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1- REQUIRED TOOLS

<ul style="list-style-type: none"> • Approximately 60 in.(15cm) length of string 	<ul style="list-style-type: none"> • 300ml tube construction adhesive or flooring adhesive equivalent (Liquid Nails, PL400)
<ul style="list-style-type: none"> • Non-ferrous metric hexagon wrench set 	<ul style="list-style-type: none"> • Denatured alcohol
<ul style="list-style-type: none"> • Masking Tape 	

Table 1-1

2- FUNCTION AND PURPOSE

2-1 Function

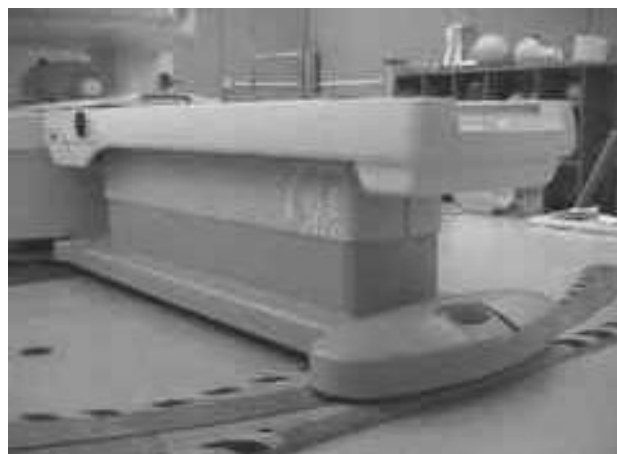
The Swing Table as its name implies can be moved to a minus 25 degree position and a plus 25 degree position.

2-2 Purpose

This swinging action and the ability of the table to move laterally, left to right, allows the customer to center the anatomy of interest at ISO center thereby improving the Image Quality of the region of interest. These three positions, Plus 25 degrees, Minus 25 degrees and Zero, are designed to maintain clearance with the magnet support posts during normal scanning.

2-3 Limitations

The Signa® *Ovation* swing table system has three positions that can be used to position the patient for optimization of the scan. The table must be in one of these three fixed positions to enable scan. There is no accommodation for positional scanning between these 3 fixed points. Optimum image quality is attained at the zero center position of the Swing Table.



Swing Table

ILLUSTRATION 1-1

3- Wear Plate/ Race Installation

1. Clean the Wear plate/Race and floor with denatured alcohol and place it in position. Outline the plate with a marker pen then, using masking tape, tape the Wear plate/Race in position to the floor. Cut the masking tape along the edge of the plate with a razor knife leaving an imprint of the Wear plate/Race on the floor with the tape. The masking tape outline will be your guide to apply the glue and protect the surrounding floor from excess glue on the edge.



2. Glue the Wear plate/Race into position. Apply enough glue to spread out a thin layer over the entire marked area. (See Illustration 1-3) Press the Wear plate/Race in position. Recommendation: Allow glue to set for at least 24 hours before placing the table on it.

GLUING THE WEAR PLATE/RACE TO THE FLOOR
ILLUSTRATION 1-13

4- INSTALLING THE SWING TABLE RACE (WEAR PLATE)

4-1 Wear plate Installation

The Swing table rides on the front rail and the Wear plate/Race at the rear. The location of the plate is critical. Once the front rail is positioned correctly. You can locate the race for installation on the floor. The race should be installed before the finished floor is installed and the table is in place. It is approximately 0.125 inches (3mm) thick. The finished floor should be put in after the race is located properly and glued down.

