



**Concrete Buildings**

**800.696.5766**

# **Maintenance & Operation Manual for Flush Buildings**

**This manual was prepared specifically for:**

**Building #** \_\_\_\_\_

**Type** \_\_\_\_\_

**Location** \_\_\_\_\_

# Welcome!

***Congratulations*** on the purchase of your new CXT Flush Restroom Facility. We are proud of our quality products and customer support. Your CXT flush restroom building is designed to be durable and easy to operate. Properly maintained, it will give you decades of superior service.

This easy-to-use manual will introduce you to the many features and minimal maintenance requirements of your building. Should you have any questions about your building after familiarizing yourself with this manual, please call us toll free:

**1-800-696-5766**

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*A quick note about...*

## **The Americans with Disabilities Act (ADA)**

All CXT buildings are designed to be accessible to people with disabilities and to be in compliance with the ADA standards in effect at the time they are manufactured. While the toilet riser may seem a bit high or the door closes too slowly, these features, among others, were built into your building so that it would be in compliance with these standards. Please keep this in mind when modifying, replacing or repairing any part of your CXT.

If you have any questions about ADA compliance issues related to your building, please contact us.

## Your Water Supply System

For your building to operate properly, it must be connected to a water supply that is clean, free of debris and provides the proper volume and pressure.

Great care should be taken to keep debris out of your water supply. Any small particle in your water may affect the performance of the fixtures. We recommend that you thoroughly flush your system prior to connecting the supply. If your supply is prone to debris, you should consider adding an in-line filtration system to avoid problems.

Your water pressure should be 45-75 psi. Lower pressures will result in poor flushing action. Higher pressures may damage components and create an unsafe situation.

The supply line size for your building is indicated in the plans for your specific building. The size indicated must be maintained from the source to the building. Do not use reducers, smaller meters or any other component on the supply that will reduce the internal diameter and restrict flow. Restricted flow always results in fixture performance problems.

## **Building Start-up Procedure**

After you have accepted your installed building from CXT it is time to put it into service. If CXT is not connecting the utilities to your building, we strongly recommend that all connection work performed on your building be completed by licensed professionals.

### ***Step 1 – Do not turn the power or water on at this time***

Power should not be energized until you have completed the steps below. Applying power prematurely to the building may damage components or cause an unsafe condition.

### ***Step 2 – Check the keys, locks and doors***

If your installer did not hand you the keys to your building, they should be inside the building by, or attached to, the toilet paper holder. Check your keys in every lock to assure that they are all cut properly and the locks function properly. Check the closing speed on your doors and adjust as necessary to assure that they perform properly in your conditions and are in compliance with the ADA guidelines for door force.

If your building is equipped with a magnetic locking system, verify that the system timing is set properly and that the "panic button" is operational.

### ***Step 3 – Check the fixtures***

Our factory technicians and installers are trained to provide you with a complete and functional building. While your building was thoroughly tested before shipment and installation, it is possible that some items may have come loose or need adjustment before you open it to the public. Verify that the wall mounted fixtures, mirrors, toilet seats, etc. are secure, and all fasteners are installed and properly tightened.

### ***Step 4 – Flush your plumbing system and turn water on***

The plumbing system in your building is comprised of specialized commercial components. Many of these will not function properly if debris is present in your water. We strongly recommend that you thoroughly flush your water supply system and the water system in

the building before you put it into service. If CXT installers connected your building to the water supply, this step should already have been completed.

CXT **will not** warrant fixture performance problems caused by debris in your water system.

### ***Step 5 – Purge the air and fill the water heaters***

Once you have flushed the system, opened all valves and purge the air from the system. Verify that your water heater tank(s) is/are full (tank systems) or that there is water flowing through it/them (instant systems) (as applicable). This is the best time to check for leaks.

### ***Step 6 – Check the electrical system and energize the power***

Before you energize the electrical system in your building it is important to visually verify that the systems are properly installed and complete. While most, if not all, of the wiring in your building was completed at the factory, there can be certain fixtures, appliances or grounds that must be field installed. Inspect to assure that every junction box, conduit, fixture and appliance has a secured access plate, cover or trim properly installed at the connection or control points. There should never be any exposed wires. Verify that the electrical system has been properly grounded.

