

Cascade Comfort
Bathing Systems with Aqua-Aire™
*Safe Operation & Daily Maintenance
Instructions*



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Introduction

The Cascade Comfort System is designed to significantly improve the efficiency and environmental safety of your nursing care operation and yet have the quality appearance and appeal of a home system. However, the benefits designed into the Cascade Comfort System will be realized only if the system is operated and cared for properly. The purpose of this manual is to provide you with a recommended procedure to help you obtain the maximum efficiency and safety from your Cascade Comfort System.

Symbols and Terms

WARNING

The warning symbol identifies important safety messages. Failure to obey a safety warning may result in injury to you or to others.

CAUTION

The caution heading identifies important maintenance and operation information. Failure to obey a caution warning may result in damage to the equipment and may void the warranty.

Left or Right

When the terms “left” or “right” are used with reference to the spa, this means left or right as you look at the control panel from the seat end of the spa.

Technical Description

The Cascade Comfort Spa is an “Aqua-Aire” bathing system intended for use in nursing homes, hospitals, and assisted living facilities to bath residents under the direct supervision of trained staff. The system is mainly constructed of gel-coated fiberglass laminate on a powder coated steel frame. The spa has an Aqua-Aire system for mixing the water with air. It has a disinfecting system to aid in cleaning the spa. The spa has a locking door on one side for access to the spa by the resident. A thermostatic mixing valve controls incoming water temperature. Digital temperature read-outs indicate all incoming and spa water temperatures. A hand shower sprayer is also provided.

Cascade Comfort System

Manufacturer: Penner Manufacturing Inc
101 Grant St / PO Box 503
Aurora, NE 68818
(402) 694-5003

Models: Cascade – Comfort

560010-X Cascade Comfort bathing system Right hand entry
560010-XL Cascade Comfort bathing system Left hand entry
560010-XSB Cascade Comfort bathing system Right hand entry Still Bath
560010-XLSB Cascade Comfort bathing system Left hand entry Still Bath
(X in the model number represents a number which denotes a Color of the Spa)

Spa Electrical Ratings: 120 Volts AC
60 Hz 1 Phase
Aqua-Aire: 9.25 amp
60 Hz 1 Phase
UL Classification: Class I; Type B; Ordinary EQUIPMENT

Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

**MEDICAL EQUIPMENT
WITH RESPECT TO ELECTRIC SHOCK
FIRE AND MECHANICAL HAZARDS ONLY
IN ACCORDANCE WITH UL2601-1, AND
CAN/CSA C22.2 NO. 601.1 IEC 60601**



Patient weight rating: 400 lbs Maximum
Upright position to reclined position angle: approximately 30°
Reclining actuator rating: 1 minute ON - 9 minutes OFF

All temperature read-out values are accurate to +/- 2°F (per NSF C-2). The read-out range is -40/199°F. The resolution is 1°.

An electrical circuit diagram can be found on the inside of the lid of the electrical box located inside the service access door on the right side of the spa cabinet.

Service parts and technical information are available by contacting your distributor or by calling one of the telephone numbers located on the front or back cover of this manual.

Environmental conditions for transport and storage for up to 15 weeks (as packaged from the manufacturer) are as follows:

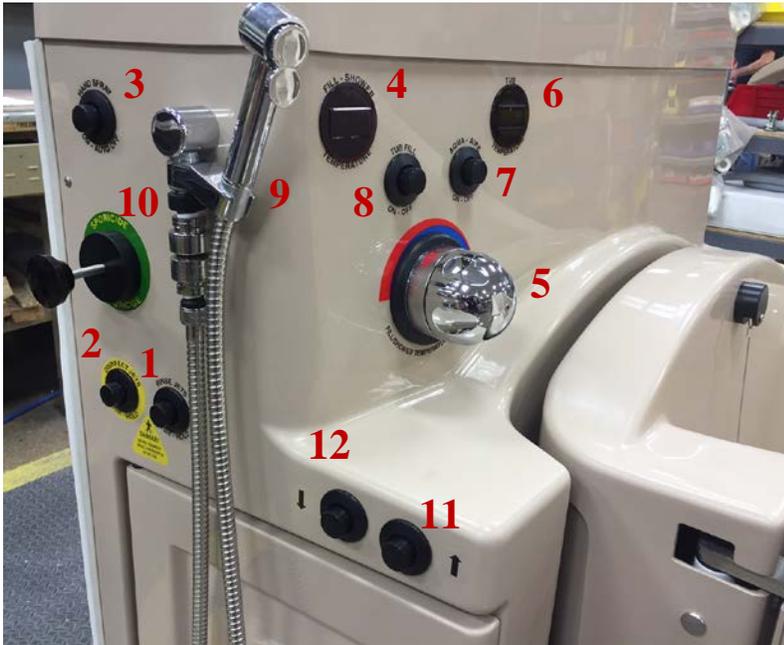
Temperature range	-40° F (-40° C) to 120° F (49° C)
Relative Humidity	10% to 90%
Atmospheric Pressure	7.5 PSI to 15.5 PSI