4-2 Installation Of The Finished Flooring

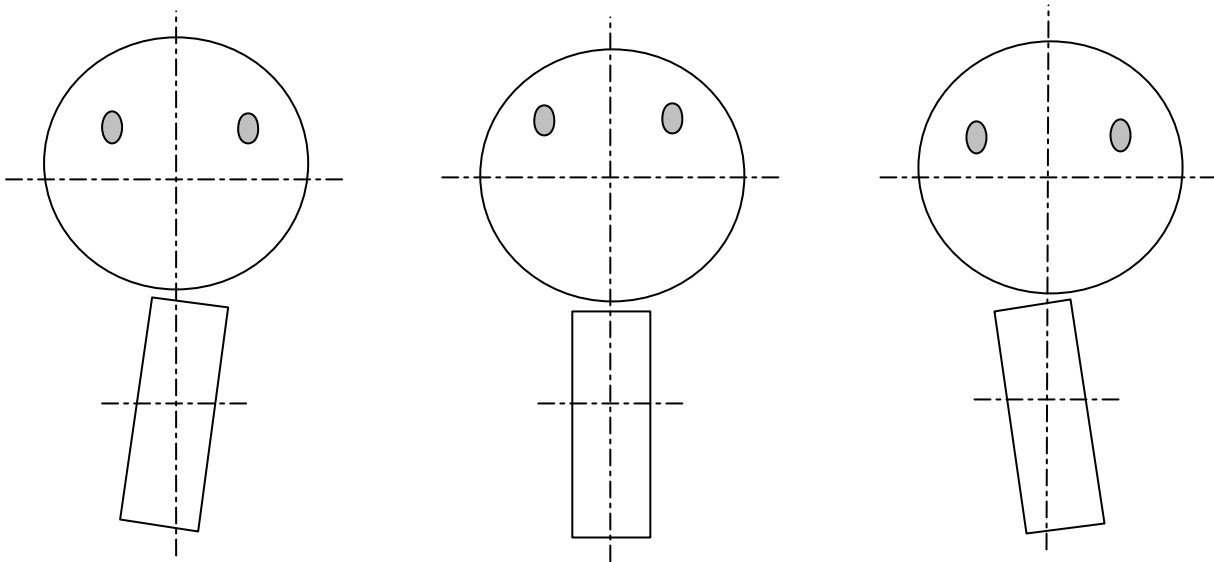
After the wear plate/race glue has cured (recommendation: allow glue to set for at least 24 hours before placing the table on it.) The flooring contractor can install the finished floor. The finished floor should be installed before physically installing the swing table.

5- MECHANICALLY INSTALLING AND CENTERING THE SWING TABLE RAIL

5-1 Positioning the Table Rail with relationship to the Magnet

The swing table must Rail must be mechanically installed and adjusted to insure that the table will swing properly and clear the magnet at all three positions. Failure to correctly perform this procedure will result in a lack of image quality and possible physical interference with the magnet support posts while using the lateral function of the swing table. It is essential that this procedure be completed prior to installing the Enclosure and adjusting the laser align lights.

Incorrect Table Placement **CORRECT Table Placement** **Incorrect Table Placement**



RAIL ALIGNMENT AFFECTS TABLE SWING MOTION
ILLUSTRATION 1-14

5-2 Adjustments

The only adjustments you have to insure the swing table swings clear of the front of the magnet are slight changes in the position of the rail support that the front of the table rides on.