We recommend that you switch every breaker in your panel to the "off" position before energizing the panel. When you have done this, move the main breaker to the "on" position. One at a time, move every breaker in the panel to the "on" position, pausing to determine if there are any perceptible problems on that circuit before moving on.

Once you have energized all circuits, follow each manufacturer's instructions to set your timers, start your heaters, and check every appliance, or system, to verify that they operate properly. Press the test button on the GFCI receptacle to assure that it is operating properly.

***Step 7 – Connect the propane or natural gas supply (optional)***

We strongly recommend that a professional trained in gas service installation make the connection to the propane or natural gas supply. All gas appliances should be started, and their performance verified, by trained personnel, according to the manufacturer's instructions.

***Step 8 – Fill the dispensers (as applicable)***

Now is the time to fill your dispensers (soap, towels, etc.) and verify that they are operating properly.

Your CXT is shipped with the toilet paper holders full. Make sure that the paper dispenses from the roll smoothly and does not jam. Place your pad lock on the holder to secure the paper rolls. Remember that the frustration caused by lack of, or difficulty dispensing, toilet paper is a leading cause of vandalism in public restrooms.

## Electrical System Operation

### ***Exterior Lights***

The Exterior lights are normally on the same circuit, breaker #, as the lights in the chase area. Their operation is controlled by a photo control unit mounted on the outside of your building, under the eave. They will automatically turn on at dusk and off at dawn.

### ***Interior Lights and Fans***

Your restroom building either has lights in each room or, they are lit from the chase area through windows. In either case, the lights and ventilation fans are controlled by a time clock or occupancy sensors.

Time clock controlled systems - Time clock controlled systems allow you to set the hours of operation for your lights and fans. The operator's manual is located inside the front cover of the time clock enclosure. Note: The lights and fans must be programmed separately.

Sensor controlled systems - Occupancy sensors activate the lights and fans when someone enters the room and keeps them on as long as they remain inside. The sensors we use are adaptive or self adjusting. When they are first energized after your building power is connected, the lights and fans will come on, and remain on, for up to three hours. This is normal and may occur every time power is interrupted to the building.

After this initial start-up period, the sensors will start adjusting the activation of the lights and fans in the room to the usage. As the room usage changes, the operation of the lights and fans will change as well. For example, during periods of heavy use, people may be entering and exiting the building many times per hour. The sensor will monitor this and will keep the lights on in anticipation of the next person entering.

During lighter usage periods, the sensor will turn the lights and fans off more quickly after a person exits. You may also notice that the lights and fans in the women's restroom are

operating differently from the men's as they independently adjust to the usage levels of each room.

Due to the interior layout of some buildings, there may be an additional sensor in each room. This keeps the lights and fans on when someone is in the back part of the room and cannot be sensed by the front sensor. This second tandem sensor works independently of the front sensor and may react differently.

## Building Winterization Procedure

If your building is installed in an area that experiences freezing weather conditions and you did not order the optional insulation and heating, you will need to provide a heat source for each room or, you must close the building and winterize it to protect your plumbing system from damage.

The winterization process removes as much water from your plumbing system as possible. CXT has developed the following procedures as a guideline for winterization and, while it can be an effective method, it is difficult, if not impossible to design a process that fits every situation. Consult plumbing professionals in your area to determine whether our winterization process is the right one for your conditions.

We recommend that you review the manufacturer's operation manuals for the appliances and fixtures in your building prior to executing these procedures. In every case, the manufacturer's winterization recommendations will supersede CXT's procedure where they may differ.

### ***CXT ASSUMES NO LIABILITY FOR DAMAGE THAT IS THE RESULT OF IMPROPER OR INADEQUATE WINTERIZATION.***

#### ***Step 1 – Clean your building***

A thorough cleaning before winter will minimize the potential for stains developing on fixtures and components through the winter. It will also make start-up easier in the spring.

#### ***Step 2 – Repair as necessary***

When you are winterizing your building, it is a good time to inspect for cracks, chips, paint or caulk issues. Correcting these things before the cold and wet season will protect your building's structure from the harmful effects of moisture infiltration.

***Step 3 – Turn off your water supply***

In areas of slight freezing, it may be adequate to turn off the supply valve in the chase. If your area experiences deep or prolonged freezing, you may want to turn the water off at the source.