Basic Components

The Cascade Comfort System is composed of the following components:
Cascade Spa with Cascade Door and Control Panel Cabinet.

The remainder of this section describes the components and their relationship to each other.

Cascade Comfort Spa Controls



1 RINSE JETS

2 DISINFECT JETS

3 HAND SPRAYER ON/AUTO - OFF

4 FILL/SHOWER TEMPERATURE DISPLAY

5 FILL/SHOWER TEMPERATURE CONTROL (MIXING VALVE)

6 SPA TEMPERATURE DISPLAY

7 AQUA-AIRE ON/OFF

8 TUB FILL ON/OFF

9 HAND SHOWER

10 SPORICIDE PUMP

11 SPA TILT BACK

12 SPA TILT FORWARD

The Cascade Comfort Aqua-Aire Spa is a specialized spa with built-in air jets. It has been designed for ease of use and resident comfort. The spa has a built-in control panel, which provides controls for all the functions of the spa, as shown above.

⚠ WARNING: DO NOT PLACE LIQUIDS OR CONTAINERS OF LIQUIDS ON TOP OF THE LID OF THIS SYSTEM. FAILURE TO HEED THIS WARNING MAY RESULT IN INJURY TO A RESIDENT AND OR OPERATOR.

Cascade Door

The Cascade Comfort Door is a specially designed reinforced door with locking door handle to open and close the door.



Figure 2

Locking Cascade Door

Figure 2

1. With door handle in the upright position, close the door tight against the spa.
2. When the door is against the spa push the door handle to the left or down so the door handle is in the LOCK position. (Label at base of lever indicates “UNLOCK” or “LOCK” positions)
3. The door is now locked in place.
4. (Note) To extend the life of the Water Door Seal, leave the door open when not in use.

Unlocking Cascade Door

WARNING:

NEVER ATTEMPT TO UNLOCK THE DOOR WHILE THERE IS ANY WATER IN THE SPA. FAILURE TO HEED THIS WARNING MAY RESULT IN INJURY TO A RESIDENT AND OR OPERATOR.

1. To unlock, first pull up on the door handle release and hold it.
2. Then move the door handle to the “unlock” position.
3. The door is now unlocked and able to be opened.

System Preparation (Before Bath)

WARNING

Only personnel who have been thoroughly trained in the operation of the Cascade Comfort System should operate this equipment. Operation of this equipment by untrained personnel could result in injury to the operator or patient. Your Penner Spa distributor is available at your request to provide complete in-service training on the equipment's proper operation.

Prior to the bath, perform the following preparation steps.

1. Make sure you have your bathing aids ready such as a washcloth, towels and liquids such as shampoo and body wash. You are now ready to bring the Resident or Patient to the Bathing Area with your Patient Transfer System or Wheel Chair.
2. At the bathing area, position your patient transfer equipment near the access of the Cascade Comfort for a normal wheel chair-to-chair transfer. Ensure the water door is open wide to allow easy access.
3. Lock the brakes of your patient transfer equipment before transferring the Resident or Patient.

 **WARNING: Failure to lock the caster brakes of your equipment before the resident is transferred onto the Cascade Comfort could result in injury to the operator or patient.**

4. Close the water door and lock it by pressing the door handle downward.

⚠ WARNING

In addition to monitoring the temperature readout, always check the water temperature by allowing it to run over your wrist. Failure to do this could result in a hot-water burn to the resident.