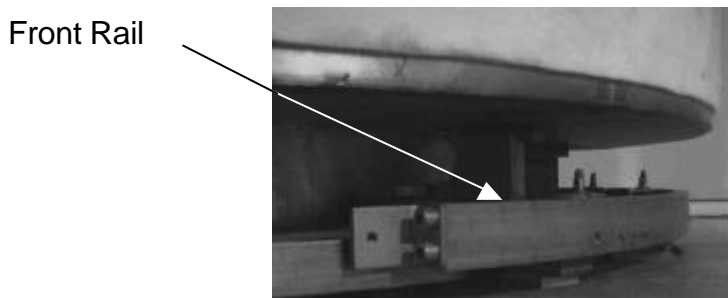


TABLE FRONT RAIL
ILLUSTRATION 1-15

5-3 Installing The Table Rail

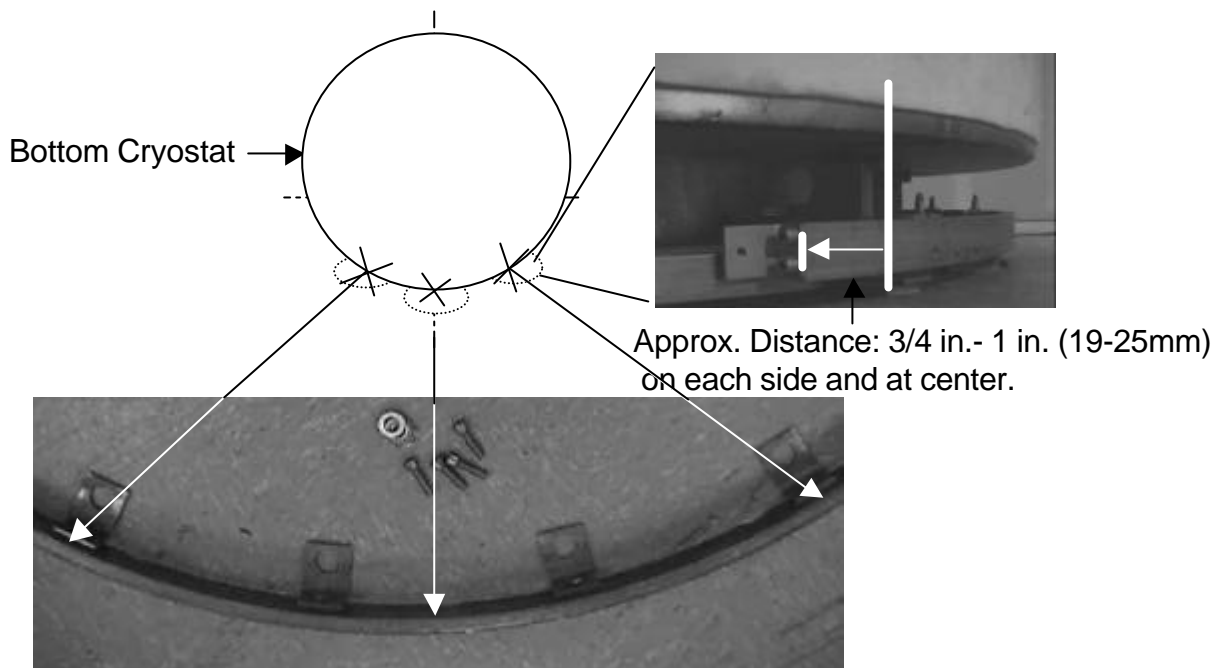
The Table Rail mounting holes are oversized on purpose to provide adjustment of the Table Rail position relative to the magnet cryostat. In the following steps you will make several measurements to insure that final placement of the rail and its arc follow the same arc on the magnet cryostat.

1. Once the magnet is in place install the Table Rail to the front mounts on the magnet baseplate with the 4 bolts and washers provided. Hand tighten at this time.

Note:

The number of shims used should be the same at all sites. However, due to the variation of baseplate installation you may need to adjust the height of the Table Rail by adding or removing these shims.

It is important that the position of the Table Rail follows the same arc as the lower cryostat. The approximate distance that is indicated in illustration 1-16 is relative. (Actual specification not yet established.) Use the marks transferred from section 3. Step 7. (Zero, -25 + 25 degree marks on floor) as the reference point, for each measurement below.



STRAIT EDGE AND MEASUREMENT POINTS

Illustration 1-16

2. Using a measuring tape or rule, measure from the strait edge to the rail on both the left and right sides. Adjust the rail achieving equal distances on both sides and center points. Finish this process by tightening down the rail bolts.

6- INSTALLING THE SWING TABLE ON THE FRONT RAIL.

6-1 Mounting the Table on the Front Rail

1. Move the table into position using the shipping dollies attached.

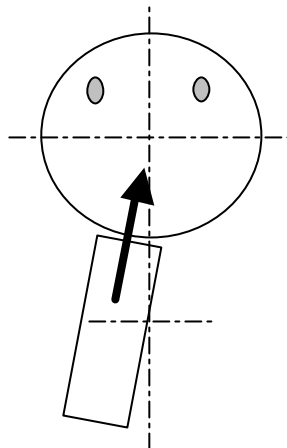


TABLE DOLLIES
ILLUSTRATION 1-17

2. Position the table at approximately 15 degrees off center. Carefully slide the cables under the magnet and retrieve them from the back of the magnet. Make sure they are pulled all the way through and temporarily ties wrap them together.

