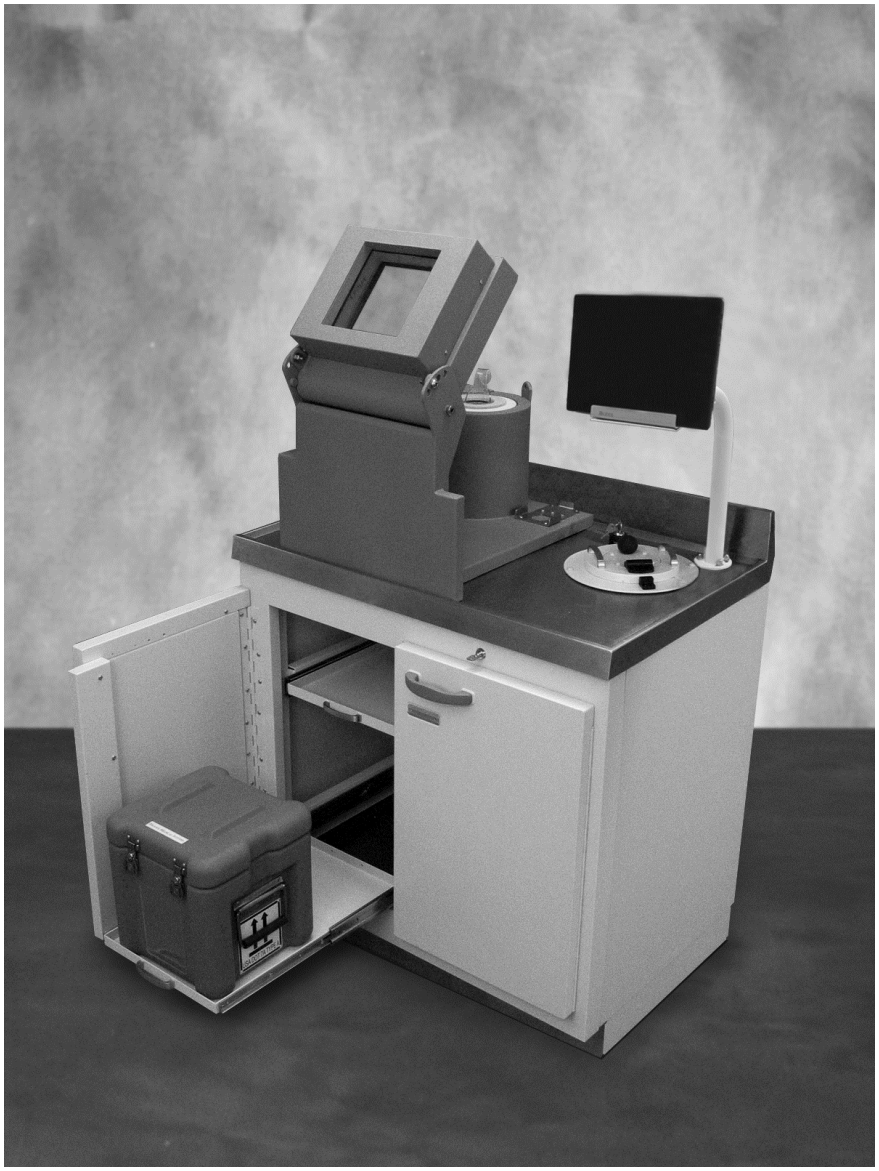
PET UNIT DOSE CABINET

INSTALLATION MANUAL

244-200

244-205



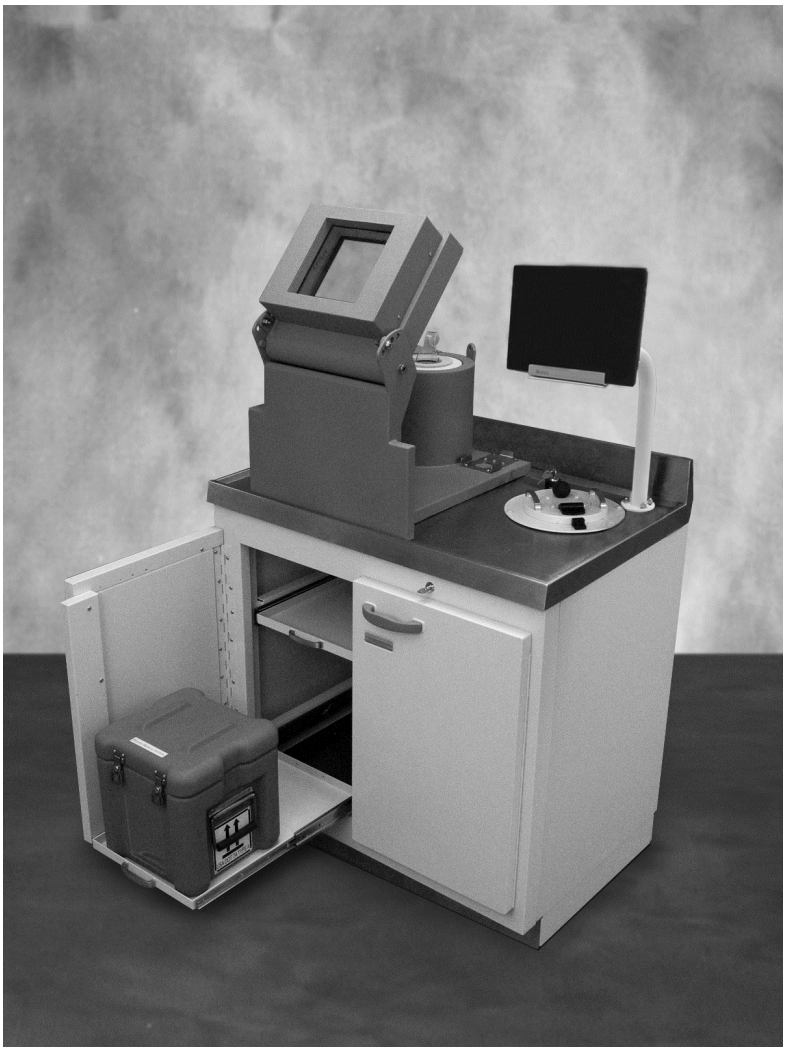
BIODEX

Biodex Medical Systems, Inc.

20 Ramsey Road, Shirley, New York, 11967-4704, Tel: 800-224-6339 (*Int'l 631-924-9000*), Fax: 631-924-9241, Email: info@biodex.com, www.biodex.com

FN: 08-134 Rev A 11/17

Pet Unit Dose Cabinet



This manual covers operation procedures for the following products:

244-200 Cabinet, PET, Unit Dose

244-205 Cabinet, PET, Unit Dose

Table of Contents

Definition of Symbols

The following symbols and their associated definitions are used and implied throughout this manual.

Symbol	Definition
	Carefully read these instructions prior to use
	Caution
	General Warning
	General Mandatory Action
	Dangerous Voltage
	“On” Power
	“Off” Power
	Earth (ground)
	Alternating Current
	Fuse
	USB Connector/Cable
	Waste in Electrical Equipment
	Date of Manufacture
	Manufactured By
	Type B Applied Part
	CE Mark
	CE Mark for products with EC Certificate
	Certified for Safety by ETL Intertek

Before Proceeding

NOTE: The warnings, cautions and instructions provided in this manual must be read, followed and kept available for consultation at all times. Observing the information, instructions and procedures presented throughout this manual is essential for using this product both properly and safely.

SPECIFIC CAUTIONS:

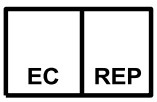
- Allow only qualified, trained personnel to operate or service this product.
- If the equipment is used in a manner other than specified in this operation manual, the protection provided by the equipment may be impaired and results could be compromised.

