34’x11’ Self-Contained Washroom Trailer

General Information

The 34x11 Washroom trailer is designed to be used in various applications. It can be used as self-contained meaning that the 600 gal water tank would need to be filled by a water truck and have the 600 gal sewer tank pumped out by septic truck. Alternatively, the trailer can be hooked up with municipal services or an on-site water source and septic tank/field.

The washroom trailer is equipped with a duplex Liberty sewage sump pit with 2 grinder pumps and two ½ HP water pumps. Only one of the water pumps are to be used at any one time. The other water pump is for back up only. Please note there is a water pump power supply control box on back wall to switch power between the two water pumps or to run on municipal services.

Note: Washroom trailers need to be completely level so that plumbing will function properly. The 600 gal water tank, 600 gal sewer tank and hot water heater must be drained prior to moving the trailer.

Water System Operating Instructions

Washroom Start Up Tutorial

Self-Contained System

1) Filling the 600 Gallon Water Tank:

- Fill pipe is located outside the mechanical door with a sign indicating its use
- Remove protective cover off 2” male camlock
- Connect 2” female camlock to fill pipe
- Ensure 2” water tank drain valve #3 inside trailer mechanical room has been **CLOSED**
- Pump water into water tank using water pump and a 2” hose from water supply
- Alternatively, a garden hose can be used. Remove 600 gal water tank cover to fill water tank
- Once water flows out of the 3” overflow pipe at the rear and top of the trailer, the 600 gal water tank is full
- Reconnect protective cover over water fill pipe

Note: While water tank is filling, the water tank supply can be monitored by going into the mechanical room and looking at the sight glass on the side of the water tank. There is a low-level float switch that activates when the water tank is empty and the alarm will sound and a red light will turn on. Turn OFF water alarm breaker at electrical panel to stop alarm until water is refilled. Turn breaker back on after refilling water tank.

2) Instructions to Pressurize Water Supply When Using Water Tank & Pumps:

Note: There are 2 water pumps and only one is to be used at any one time as the other pump is for backup only. Please see water pump power supply box on back wall to switch power between the two pumps. See valve position guide for start-up and use of self-contained water system.

- **OPEN** water supply valve #4 at bottom of water tank to feed water pump. Please note that pump may have to be primed. Ensure hot water heater drain valve #9 is **CLOSED**.
- Ensure water pump to be used is plugged in, the power box switch is positioned for the appropriate pump and the breaker in the electrical panel is in the ON position.

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- If using pump #1 have valves #17, 18 **OPEN** while valves #20, 21 are **CLOSED**.
- If using pump #2 have valves #20, 21 **OPEN** while valves #17, 18 are **CLOSED**.
- Ensure valve #15 feeding the hot water heater is **CLOSED** to pressurize the system.
- Open valve #4 (water supply valve)
- To prime the pump, begin by removing the pressure gauge and filling the pump with water. Reinstall the pressure gauge and lift low-pressure valve lever on side of water pump until water pressures exceed 25 Psi and water pump operates on its own. Then, release low-pressure valve lever and pump should continue running until 50 Psi is obtained at which time pump will shut off.
- Once water line is pressurized then **OPEN** valve #15 to fill hot water heater and pressurize hot water lines.

Valve Position Guide for Start-Up & Use of a Self-Contained Water System

Note: The water supply control box selector should be set to either pump 1 or pump 2. If water pump 1 fails move switch on water pump supply to pump 2, **CLOSE** valve 17 & 18, and **OPEN** valve 20 & 21.