Note:

The Swing Table weighs approximately 750 lbs. If the cables are not pulled through and temporarily tie wrapped, they could get caught in the Table Rail and severed by the table swing motion.



CORRECT TABLE POSITION FOR TABLE INSTALLATION
ILLUSTRATION 1-18

Note:

To avoid damage to the Zero degree switch assembly, the table should NOT be installed at the zero position.

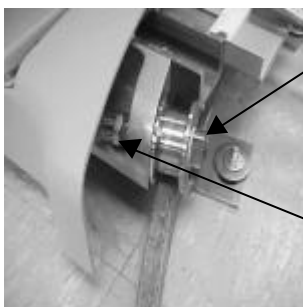


TABLE RAIL WHEEL
ILLUSTRATION 1-21

3. Remove the Rail Wheels from the front of the table and slowly slide the table under the magnet between the table Rail and the magnet itself. Be sure to watch for the switches. Use the shipping dollies to adjust for height clearance.
4. Once the table is in position, replace the table rail wheels and bolt them tight. Use the second safety lock nut to lock the bolt in position.

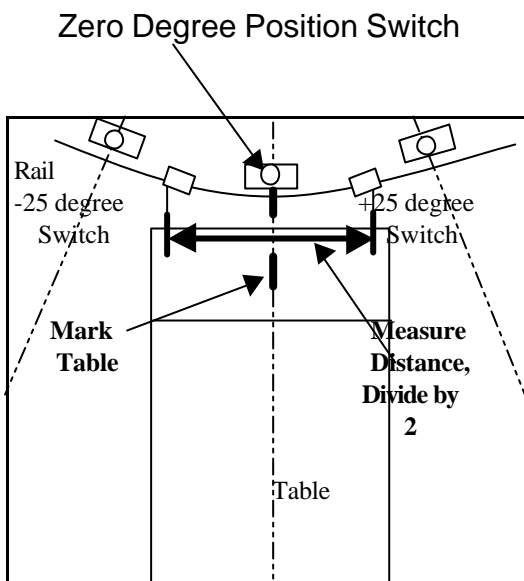
5. Using the shipping dollies, slowly drop the table into position.
6. Remove the dollies from the table.
7. Remove the temporary tie wraps and connect the table cables to the mating cables at the rear of the magnet.
8. The table transport dollies should be shipped back as soon as possible. Ship the table dollies back to:
MID-CONTINENT ENGINEERING, INC.
405 35TH AVE NE
MINNEAPOLIS MN 55418-1126

7- INSTALLING THE WEAR PLATE POSITION PIN LOCK PLATES

7-1 Centering the Swing table and adjusting the Zero degree position switch.

The center position switch is temporarily set at this time to allow for a test of the system during the Power Up procedure. This adjustment will be repeated when power is applied and the exact table swing positions are known.

1. Use the marks transferred from section 3. Step 7. (Zero, -25 + 25 degree marks on floor) as the reference point. It is important that the table be physically centered in the front of the magnet before adjusting the Zero degree Switch assembly on the table rail.



2. Using the measuring tape, measure the distance across the front of the table.
3. Divide that measurement by 2 and mark the table centerline.
4. Swing the table until the Center mark on the floor and the Center mark on the table line up.
5. Temporarily lock the table in position using the Table Brake at the rear of the table.

ALIGNING TABLE & MAGNET MECHANICAL CENTER
ILLUSTRATION 1-22

8- PLACEMENT OF THE TABLE BRAKE LOCK PLATES IN THE TABLE WEAR PLATE.