Using Cascade Comfort Bathing System

Reference page 5 for locations of the controls listed in this section.

⚠ WARNING

Failure to manually check the water temperature before putting a resident in the spa may result in burn injuries to the resident and/or operator.

1. Push the Tub Fill button located on the Cascade Comfort Control Panel and adjust the water temperature by turning the Temperature Control knob to normal bathing temperature, 95 to 105 degrees Fahrenheit (35 to 41 degrees Celsius).
2. When water reaches the overflow push Tub Fill button again to shut water off.
3. Press and hold the up button and recline the resident until you have reached a position suitable for resident bathing.

Bathing Procedure

You are now ready to begin washing the resident. The suggested bathing time is 5 to 10 minutes. Bathing a patient more than 10 minutes is not required.

To bathe the resident, use the following procedures:

(Reference Figure 1 for the location of the controls listed in this section)

After resident is comfortable in spa you can recline the spa using the up and down buttons pictured on page 5 of this manual.

1. Start the air blower by pressing the Aqua-Aire ON/OFF button.

⚠ WARNING

In the following bathing instructions it is recommended that the resident be rinsed with the shower sprayer. Before doing so each time, make sure the temperature is between 95 and 105 degrees Fahrenheit (35 to 41 degrees Celsius) by viewing the temperature readout. As a further precaution, always test the water on the inside of your wrist before turning the shower sprayer toward the resident. Failure to follow the precautions in this warning could result in a burn injury to the operator or the resident.

2. Bathe the resident's upper body as follows:
 - a) Begin gently washing the resident's upper body. Pay special attention to folds or creases in the skin and under the arms.
 3. Rinse the upper body with the shower sprayer as follows.
 - a) Pull out the Hand Sprayer.
 - b) Press the "HAND SPRAYER ON/AUTO OFF" button. This starts the water flow to the hand sprayer for a set period of time. Then the water flow is automatically stopped. It can be restarted at any time by pressing the "HAND SPRAYER ON/AUTO OFF" button.
Note. This time period is adjustable, up to 10 minutes, by the maintenance department.
 - c) Direct the sprayer into the spa, **not at the resident**. Press the trigger on the hand sprayer and adjust the mixing valve, if needed, to the normal bathing range of 95 to 105 degrees Fahrenheit (35 to 41 degrees Celsius). Monitor the temperature via the Fill/Shower Temperature readout. As a further precaution, always test the water on the inside of your wrist before turning the sprayer toward the resident.
 - d) The Aqua-Aire action in the Cascade Comfort will help clean the resident's.

Transferring Out Of Cascade Comfort

After the bath has been given, you are now ready to transfer the resident out of the spa.

1. **Drain the spa** by pulling the drain plug from the drain. To avoid water overflow start draining the spa before bringing the spa to the full upright position.

⚠ WARNING

Failure to have the spa completely drained before unlocking the door could cause injury to the operator and resident.

2. Press and hold the down button until the spa is in the full upright position.
3. Unlock door by pulling up on the door handle release and pulling up on the lever at the same time.
4. Open door to widest position.
5. Dry off resident.
6. Carefully maneuver resident's legs around and use proper nursing techniques to transfer to a wheelchair.
7. If using a sit-to-stand lift or total lift, follow the manufacturer's instructions on the use of that particular lift.
8. You are now ready to disinfect the Cascade Comfort Spa.

System Cleaning (After Every Bath)

Clean and disinfect the spa after every bath with Penner Cleaner/Disinfectant as follows:

Note. Penner Cleaner/Disinfectant is a special non-abrasive cleaning and disinfecting solution that will not harm the spa's fiberglass surface. Penner Cleaner/Disinfectant is the only cleaning solution designed and recommended for use with your Penner Spa.

CAUTION

Some cleaners, disinfectants, and floor strippers contain ingredients that are corrosive or abrasive. These solutions or compounds may contain chlorine, acid, basic ingredients or abrasives. DO NOT allow such solutions or compounds to come in contact with your Penner equipment. Failure to heed this caution could result in damage to the equipment and void the warranty.