***Step 4 – Turn off the power to the water heater***

Water heater power must be turned off so that the heater is not damaged when emptied. If you have natural gas or propane water heaters, consult with your supplier to determine if the gas supply should be turned off or disconnected in winter.

***Step 5 – Open the hose bib in / on the building***

This will allow much of water in the building system to drain. If desired, you may want to place a bucket under the bib first to catch the draining water.

***Step 6 – Drain all water tanks***

If your building is equipped with a tank style water heater(s), accumulator tank(s), water treatment tank(s) or other storage/holding tanks, drain them now. Tankless water heaters will be purged when you blow out the water system and should not need draining. Check the instructions for your specific water heater to see if drainage is necessary to eliminate all water from the unit.

***Step 7 – Flush the toilets and open all valves***

Turn on all faucets, drinking fountains and or showers. To assure that the maximum water is removed from the system, you may want to open the toilet valves.

***Step 8 – Blow out the water lines***

Connect a clean air supply to the hose bib that is set to **45 psi maximum** pressure and blow the water from the lines. Continue until there is no visible moisture in the exhausting air. CAUTION - connecting an air supply at a higher pressure than 45 psi may damage fixtures and will create an unsafe condition.

***Step 9 – Empty the toilet bowls***

Using a plunger, push the bowl water down the drain.

***Step 10 – Add anti-freeze to the traps and floor drains***

Add an appropriate quantity of environmentally friendly potable water antifreeze (available at any RV or marine supply store) to every fixture and drain trap to assure that they are protected from freezing. This includes, but is not limited to, floor drains, toilets, urinals and sinks.

***Step 11 – Lubricate all locks, latches and hinges***

Lubrication before cold and wet weather will give your locksets and doors the maximum level of protection against corrosion and will make next season's start-up easier.

***Step 12 – Remove all paper products***

Removing the toilet paper, paper towels, and other paper goods from the dispensers and storage areas will eliminate the possibility of mold and mildew growth and minimize insect/animal nesting.

## Doors and Locks

The standard doors on CXT buildings are steel. Fiberglass doors are offered as an option. While these materials are resilient, they are temperature sensitive. Steel doors will expand and fiberglass will distort when exposed to hot weather conditions. This can make the door hard to open and cause poor alignment of locks. This condition will correct itself as the doors cool.

### ***Privacy Locks***

The privacy lock is designed to work only when someone is inside the restroom. When the door is closed, pushing the button will lock the door for privacy. The lock is released when the inside handle is turned to open the door. If the lock button is inadvertently pushed while the door is open, it will automatically release when the door is closed.

### ***Door Sweeps***

The door sweeps mounted on your doors are adjusted at the factory and are checked during installation. Over time they may need to be adjusted to account for wear, weather or abuse. To adjust your sweep, loosen all screws and position it where it barely touches the ground and then tighten the screws.

### ***Door Spring Hinges***

Most CXT buildings are equipped with spring loaded hinges that will automatically close your doors. These hinges are factory adjusted to meet ADA requirements for access. Over time, they may need to be adjusted so they apply the appropriate amount of force.

To adjust your hinges, you must first determine which brand of hinge was installed. Stanley hinges have a smooth barrel while World Class hinges have pins in the barrel.

***For Stanley hinges:*** Remove the Phillips head screw on the top of the hinge. Determine the appropriately sized Allen wrench to fit in the top of the hinge. To add closing force to the hinge, tighten the Allen screw in the direction of the arrow on the hinge. To reduce the

closing force, insert the wrench into the Allen screw and gently tap down on the wrench. This will release tension from the spring. If you tap down too much, you may release all the tension on the spring and you will have to add closing force as described above. DO NOT turn the Allen screw opposite the arrow on the hinge as this will damage the hinge.

***For World Class hinges:*** With the door closed, place a 5/32" hex wrench in the hole on the pin and turn it slightly clockwise to release the pressure on the roll pin. While the pressure is released, remove the roll pin and turn the hex wrench 90 degree where the hole on the hinge barrel will line up with the hole in the tension adjustment pin. Insert the roll pin completely into the hole and then release the hex wrench to lock the set tension into the spring. DO NOT TURN THE ARROW ON THE TENSION ADJUSTMENT PIN PAST THE ARROW ON THE HINGE BARREL AS THIS WILL VOID THE HINGE WARRANTY. All the spring hinges on a door should be loaded equally using the above procedures. If, after testing the closing force on the door it is determined that is more than required, reduce the force one hinge at a time until the desired closing force is achieved.