CAUTION: Modifications to this product are only permitted by the manufacturer. Unauthorized modification of the product can result in hazards to the operator and patient, and will void the manufacturer's warranty. Do not modify this equipment without authorization from the manufacturer.

CAUTION: Two people are required to assemble the product.

For additional technical advice or service, please contact: Biodex Medical Systems, Inc., 20 Ramsey Road, Shirley, New York 11967-4704; 1-800-224-6338 (Int'l 631-924-9000) or customerservice@biodex.com.

Authorized European Community Representative:



Emergo Europe
Prinsessegracht 20
2514 AP, The Hague
The Netherlands

Important Safety Information

CAUTION: Federal Law restricts this device to sale by or on the order of a physician, sonographer or other licensed professional.

Follow the unpacking and assembly instructions document.

Before using this equipment, read the entire operation manual carefully. Failure to read the manual may result in user error or injury. Be sure to save all provided documents for future reference.

Make certain to understand all warning and caution labels as explained in the Before Proceeding section of this manual.

This product should be used only as specified in the operation manual.

For product specifications, refer to the Table of Contents.

Biodex Warranty

Refer to the warranty card included with the product or contact Biodex Support Services.

Contact Information

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1. Introduction

Intended Use

The Biodex PET Unit Dose Cabinet is ideal for use in small PET hot labs. It provides a space-efficient work area with plenty of shielded storage capacity. It is completely shielded on all six sides with .25" lead and can stand alone or be combined with other cabinets.

Note: *The cabinet is also available with .5" and 1" lead shielding.*

Indications for Use

The cabinet supports the 042-433 Biodex Compact L-Block with Built-in Dose Calibrator Shield, the 039-412 Sharps Container Shield, the 042-434 Lead Brick Cave, and accommodates all of the Atomlab Dose Calibrators, Wipe Test Counter, and many others. The dose calibrator display unit mounts on a stand above the countertop to maximize work space or, if a tablet is used instead of the dose calibrator display unit, a different shelf (also included) designed to accommodate the tablet can be mounted in its place.

2. Assembly Instructions

Installing the PET Unit Dose Cabinet

Required Tools:

- 7/16" Wrench
- Phillips Screwdriver

1. Use a pallet jack to move the cabinet into the area in which it will be located.

   Note: *The jack can enter from the side or the front of the PET Unit Dose Cabinet after the wood pallet is removed (if it is on a wood pallet).*

2. Move the Cabinet into place.

Installing the Sharps Container Shield

Note: *In the Continental United States, Biodex will factory mount the L-Block Shield and Sharps Shield in place thus eliminating the need for on-site lifting equipment. If they are already mounted, advance to the Installing the Dose Calibrator Chamber section.*

Required Supplies:

Two ¼ – 20 eyebolts, which are not supplied. Screw them into the two threaded holes at the top of the sharps shield.

Note: *Two people are required to complete the following procedure.*

1. Open the right cabinet door and remove the upper drawer from the cabinet. Depress the tabs located on each side of the slide tray and pull the drawer straight out to remove.
2. Line up the ¼ – 20 eyebolts in the circular Sharps Container Shield with the eyebolt holes in the countertop's Sharps Container Shield cutout (located at the back right of the countertop). The hinge side of the sharps container shield faces toward the right edge.

   

   CAUTION: The Sharps Container Shield weighs 175 pounds (79.37 kg). Use a forklift to hoist it into position.

3. With the aid of another person, lower the Sharps Container Shield into the cutout, making sure the eyebolts fit securely into the notches and the Sharps Container Shield is resting on the support plate inside the cutout with the rim flush to the countertop.
4. If desired, add silicon sealant to seal the Sharps Container Shield rim to the countertop.
5. Shims (P/N 244-200-M327) are supplied and used to fill the gap between the bottom of the Sharps Shield and the top of the support bars (see Figure 2.1). Secure the shims using the 7/16" wrench, four 1/2"-13 x 1.50 Hex Head bolts (P/N C11217), and four 1/2" lock washers (P/N C08349).

