Setup Wizard Introduction

The Setup Wizard guides users through the setup process and can be accessed by either tapping *Yes* at the Confirm screen, which asks: *Do You Wish to Run the Setup Wizard?* or by selecting Setup Wizard from the *Compound* tab on the Menu screen.

Either approach takes you to the 5-step set-up process, which includes

- Calibrating the load cell
- Selecting a configuration
- Changing the tube set
- Priming and verifying, and
- Calibrating the compounder

You may also view the Authorization Report from this screen.

Please note in this tutorial, the Display seen is the Model DX Display. Many users have an updated Display known as the DY Display. The DY Display has a slightly varied size and appearance, but exactly similar functionality to the DX Display shown here.

Calibrating the Load Cell

The scale calibration process begins when users tap the *Calibrate Load Cell* button on the Setup Wizard screen.

This process ensures that the scale (or load cell) accurately measures weight and must be performed on a daily basis after the calibration expires at midnight.

When the *Empty Load Cell* message appears, make sure that there is nothing on or touching any part of the load cell, then tap *OK*. A *Step 1 in Progress* message appears and disappears. Then a *Place Calibration Weight* message appears.

Using gloves, place the weight on the load cell, aligning it with the holes in the load cell.

Then tap *OK*. A *Step 2 in Progress* message appears and disappears.

At the Setup Wizard, when the software has completed the load cell calibration, a check mark appears next to the *Calibrate Load Cell* button. You can now remove the calibration weight.

It’s important to note that the calibration weight should be carefully treated and stored. It is recommended that users wear gloves to handle the weight, to minimize the accumulation of oils and dust.

Selecting the Configuration

In the Setup Wizard, the software automatically selects the last configuration that was used, and a check mark appears next to *Select Configuration.*

Tapping *Select Configuration* identifies which ingredients are attached and to which ports on the compounder.

To use a configuration that is different from the last one used (and there is more than one configuration available), tap the *Name* list, select the desired configuration, and tap *Ok*.

Installing and Changing the Tube Set

When the *Change Tube Set* button is tapped, a screen with tube set statistics and recommendations appears, showing how long the current tube set has been installed, how much fluid has been pumped during that time, and whether or not the software recommends changing the tube set.

To maintain delivery accuracy, the tube set must be replaced after it has delivered 150 L of fluid or has been installed for 24 hours, whichever comes first. Check that the materials of the inlets, valves, and bags are compatible with all ingredients used. Contact the ingredient manufacturer to confirm compatibility. At this screen, tap *Tube Set Will Be Changed*.

This will take you to the *Hang Source Container* screen. As you can see, this also resets the expiration counter for the tube set as well as the ingredient remainders. Ingredient remainders are values in the software that represent the actual volume of fluid remaining in the source containers.

Using aseptic technique, remove the valve set from the packaging, making sure to first check the expiration date.

Next, check the valve actuators to ensure none are broken or damaged. If you find a damaged actuator, do not use the compounder because patient harm may result. Contact Baxter Technical Support for assistance. Please refer to the Operator Manual for examples of normal, damaged, and broken actuators.

Check that the valve set numbers match the graphical representation on the graphical user interface. Then check that all the slots on the bottom of the valve set are aligned.

Place the valve set onto the actuators and gently push the end tabs down and out until you hear a click on each end. Once the valve set has been installed, do not attempt to remove it during operation. If the valve set is not installed properly, the compounder cannot be calibrated accurately.

Route the outlet tube into Channel 1, around the pump rotor and into Channel 2 as shown. Move the pump rotor counterclockwise only. Do not pull or stretch the outlet tube.

Make sure that the tube is in proper position at the bottom of Channels 1 and 2 against the wall around the pump rotor. You should firmly push the tube flush downward into both channels and flush against the occlusion and bubble detectors.

Next, route the outlet tube into the third channel, close the pump door, and connect the end of the outlet tube to the tube holder on the vial rack.

Connecting a Source Container

The EXACTAMIX 2400 Compounder is not for use with non-sterile bags. To change the tube set, the user must remove the old tube set and install a new one. The EXACTAMIX 2400 Compounder Operator Manual provides directions on how to do so properly.

Once the new tube set is installed, follow the steps (commonly identified by the acronym ITASHL) to complete the process:

1. Identify the port where you will attach the ingredient
2. Tap the ingredient button on the screen
3. Attach the inlet to the corresponding port
4. Spike the source container
5. Hang the source container on the vial rack, and
6. Label the inlet

Always use aseptic technique when attaching ingredients and inlets. Let's review each of these steps.