## **Building Structure Care & Repair**

### ***Surface Care and Cleaning***

Your CXT should be cleaned regularly to minimize soil buildup on surfaces, discourage insect infestation and to maintain proper sanitary conditions. The frequency of cleanings should be adjusted to deal with the level of traffic using the facility.

Moisture has the ability to weaken and eventually erode concrete. Your CXT exterior is coated with high quality Durashell stain and sealer. The interior walls are coated with high quality interior enamel while the floors are coated with Armorseal, a high durability epoxy floor coating. These finishes make your building moisture and soil resistant. They can be cleaned by rinsing with a garden hose after the toilet paper is removed. Care should be taken to assure that water does not enter any electrical components in the building.

If there are more stubborn soiled areas, a mild soap/disinfectant solution and a cloth or brush may be used. While a pressure washer can be used to clean your building, great care should be taken as these, if not operated properly, can damage or peel the coatings.

### ***Graffiti Removal***

The sealer that we use on the building surfaces will help keep graffiti from adhering to your building but ultimately most must be removed using chemicals or over-painting. We recommend that you try our Vandlshell graffiti remover first as it is formulated to work well with our coatings. Other commercially available graffiti removal products should be tried first in an inconspicuous area to determine their effect on CXT's coatings.

If any one of the many commercially available anti-graffiti coatings has been applied to your building, please refer to the removal procedures recommended by the manufacturer of that product.

If you cannot remove the graffiti and need to repaint, CXT offers a full line of factory original paint, stain, sealers and caulk to help you restore the appearance of your building. Please contact your CXT Sales representative for details and pricing.

### ***Concrete Cracking***

Concrete cracks. These cracks can be caused by the curing process, handling during shipment, or settling of the building after installation. While they may be unsightly, they are rarely, if ever, structural in nature. Typically, minor cracking can be repaired using a high quality adhesive latex caulk which is painted and sealed to match the surface.

### ***Concrete Chip Repair***

Your CXT is constructed of color-through concrete. Though this will minimize the visual impact of chipped or damaged walls, roofs or floors, it will not completely hide this damage. It should be repaired in a timely manner to reseal the concrete panel against moisture. We recommend a latex grout mix for these repairs. This grout can be finished to match the texture of the surrounding area and, once dry, can be recoated and sealed to match your building surface.

CXT stocks all the materials you may need for these repairs. Please contact your Sales representative for details and pricing.

If you are interested in learning more about concrete building cracks and chips, their causes and repair, the US Forest Service has prepared a document that covers this topic in detail. You can request a copy of Tech Tip 0471–2334-MTDC from the US Forest Service or directly from your CXT Sales representative.

### ***Major Concrete Damage Repair***

CXT buildings are built tough. Your building can be restored, even after sustaining severe damage from falling trees, vehicles, rocks or other causes. If your building experiences damage beyond chips and cracks and you are unsure about the proper repair approach or

the structural soundness, contact CXT so that we may evaluate your damage and recommend a repair method.

### ***Painting***

The coatings used on your building are of the highest quality and are applied by trained professionals. They are design to provide a moisture resistant seal to protect your concrete wall, floor and ceiling panels. Properly cleaned and maintained, they will perform well for many years in normal conditions. Even the best material coating will deteriorate over time and their ability to provide the appropriate moisture seal will diminish. Regular repainting and resealing will add years to the life of your building.

If you have peeling paint, it should be addressed as soon as possible to reseal the affected area. After you remove the peeling paint with a stiff brush, the surface must be prepared by sanding with a medium abrasive. This will provide a surface to which the finish coating will tightly bond. The finish coat of stain or paint should be followed by a coat of sealer.

The manufacturer's directions and procedures should be followed when applying any product to the surface of your building and will always supersede CXT procedures if there is a conflict. This includes surface preparation, drying time, application method, etc.

CXT can provide all the factory original materials you will need to repaint, recoat or reseal your building. Please contact your Sales Representative for details and pricing.

## Fixture Care

### ***Stainless Steel Fixtures***

Stainless steel, an alloy of iron and chromium, is corrosion *resistant*, not corrosion *proof*. While its care is relatively simple if done regularly, it can be harmed if improper chemicals or procedures are used.