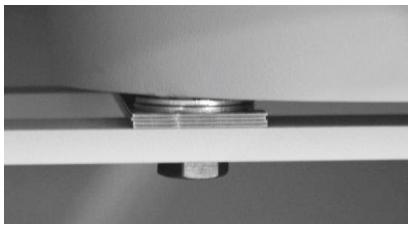

Figure 2.1. Shims

Installing the L-Block Shield

1. Insert a 3/8" shackle through the holes and use a block and tackle to hoist the shield into position.

   Note: *The L-block Shield can be hoisted using the two lifting holes located on each side of the shield near the viewing area and the lifting eye on the back of the L-block Shield.*

2. Lower the L-block Shield onto the countertop and slide it into position ensuring it fits over the Dose Calibrator detector hole in the cabinet counter top.

   Note: *For model 244-205 only, install the Lead Brick Cave (if ordered) after installing the chamber.*

Installing the Dose Calibrator Chamber

Note: *Two people are required to complete the following procedure.*

1. Open the left cabinet door and fully pull out the top left shelf.
2. The Lead Tray and the Access Door and metal spacer on the top left shelf are wrapped. They must be removed, unwrapped, and set aside to be used later.
3. Depress the tabs located on each side of the slide tray and slide the shelf straight out to remove.
4. Feed one end of the chamber-to-display cable from the top of the cabinet through the hole on the right side of the cabinet where the Display Stand Arm mounts.
5. From the inside of the cabinet, take the chamber-to display cable and feed it through the cutout in the top rear of the center vertical divider inside the cabinet.
6. Run the cable into the shielded chamber support from the back under the cabinet top.
7. Raise the chamber up from inside the cabinet through the L-Block Shield.
8. With one person supporting the chamber from above, have a second person slide the lead tray into the opening at the bottom of the Dose Calibrator Shield and lower the chamber down ensuring it rests on the lead tray.

   Note: *If the top of the chamber is below the top of the L-Block (chamber shield), lift the chamber up and slide the metal spacer in under the chamber to raise the chamber height.*

9. Rotate the chamber ensuring the connectors face the opening in the cabinet door and plug the chamber RJ-12 cable into the chamber connector.

10. Mount the Access Door (see Figure 2.2) to the front of the Shield noting that there is a hook on the inside edge of the door. Lift the door up against the face of the shield with the hook side up and place it into the recess at the top of the shield from which the door hangs.

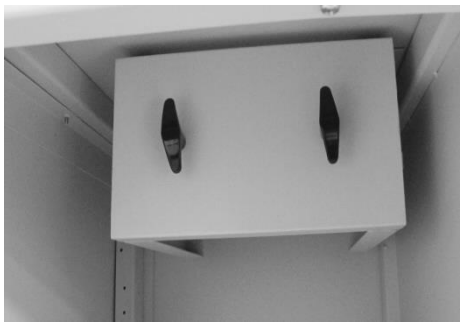

Figure 2.2. Shielded Access Door Beneath L-Shield.

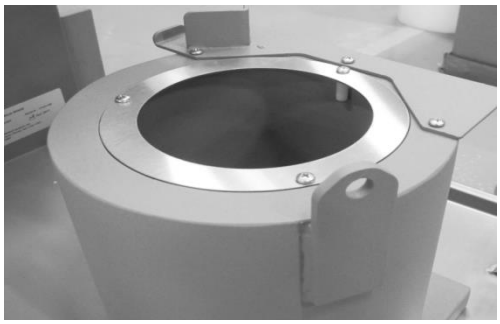

Figure 2.3. Chamber Cover Plate

11. Replace the top left shelf by sliding it back in place.
12. Place the Chamber Cover Plate (see Figure 2.3) onto the top of the chamber.