At the hang source containers screen, identify the port number. On the valve set, identify the port number specified on the screen. The screen will also indicate the manufacturer and container size of the ingredient as well as the appropriate inlet to use. Next, tap the corresponding ingredient button for the port on the screen.

Important! Always view the ingredient detail window. It includes details not visible on the ingredient button.

Next, attach the inlet to the identified port on the valve set. Locate the inlet type that was specified and check that the inlet is not kinked. On the valve set locate the port number that was specified at the ingredient detail window. Grasp the port cap with one hand, remove the port cap, and immediately attach the inlet with your other hand.

Baxter recommends working from left to right in the sequence of the port numbers. It is important to use the correct inlet type for the container. Using the incorrect inlet type can lead to occlusions and incorrect ingredient delivery, resulting in harm to patient.

To spike and hang a bag: First, hang the bag on the hood hanger. Make sure the bag is hanging with its spike port facing down. Doing so helps reduce the possibility of air bubbles entering the inlet tube.

Remove the cap from the spike end of the inlet. Then, insert the spike fully into the bag and rotate the spike 180 degrees to prevent occlusions.

Failure to insert the spike completely into the bag port may restrict flow or permit the spike to dislodge during pumping. This can cause the delivery of incorrect ingredient volumes and may result in patient harm.

Now it's time to label the inlet. Label the inlet with the appropriately numbered barcode label that was packaged with the valve set, attaching the label close to the source container. The number on the label must match the number of the port where the inlet is attached. At the ingredient detail window, tap *Ok*.

At the Hang Source Containers screen, the color of the ingredient button becomes teal to indicate that the ingredient is attached and waiting to be primed. Repeat the previous steps for all the ingredients you want to attach. Again, Baxter recommends that you move numerically from left to right. After all ingredient buttons turn teal, tap *O*k to continue to the next step in the Setup Wizard.

To connect and hang a 60 mL syringe: First, turn the syringe so that its Luer end is facing down. Then, rotate the inlet Luer connection onto the syringe until tight. Finally, hang the syringe on the vial rack by snapping the syringe flanges into the syringe holder.

To spike and hang a bottle: First, hang it on a hood hanger and turn it so the septum is facing down. Then, insert the spike fully into the bottle up to the shoulder of the spike.

To spike and hang a vial up to 250 mL: First, turn the vial so its septum is facing down. Then, insert the spike fully into the vial. Next, push the bottom of the vial up against the top vial holder on the vial rack and make sure the vent faces out. Be sure not to touch the vent—this could cause blockage. Finally, slide the spiked end of the vial into the bottom vial holder.

Electronic Y-Sites

The EXACTAMIX 2400 Compounder allows you to attach containers of the same ingredient to multiple ports, creating an electronic Y-site. This improves efficiencies when pumping common ingredients. In this example, the user has created an electronic Y-site using Ports 23 and 24 for a common Universal Ingredient.

The ports that make up an electronic Y-site are identified by colored highlighting on the Pump Screen. When the first container of this ingredient has emptied, the compounder continues pumping from the next container of this ingredient.

Attaching a Calibration Bag

After all ingredients have been attached, the next step is to attach the sterile calibration bag. One calibration bag and two sets of bar code labels are included with every valve set. First, aseptically remove the bag from its packaging, connect it to the outlet tube, and attach the bag to the load cell.

Place the holes in the corners of the bag over the guide pins on the load cell. Route the bag's fill port through the load cell's fill port holder, making sure that the outlet tube is curved, not twisted or kinked.

Barcode Scanning and Verification

After all ingredients are attached and the calibration bag is attached to the load cell, the ingredients and inlets must be primed and verified. This process begins with scanning the bar codes on each container and inlet to verify that the correct ingredient has been hung. Then a second user independently verifies the setup and primes the inlets. Let's first review the bar code verification process.

At the Setup Wizard screen, tap *Prime and Verify*.

The Bar Code Verification screen will indicate that all ports are empty until the bar codes on the attached inlets and source containers are scanned.

Scan the bar code label on an inlet. Then scan the bar code label on the corresponding source container.

If you scanned the correct source container, the corresponding ingredient button appears on the screen.

Continue scanning the inlets and labels moving from left to right (or right to left) to prevent skipping any ports. Scan only the barcodes attached to the inlet and the corresponding source container. Do NOT scan unattached barcodes or old containers. Doing so may result in incorrect ingredient delivery and patient harm. The red "X" indicates that the ingredient needs to be verified (which is done later in the process and is reviewed in the Priming the Inlets and Verifying the Setup video.)