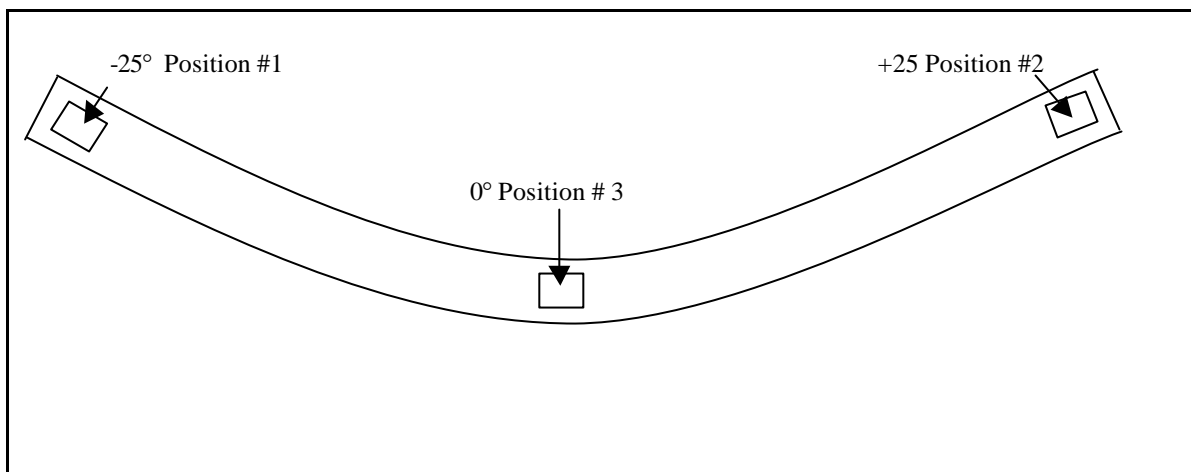
Failure to insure that the cradle clears the Magnet Down Posts at the -25 and + 25 degree positions, with the table laterally adjusted to 120mm before permanent placement of the Position Lock Plates will result in incorrect table positions.

8-1 Marking the Table Brake Lock plates

Note:

The Cradle will need to be moved into the magnet for the next section. The system and Table must have power to perform the following steps.

1. Move the table so it does not interfere with any of the Brake Lock plate locations. Place a Table Brake Lock plate into each of the three locations. These Locking Plates will become unique to the position.
 - Mark the -25 degree position as #1.
 - Mark the +25 Degree position as #2.
 - Mark the Zero degree position as #3.



MARKING THE TABLE POSITION LOCK PLATES
ILLUSTRATION 1-23

2. Apply masking tape across the face of each of the plates covering them completely. The masking tape is essential. It will provide an exact indentation for the drilling of the Table Brake Locking plate for each location.

3. Use a pen or metal scribe, mark an Orientation Line on each plate as it relates to its position in the slot. (See illustration 1-25)
4. Move the Swing Table to the -25 Degree Position.
5. Use the hand crank to drive the cradle 120 mm to the right. Drive the table into the magnet. Insure that there is sufficient clearance between the Magnet Down Posts and the cradle. If not, swing the table until there is no interference between the cradle and the Magnet Down Posts.

Note:

It is critical that the cradle longitudinal movement does not interfere with the Magnet Down Posts prior to marking the Table Brake lock Plates. Failures to insure that there is sufficient clearance for the cradle at both -25 and +25 degree positions before marking the plates, will result in cradle longitudinal drive interference problems later.

6. Apply the brake. Release the brake and move the table. The Brake Lock Plate should have a mark caused by the brake, on the masking tape. Make sure the Brake Lock Plate and the slot it is placed in, are marked with the same number (1), and Orientation mark. You must insure you each Brake Lock plate goes in the correct slot.
7. Move the Swing Table to the +25 Degree Position.
8. Use the hand crank to drive the cradle 120-mm to the Left. Drive the table into the magnet. Insure that there is sufficient clearance between the Magnet Down Posts and the cradle. If not, swing the table until there is no interference between the cradle and the Magnet Down Posts.
9. Apply the brake. Release the brake and move the table. The Brake Lock Plate should have a mark caused by the brake, on the masking tape. Make sure the Brake Lock Plate and the slot it is placed in, are marked with the same number (2), and Orientation mark.
10. Swing the table to the Zero degree position. Using the hand crank, move the cradle until the lateral indicator reads Zero (0) mm.
11. Apply the brake. Release the brake and move the table. The Brake Lock Plate should have a mark caused by the brake, on the masking tape. Make sure the Brake Lock Plate and the slot it is placed in are marked with the same number (3), and Orientation mark.