Installing the Atomlab 500 Dose Calibrator

The Atomlab 500 cabinet is shipped with two shelves: the larger shelf is for the WIN CE display and the smaller shelf is for the tablet. Both shelves are shipped inside of the cabinet on the right-hand side. Determine which of the two shelves are to be mounted on the shelf tube and mount that shelf following the appropriate procedure from the *Procedure to Change the Shelf When Required* section.

Installing the Atomlab 500 Dose Calibrator with a WIN CE Display Shelf and Arm:

1. Using a 7/16" wrench, remove the four acorn nuts and flat washers that are used to secure the Dose Calibrator Display Shelf support post to the countertop. The nuts and flat washers are found on the threaded studs on the counter top (see Figure 2.4).
2. Place the support arm on the threated studs positioned over the rear, right opening (see Figure 2.4). The arm should face the front of the cabinet. Place the washers on the studs and the acorn nuts over the washers. Adjust the arm and tighten the acorn nuts.

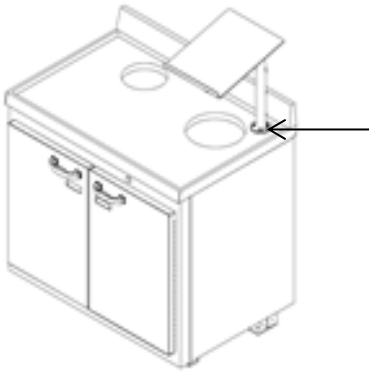

Figure 2.4. PET Unit Dose Cabinet Illustrating Positioning of the Support Arm

3. Place the Atomlab 500 Dose Calibrator WIN CE Display on the larger support shelf. The Atomlab will be held in position by the shelf's front lip.

Installing the Dose Calibrator Interface Module onto Tablet Shelf Mounted on Arm:

1. Using a Phillips head screwdriver, remove the four 6-32 SST screws and the mounting clips from the bottom of the Atomlab 500 Interface Module and discard them (see Figure 2.5).

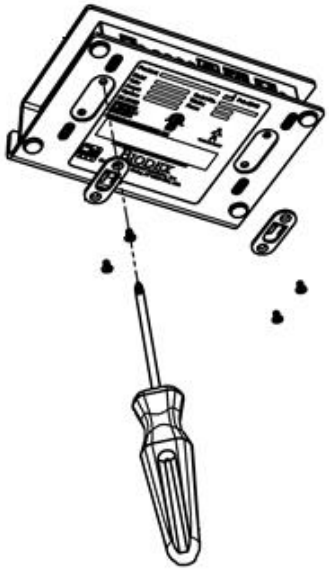

Figure 2.5. Removing Screws and Mounting Clips from Interface Module.

2. Place the four 6-32 x .38" SST screws provided with the Tablet Shelf through the openings on the bottom of the Tablet Shelf up into the Interface Module (see Figure 2.6). Using a Philips head screwdriver, tighten the screws until the Interface Module is fully supported.

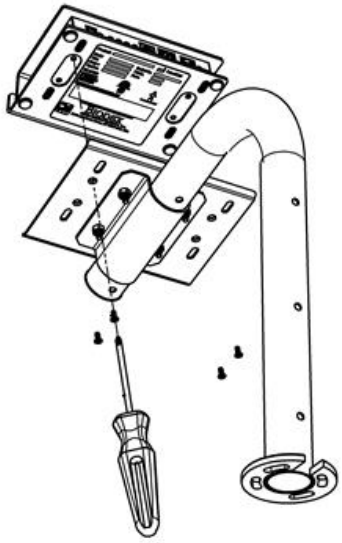

Figure 2.6. Attaching the Interface Module to the Tablet Shelf.