1. Close and lock the door.
2. Press the Tub Fill Button and turn the Temperature Control Knob all the way to the left to its warmest level to heat the disinfectant solution and maximize its effectiveness.
3. Remove any visible tissue, residue, or fluids from the spa by pressing the Shower Button and rinsing the inside spa surfaces with the shower sprayer.
4. Press the Tub Fill Button again to turn off the water. Allow the spa to drain, and place the drain plug over the drain.
5. Press and hold the Disinfect Button located on the control panel. As the button is held down, the properly mixed cleaning solution is running through the air injection system and out all of the air jets. Release the button after you see solution coming out of all the air jets and you have 1 to 1 1/2 gallons of disinfectant solution in the foot well of the spa.

WARNING

Housekeeping personnel should wear protective glasses and gloves to prevent disinfectant from damaging their eyes or skin. If disinfectant gets on the skin or in the eyes, rinse thoroughly with plenty of water. Seek medical advice if irritation occurs.

6. Using the long-handled brush, available from your Penner distributor; thoroughly scrub all interior surfaces of the spa. Let disinfectant stay on surface for 10 minutes. (Or, as recommended by the instructions on the disinfectant concentrate container.)
7. Remove the plug from the drain.
8. Rinse the spa's interior surfaces thoroughly with the shower sprayer. (Continue with step 16)
9. Press and hold the Rinse button located on the control panel until clear water runs from all the air jets. Then release the Rinse button.
10. Finish rinsing the interior surfaces of the spa with the shower sprayer.
11. Start the air blower by pushing the Aqua-Aire Button. Allow it to run for 30 seconds. This pushes the rinse water out of the air injection system. If this was the last bath of the day, allow the blower to run for 2 minutes to dry out the system.

12. Stop the Aqua-Aire blower by again pushing the Aqua-Aire button.
13. Visibly check that the spa was effectively cleaned during the disinfecting procedure. If not, repeat the procedure.
14. If there is a delay of one or more hours before the next bath, we recommend using a towel to wipe off all excess water. This will keep your Cascade spa looking great for years to come.

Daily Maintenance

To properly maintain the Cascade Comfort Spa, perform the following daily maintenance procedures.

1. Check that there is an adequate supply of disinfectant concentrate in the supply bottle located behind the access door on the left side of the spa cabinet. Replace the bottle before it is empty to avoid re-priming the system. Be sure each bottle label matches the label found on the hose to which the bottle is attached.

WARNING

While replacing system liquids, housekeeping personnel should wear protective glasses and gloves to prevent disinfectant concentrate from damaging their eyes or skin. If disinfectant gets on the skin or in the eyes, rinse thoroughly with plenty of water. Seek medical advice if irritation occurs.

2. Perform the Daily Safety Checklist described in the following section before using the system.

WARNING

Failure to perform the daily safety checks and take corrective action, when required, prior to the operation of the equipment each day could result in injury to the resident or operator.

WARNING

If any part of the system is not functioning properly, cease all bathing activities until the problem is corrected by maintenance. The system must be maintained on a scheduled basis to ensure it is functioning properly. Failure to heed these precautions could result in injury to the operator or resident.

Daily Safety Checklist

CHECK THE FOLLOWING ITEMS EACH DAY BEFORE USING YOUR CASCADE COMFORT SPA.

Cascade Comfort Spa

Perform the following safety checks for the Cascade Spa:

1. High temperature limit – Press the Fill Button and turn the Temperature Control Knob all the way to the left to the highest setting. Test the fill and shower water temperature to ensure that it reaches no more than 115 degrees Fahrenheit (lower if required by local regulations).
2. Temperature Read-Out Accuracy – Temperature should be verified with a calibrated thermometer.
3. Seal Wear - Open the door and check to see that the seal is not cracked or peeling away from the door.

WARNING

If during the safety checks you find parts are missing, are excessively worn, do not function properly, or do not meet the recommended safe operating levels, do not operate the equipment until the maintenance department has taken the appropriate corrective action.

Your Penner Distributor and his personnel are trained to provide in-service instruction and maintenance on your Cascade Sit-Bath System. If you have any questions about the operation or maintenance of your Cascade Sit-Bath System, please contact your Penner Distributor. For your nearest Penner distributor, contact Penner Patient Care, Inc at 1-866-736-6377 OR 1-800-732-0717.

For your nearest distributor, contact:

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