If you scanned an incorrect source container, the compounder beeps and displays *Incorrect scan, try again* at the bottom of the screen. Scan the correct source container.

If the scanned product is not the specific product identified in the configuration but is the same ingredient, a *Warning* message appears. Tap *Yes* if you want to use the scanned product instead of the product originally listed on the configuration.

Repeat the previous steps until an ingredient button appears for each attached ingredient.

When the *Bar code verification completed* message appears, tap *OK*.

Baxter recommends that a second user (a cosigner) independently verify the setup, to help ensure that the first user attached each ingredient's inlet to the correct port. Incorrect setup may result in patient harm.

The first user is automatically logged out when the cosigner logs in.

Priming the Inlets and Verifying the Setup

Once all ingredients have been scanned, you are ready to prime the inlets and verify the setup. At the Prime and Verify screen, a red "X" appears on each of the ingredient buttons, indicating that verification is needed. Do not prime calcium and phosphate solutions consecutively. Interaction of these ingredients can cause a precipitate in the finished solution. If the configuration includes a lipid, prime the Universal Ingredient immediately after priming the lipid.

From this screen, tap an ingredient button to reveal the ingredient detail window. Review the information, checking that

- The product information in the title bar is correct and matches the source container to be used
- The port number is correct
- The ingredient description is accurate
- The remaining volume matches the current volume of the source container to be used, and
- The spike (or inlet) type is correct

On the valve set, locate the port for this ingredient. With your hand, hold the inlet that is attached to the port, and follow the inlet up to the source container. Check that the number on the inlet label matches the port number. Check that the product attached to the inlet matches the information on the screen.

At the ingredient detail window, tap *Prime*.

At the Confirm screen, make sure that a calibration bag is attached and tap *Ok*.

When an ingredient is being primed, its button becomes yellow. The screen displays an animation of the process.

Watch for fluid moving from the source container, through the inlet in your hand, and down to the valve set. The ingredient must be attached to the proper port. Patient harm may occur if the location of an ingredient is incorrect.

When priming is finished, the ingredient detail window appears. Check the inlet to be sure that it is primed properly, leaving no air in the inlet tube. If necessary, tap *Re-prime* to remove the air from the inlet. If the ingredient delivered correctly, release the tube from your hand and tap *Verify* to confirm that the ingredient's inlet is attached to the correct port.

The red "X" on that ingredient button now turns to a green checkmark, indicating that the ingredient has been verified. Repeat these steps with each ingredient to complete the Priming and Verification process. If the calibration bag becomes full, remove it and attach a new one. When you are finished, tap *Close*.

Flushing the Universal Ingredient

After all ingredients have been primed and verified, a message appears stating *The fluid path will be flushed with UI*. Tap *Ok*.

The compounder will automatically flush the common fluid pathway with a measured amount of UI based on customer settings. Check that the fluid moves properly during the flush.

At the *UI flush complete* message, tap *OK*. If a cosigner was logged in, the software automatically logs out the cosigner and logs in the original user.

A checkmark now appears next to the *Prime and Verify* button on the Setup Wizard. You are now ready to calibrate the compounder.

Calibrating the Compounder

From the Setup Wizard screen, tap *Calibrate Compounder* to ensure that the compounder delivers the intended volume of each ingredient.

Make sure the calibration bag is attached and then tap *Ok*. To avoid using the wrong bag on a patient, a calibration bag should be used during all priming, verifying, and Universal Ingredient flushes.

Select the size of the calibration bag you are using, then tap *Ok*.

Make sure there is nothing except the calibration bag touching any part of the load cell. A *Sampling weight for highest accuracy* message appears and disappears a couple of times. If any items (except the calibration bag) touch the load cell during the calibration, the calibration will not be accurate.

The compounder pumps 100 mL of water, checks the weight, makes any necessary adjustments to the movement of the pump rotor, pumps 100 mL again, and checks the weight again. If the UI for the configuration is something other than water, the compounder automatically flushes the common fluid pathway with the identified UI.

At the *Pump calibration completed successfully* message, tap *Ok*. The Setup Wizard is now complete. If calibration fails, refer to your Operator Manual or contact your local Baxter Technical Support.

Fulfilling an Order

In the order-entry software, a patient order (or .PAT file) is created. This contains the patient information and the formula to be pumped. A corresponding label with a bar code may also be printed at the same time. Typically, a technician applies this label to a new patient bag and brings the bag to the compounder. This will depend on your facility's protocols.