3. Using a 7/16” wrench, remove the four acorn nuts and flat washers that are used to secure the Dose Calibrator Tablet Shelf support post to the countertop. The nuts and flat washers are found on the threaded studs on the counter top (see Figure 2.4).
4. Place the support arm on the threaded studs positioned over the rear, right opening (see Figure 2.4). The arm should face the front of the cabinet. Place the washers on the studs and the acorn nuts over the washers. Adjust the arm and tighten the acorn nuts.
5. Using a Philips head screwdriver, loosen the four 6-32 x .38” SST screws under the Interface Module shelf, but do not remove them (see Figure 2.7).
6. Insert the tablet into the opening on the front of the Interface Module (refer to the Side View in Figure 2.7 for proper placement of the tablet).
7. Slide the top plate of the Interface Module forward until the tablet is firmly held in place.
8. Re-tighten the four 6-32 x .38” SST screws using the Philips head screwdriver.

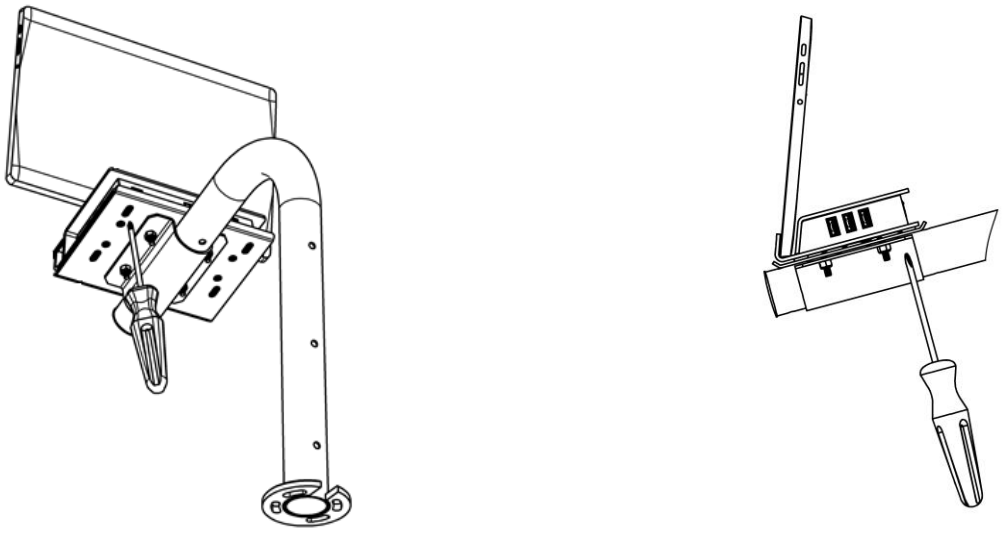

Figure 2.7. Attaching the Tablet to the Interface Module

Note: *The Dose Calibrator Tablet Shelf can be repositioned along the support arm at any time. To change the position, loosen the four acorn nuts on the bracket under the shelf, lift the shelf slightly to disengage the shelf pin, move the shelf to the desired position, re-engage the pin, and tighten the four nuts.*

Procedure to Change the Shelf When Required

Sometimes the wrong shelf is mounted to the arm for the desired configuration. When this happens, the user must remove the incorrect shelf from the arm and install the correct shelf. Once the correct shelf has been attached to the support tube, the assembly process can begin. The following details the steps to follow when changing to the correct shelf.

Changing the Tablet Shelf to a WIN CE Display Shelf:

1. Place the arm assembly into a comfortable position for removing/attaching the various parts to switch out the shelves (e.g., turn the arm assembly upside down for easy access to the screws).
2. Using a 7/16" wrench, remove the shelf tube clamp from underneath the support tube fastening the Tablet Shelf to the arm assembly and place the acorn nuts on the side to be reused with the Display shelf.
3. Remove the Tablet Shelf from the arm assembly and place to one side.
4. Place the Display Shelf on the arm assembly with the shelf tube clamp positioned on the other side of the support tube lining up the screw holes with the screw holes in the Atomlab Display shelf. Put the nuts onto the posts and tighten them (see Figure 2.8).