A cleaning schedule should be implemented to assure that deposits do not remain on the stainless for extended periods of time. New, fresh deposits of all kinds are relatively easy to remove, while older ones are much more difficult.

A mild detergent/disinfectant solution, applied with a sponge, brush or cloth should provide the necessary cleaning action for most soiled areas. Baking soda, borax or any non-abrasive cleansing agents can be used for more stubborn deposits. Always rinse the surface thoroughly and wipe it dry after washing.

Never use any abrasive compound or tool such as steel wool, scouring pads, scrapers, or wire brushes, to clean your stainless steel. These will scratch the surface or leave small particles of iron imbedded in the stainless. These residual iron particles will eventually rust and stain the surface. This will give the appearance that the stainless itself is rusting. Products that contain hydrochloric acid, muriatic acid or potassium hypochlorite may also leave a "rusted" appearance and will ruin the surface.

### ***Vitreous China Fixtures***

Any mild detergent/disinfectant solution should be effective in removing the surface deposits. Always rinse thoroughly and use a soft cloth to wipe the product dry after each cleaning.

Soft abrasive cleaners may be used when necessary to clean vitreous china products. Strong abrasive cleaners will scratch and dull the surface.

## Signs

The signage on your building is designed to be vandal resistant and to meet al ADA standards. If you need or want to replace these signs, you must first remove the vandal resistant fasteners used to attach them. We recommend that you use a chisel to cut the heads off of the fasteners and remove the sign. It may be possible to pull out the remains of the fasteners from the concrete. If not, drill them out. Drill new holes for anchors for the replacement sign and install.

CXT offers a full line of replacement parts to assist you, please contact your CXT Sales representative for details and pricing.

## Moving Your Building

Your CXT building is designed to be transported so you can move it to new locations as your needs change. The movement of the building must be undertaken by professionals using the proper tools and rigging. CXT can provide you with the lifting plates, procedures and rigging diagram necessary to move your building. If you desire, we have trained installers that can move the building for you. Please contact your CXT Sales representative for details and pricing.

## **Component Instructions and Manufacturer's Information**

The toilets, sinks, valves, hand dryers, dispensers, timers, heaters, and other components installed in your building are accompanied by specific instruction manuals that detail their adjustment and maintenance procedures. These manuals are included in this manual for your reference. Please refer to these documents for component specific details on operation, maintenance and repair. It is important that you familiarize yourself with these documents as well as this CXT prepared document. In every case where the documents may not agree, the manufacturer's document will take precedence.

## CXT Warranty

CXT warrants that all structures sold pursuant hereto will, when delivered, conform to specifications set forth in the request for bids provided by the Customer. Structures shall be deemed accepted and meeting specifications unless notice identifying the nature of any non-conformity is provided to CXT in writing within one (1) year of delivery. It is specifically understood that CXT's obligation hereunder is for credit or repair only. CXT will repair structural defects against materials and workmanship for one (1) year from date of delivery provided CXT is first given the opportunity to inspect said structure. CXT warrants all components sold within all structures pursuant here to when delivered within structures. Components deemed accepted and meeting specifications shall be warranted for a period of one (1) year against defects in the materials and/or workmanship from said date of delivery. CXT is not responsible for components that are damaged due to misuse, acts of violence, negligence, acts of God, or accidents. Shipping, handling, installation or other incidental or consequential costs, unless otherwise agreed to in writing by CXT, are not included.

### **THIS WARRANTY SHALL NOT APPLY TO:**

1. Any goods which have been repaired or altered without CXT's express written consent, in such a way as in the reasonable judgment of CXT, to adversely affect the stability or reliability thereof;
2. To any goods which have been subject to misuse, negligence, acts of God, or accidents;
3. To any goods which have not been installed to manufacturer's specifications and guidelines, improperly maintained, or used outside of the specifications for which such goods were designed.

### **DISCLAIMER OF OTHER WARRANTIES**

THE WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ALL OTHER WARRANTIES ARE HEREBY DISCLAIMED. CXT MAKES NO OTHER WARRANTY EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE.



CXT Customer Service Representatives  
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Replacement parts can be ordered at:  
**[www.cxtincparts.com](http://www.cxtincparts.com)**

visit our website [www.cxtinc.com](http://www.cxtinc.com)