At this point, attach the patient bag to the load cell using aseptic technique. Once it is on the load cell, scan the bar code on the label. The compounder will retrieve the formula information for this patient from the .PAT file and populate the Pump Screen on the compounder.

If the formula includes an ingredient that must be added manually, a *Manual Add* button appears on the left side of the Pump Screen. Tap this button to view information about the ingredients that must be added manually.

To begin the compounding process, tap *Run*. A message appears asking you to select the size of the bag attached. Select the size of the bag and tap *Ok*.

At the Pump Screen, the *Run* button becomes a *Pause* button. The compounder pumps the ordered volume of each ingredient, one at a time, into the patient bag in the specified sequence. When an ingredient is being pumped, its button becomes yellow. The compounder will weigh any ingredient delivered over 100 mL as well as the final bag.

If you need to pause compounding temporarily, you can perform either of the following actions:

- Tap *Pause*, then tap *Resume* to start compounding again, or
- Open the pump door, then close the pump door and tap *Resume* to start compounding again

The MixCheck Report will indicate that compounding was stopped.

When compounding is finished, a message displays this information about the patient bag:

- Expected weight
- Actual weight
- Difference
- Whether or not the difference is acceptable

Note that the final weight of the solution is usually within +/- 5% of the ordered volume. In this example, you see what the message looks like for a dose that is outside of the acceptable range. Note that a possible cause may be offered as to why this occurred. In this case, the bag would be discarded and the dose would have to be properly re-compounded.

If the dose is within the acceptable range, tap *Ok*. A record of the transaction will print in the MixCheck Report.

Replacing a Source Container

During the compounding process, an ingredient may become depleted and need to be replaced. When a formula is loaded and requires more ingredient volume than what remains in the source container, the vertical bar on the ingredient button flashes.

The Swap Container window appears when the container of that ingredient is empty. Users have 4 options at this point:

- Stop filling and throw the bag away to cancel an order.
- Replace the empty container with an exact match (including the same ingredient, container size, container type, and manufacturer).
- Use the same ingredient, but a different container size, type, or manufacturer (using a different container may require you to change and prime the inlet), or
- Use some overfill to use the fluid remaining in the current container to complete the order.

Please note that adjusting the value improperly in the *Overfill volume to use* field may lead to bubbles, occlusions and under-delivery of an ingredient if its source container runs empty.

When swapping (or replacing) a container, always use aseptic technique.

In this example, the empty container was swapped with the same ingredient and container type, so the user taps *Swap is complete*. A Confirm screen appears, directing the user to scan the inlet.

Use the bar code scanner to scan the labels on both the inlet and container. The compounder will automatically resume the compounding process if the correct container has been attached.

Cleaning the EXACTAMIX 2400 Compounder

The EXACTAMIX 2400 Compounder should be cleaned as part of the daily setup, before installing a new tube set, or when there is a spill. Users should only use approved cleaning materials including

- Non-abrasive cloths
- Soap and water, and
- 70% isopropyl alcohol or another self-drying disinfectant

Cleaning is required to ensure that the compounder operates as intended. Failure to clean the compounder can impair its operation.

The compounder should be cleaned and wiped down daily. Cleaning agents containing bleach should NOT be used on the compounder.

Start by shutting down and turning off the compounder. If the tube set is installed, remove and discard it. Then, clean the top of the main module including the valve actuators, clean the poles and holders on the vial rack, clean the display, clean the bar code reader, and clean the load cell.

Spraying directly onto the screen, the load cell or the actuators is OK. Cleaning underneath the device is mandatory, but you should avoid spraying directly into any of the three connections on the Main Module and the USB ports at the bottom of the Display.

Next is the pump rotor. To clean the rotor, open the pump door on the main module; remove and retain the thumbscrew and washer; and then remove the pump rotor from the spindle.

Clean the pump rotor area, and the channels nearby, including the stator area where the rotor resides. This should be done at least once a month – Baxter recommends a weekly cleaning and check. The black washer under the thumb nut must be kept and reinstalled with the rotor. Make sure to clean both the occlusion detector and the bubble detector. Also clean the pump rotor, making sure that the rollers spin freely.

To install the pump rotor, it is IMPERATIVE to align the notch on the bottom of the rotor with the pin on the spindle then install the washer and thumbscrew. Tighten the thumbscrew until finger tight.

Close the pump door. Although Baxter recommends that you clean the compounder as part of the daily setup or whenever there is a spill, you can clean the EXACTAMIX 2400 Compounder more often if indicated by your facility's protocol. For full instructions on cleaning the compounder, please refer to the EXACTAMIX 2400 Compounder Operator Manual.