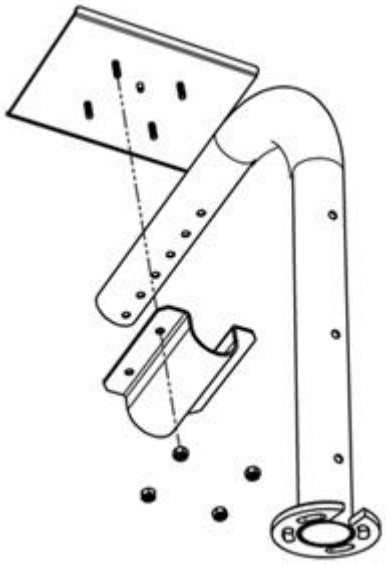

Figure 2.8. Lining up Mounting Screws with Openings in Atomlab Tube Clamp.

Changing the WIN CE Display Shelf to a Tablet Shelf:

1. Place the arm assembly into a comfortable position for removing/attaching the various parts to switch out the shelves (e.g., turn the arm assembly upside down for easy access to the screws).
2. Remove the shelf tube clamp (see Figure 2.9) keeping the nuts on hand to install the appropriate shelf. Remove the Display Shelf from the support tube and place it to one side.

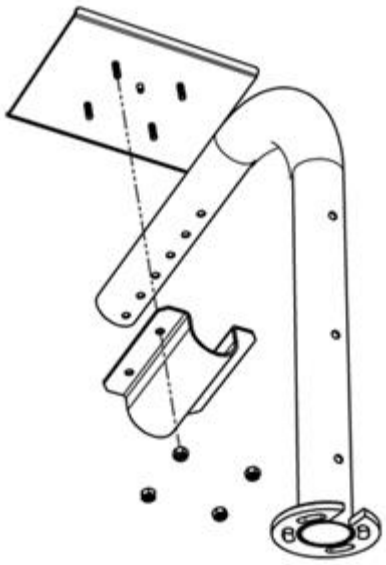

Figure 2.9. Attaching/Removing the Interface Module to the Interface Module Shelf.

3. Place the Tablet Shelf on the arm assembly with the shelf tube clamp positioned on the other side of the support tube lining up the screw holes with the screw holes in the Atomlab Tablet Shelf. Put the nuts onto the posts and tighten them (see Figure 2.9).

Atomlab 500Plus and Wipe Test Counters

Note: *Refer to the Atomlab™ 500, Atomlab™ 500plus Dose Calibrator, and Atomlab™ Wipe Test Counter Installation Guide for instructions on cable connections and Power Up instructions.*

1. Position the Wipe Test Counter on the cabinet in front of the Display/Tablet Shelf, on a shelf, or on a nearby table.

   Note: *If placing the Wipe Test Counter off the cabinet top, keep in mind the RJ-12 cable is only 8' in length and one end must be connected to the Atomlab 500 Detector.*

Complete the Atomlab Installation

WIN CE Display:

1. Connect the chamber signal cable to the back of the Dose Calibrator.
2. Plug the power cord into the back of the Dose Calibrator.
3. Run the power cable down the support tube and over the back wall of the cabinet.
4. Fasten both the chamber signal cable and the power cord at the base and along the support tube with the supplied tie wraps.
5. Plug the Dose Calibrator power cord into a wall socket. The PET Unit Dose Cabinet is ready for use.

Tablet:

1. Follow the Assembly Guide that was supplied with the Atomlab 500 Tablet for the proper order to make all connections.
2. Run the power cable down the support tube and over the back wall of the cabinet.
3. Fasten both the chamber signal cable and the power cord at the base and along the support tube with the supplied tie wraps.
4. Power up the Atomlab 500 Tablet following the assembly guide supplied with the tablet.

