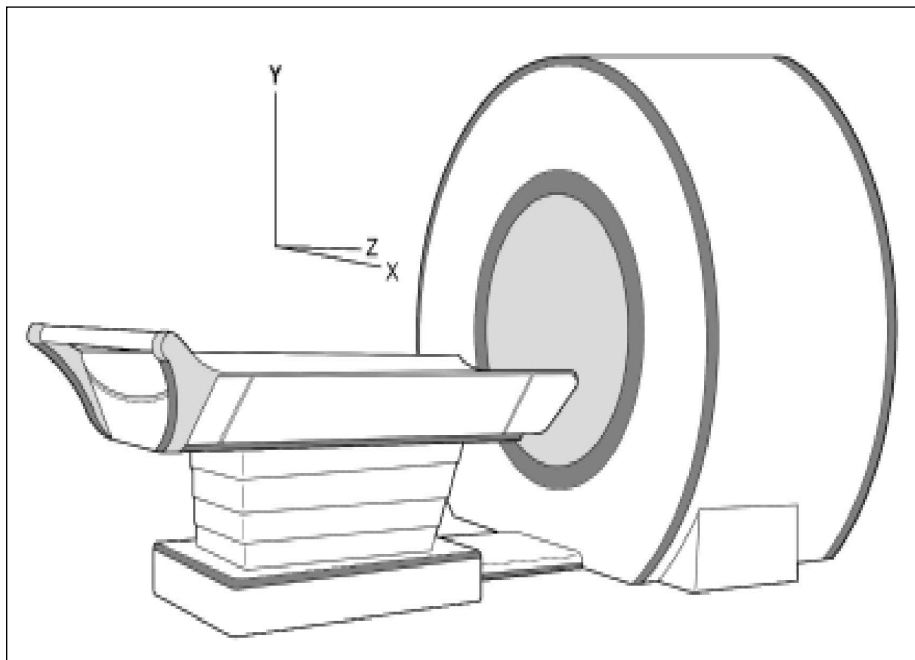


Fig. 21







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