8-2 Drilling the Table Brake Lock plates

At present, the plates are made out of stainless steel, and require an 11mm wide slot approximately 20mm long. They must be returned to Milwaukee Design Engineering to be drilled and slotted at this time.

NOTE:

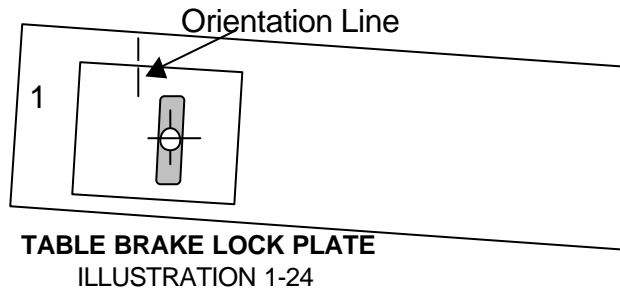
Use a courier of your choice, (Fed Express, Overnight, United Parcel)

Send To: GE Medical Systems, Inc.

3200N Grandview Blvd. Mail Stop: W-828

Waukesha, WI 53188

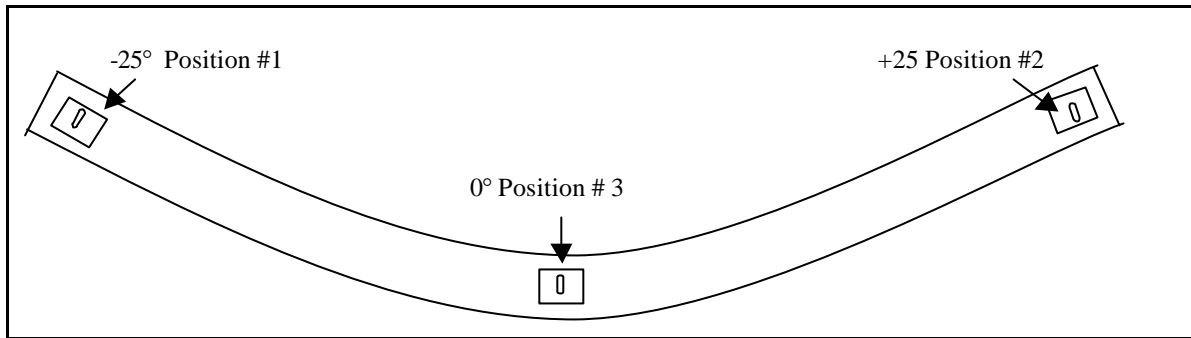
ATTN: J. Tennessen



Note:
The slots may not be in the center of the plate.

8-3 Gluing the Table Lock Plates into Position

1. Upon return from Engineering in Milwaukee, all three plates should be drilled and marked with their proper orientation and numbered position. Using a flooring adhesive or construction glue, glue each plate into position. Allow 24 hours to dry.



GLUE THE TABLE POSITION LOCK PLATES INTO POSITIONS
ILLUSTRATION 1-25

8-4 Position Switch Adjustment- Adjusting the Zero, -25 and +25 degree Position switches.



Zero degree position switch.

1. Loosen the mount on the zero degree position switch. (See Illustration 1-26) with a non-ferrous hexagon wrench.
2. Adjust the switch to the left or right until it clicks, closing the circuit. (If the system is powered up, the Magnet Display and laser alignment system will activate). Tighten the screws.
3. Repeat steps 1 and 2 for the -25 degree and +25 degree positions.

ZERO DEGREE CENTER POSITION SWITCH
ILLUSTRATION 1-26

Note:

The setup of the Center Position switch may need to be checked and reset when power is applied.

4. Check all three positions, by swinging the table and locking it into all three positions. Insure that the Magnet Display and the Laser alignment lights activate at each position. If they do not, repeat the Position Switch adjustment procedure until this is corrected.

REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
0	Jan. 14, 2001	Y.Masumo	Initial version.