Using the Sharps Container Shield

1. The Sharps Container Shield is designed for use with the 039-413 Sharps Container.
2. To deposit sharps, lift the hinged cover and release the syringe into the container. Close the hinged cover.
3. To change the sharps container:
    a. Unlock the Sharps Container Shield top door.
    b. Grasp the two handles and rotate the top counterclockwise to lift it off and reveal the container.
    c. Remove the container and dispose appropriately.
    d. Replace it with a new sharps container.
    e. Replace the top door and rotate clockwise to secure.

Leveling the PET Cabinet

The PET cabinet has front leveling pads inside the outer edges of the base channels. The cabinet can be raised or lowered by loosening the 9/16" Hex Jam Nut on the top of the plate, turning the 5/8" Hex Nut on the leveling pad clockwise or counterclockwise to level cabinet. Lock the 9/16" Hex Nut against the plate after the adjustment has been completed.

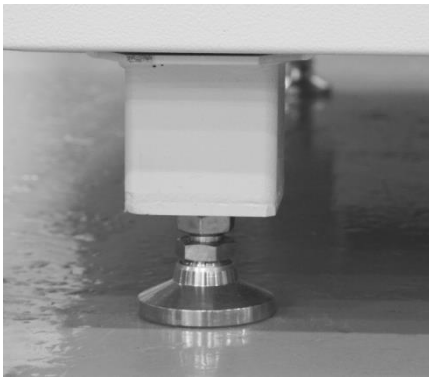

Figure 2.10. Leveling Pad Adjustment.

Installing Kick Plates

For instructions on installing the kick plates, refer to the Lead-Lined Laboratory Furniture Manual on www.biodex.com/nuclear-medicine/products/shielding-storage/lead-lined-laboratory-furniture.

Maintenance

As required, wipe all surfaces except the Dose Calibrator with a clean cloth and a solution of warm water with a mild detergent (or Radiacwash for decontamination).

Wipe the Dose Calibrator with a soft cloth dampened with alcohol.

Disposal

An appropriate waste disposal company is to be contacted (i.e., the local collection point for waste separation). Properly dispose of the device at the end of its service life:

- The device packaging is disposed of through resource recycling.
- The metal parts of the machine go to scrap metal disposal.
- Plastic parts are disposed of as hazardous waste.

The disposal of equipment must be in accordance with the respective national regulations.

Wear parts are considered hazardous waste! After being replaced, wear parts must be disposed of according to country-specific waste laws.

3. Specifications

244-200:

Dimensions: 36.5” w x 24” depth x 36.5” h (93 x 61 x 93 cm)

Lead Shielding: .25” thick (.64 cm)

Finish: Powder coat

Doors: Key-locked

Countertop: Stainless steel with 4” (10.2 cm) backsplash and .5” (1.3 cm) lip

Weight Capacity: 1550 lb (703 kg)

Weight: 1240 lb (562 kg)

042-433 Compact L-Block with Dose Calibrator Shield:

Dimensions: 18" w x 21.5" depth x 26" h (45.7 x 54.6 x 66 cm)

Lead Shielding:

Front: 1.5" thick (3.8 cm)

Base: 1" thick (2.5 cm)

Calibrator Shield: 1” thick (2.5 cm)

Calibrator Shield Inside Dimensions: 6.85" I. D. x 10.25" h (17.4 x 26 cm)

Lead Glass Window:

Dimensions: 8" w x 8" h x 4" thick (20.3 x 20.3 x 10.2 cm)

Density: 5.2 g/cm^3

Finish: Powder coat

Weight: 590 lb (259 kg)

039-412 High-Energy PET Sharps Container Shield:

Dimensions: 12" h x 8.75" dia (30.5 x 22.2 cm)

Lead Shielding:

Sides and Bottom: 1" thick (2.5 cm)

Rotating Cover: .875" thick (2.2 cm)

Hinged Door: .625" thick (1.5 cm)

Security: Key-locked

Weight: 175 lb (79.4 kg)

BIODEX
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