VALVE 1. CLOSED (MAIN SEWER DRAIN)
VALVE 2. OPEN (SEWER TO STORAGE TANK)
VALVE 3. CLOSED (WATER TANK DRAIN)
VALVE 4. OPEN (WATER FEED FROM TANK)
VALVE 5. CLOSED (MUNICIPAL FEED)
VALVE 6. OPEN (FEED LINE FROM PUMP)
VALVE 7. OPEN (PRESSURE TANK SHUT OFF)
VALVE 8. CLOSED (WATER LINE DRAIN)
VALVE 9. CLOSED (HOT WATER DRAIN)
VALVE 10. CLOSED (TAP FOR PUMP OR MUNICIPAL)
VALVE 11. CLOSED (TAP FOR PUMP OR MUNICIPAL)
VALVE 12. CLOSED (SOLENOID VALVE)
VALVE 13. OPEN (HOT WATER TANK OUTLET)
VALVE 14. CLOSED (BYPASS FOR HOT WATER)
VALVE 15. OPEN (HOT WATER TANK COLD INLET)
VALVE 16. CLOSED (PUMP 1 DRAIN)
VALVE 17. OPEN (TO FEED WATER PUMP 1)
VALVE 18. OPEN (TO FEED WATER LINE FROM PUMP 1)
VALVE 19. CLOSED (PUMP 2 DRAIN)
VALVE 20. CLOSED (TO FEED WATER PUMP 2)
VALVE 21. CLOSED (TO FEED WATER LINE FROM PUMP 2)
VALVE 22. CLOSED (WINTERIZING)
VALVE 23. CLOSED (SHUT OFF BETWEEN PUMP + MUNICIPAL)
VALVE 24. CLOSED (EXPANSION TANK)
VALVE 25. CLOSED (DRAIN LAUNDRY SINK)
VALVE 26. CLOSED (DRAIN LAUNDRY SINK)
VALVE 27. CLOSED (DRAIN MALE WR UNDER SINK)
VALVE 28. CLOSED (DRAIN MALE WR UNDER SINK)
VALVE 29. CLOSED (DRAIN FEMALE WR UNDER SINK)
VALVE 30. CLOSED (DRAIN FEMALE WR UNDER SINK)
VALVE 31. OPEN (ISOLATION VALVE)
VALVE 32. OPEN (ISOLATION VALVE)
VALVE 33. OPEN (ISOLATION VALVE)
VALVE 34. OPEN (ISOLATION VALVE)

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Municipal System

If a water source is available, then it can be connected to the trailer instead of using a water tank. See the valve position guide below for using municipal services. The on-site water supply is connected to a water pipe protruding down under the trailer near the water tank. Be sure to wrap the on-site water supply pipe in heat tape to prevent freezing. There is a plug under the trailer to plug heat tape into. **The water supply control box, located in the mechanical room, must be switched to “Municipal” for this system to operate.**

Valve Position Guide for Start-Up & Use of a Municipal Water System

VALVE 1. CLOSED (MAIN SEWER DRAIN)
VALVE 2. OPEN (SEWER TO STORAGE TANK)
VALVE 3. CLOSED (WATER TANK DRAIN)
VALVE 4. CLOSED (WATER FEED FROM TANK)
VALVE 5. OPEN (MUNICIPAL FEED)
VALVE 6. CLOSED (FEED LINE FROM PUMP)
VALVE 7. CLOSED (PRESSURE TANK SHUT OFF)
VALVE 8. CLOSED (WATER LINE DRAIN)
VALVE 9. CLOSED (HOT WATER DRAIN)
VALVE 10. CLOSED (TAP FOR PUMP OR MUNICIPAL)
VALVE 11. CLOSED (TAP FOR PUMP OR MUNICIPAL)
VALVE 12. OPEN (SOLENOID VALVE)
VALVE 13. OPEN (HOT WATER TANK OUTLET)
VALVE 14. CLOSED (BYPASS FOR HOT WATER)
VALVE 15. OPEN (HOT WATER TANK COLD INLET)
VALVE 16. CLOSED (PUMP 1 DRAIN)
VALVE 17. CLOSED (TO FEED WATER PUMP 1)
VALVE 18. CLOSED (TO FEED WATER LINE FROM PUMP 1)
VALVE 19. CLOSED (PUMP 2 DRAIN)
VALVE 20. CLOSED (TO FEED WATER PUMP 2)
VALVE 21. CLOSED (TO FEED WATER LINE FROM PUMP 2)
VALVE 22. CLOSED (WINTERIZING)
VALVE 23. OPEN (SHUT OFF BETWEEN PUMP + MUNICIPAL)
VALVE 24. CLOSED (EXPANSION TANK)
VALVE 25. CLOSED (DRAIN LAUNDRY SINK)
VALVE 26. CLOSED (DRAIN LAUNDRY SINK)
VALVE 27. CLOSED (DRAIN MALE WR UNDER SINK)
VALVE 28. CLOSED (DRAIN MALE WR UNDER SINK)
VALVE 29. CLOSED (DRAIN FEMALE WR UNDER SINK)
VALVE 30. CLOSED (DRAIN FEMALE WR UNDER SINK)
VALVE 31. OPEN (ISOLATION VALVE)
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Septic System Operating Instructions

Liberty Sewage Pit Operation

The Liberty sewage sump pit is equipped with a high-level alarm that will sound when the sump pit is full. If the tank is not full, this may be a sign that there is something clogging the pump or pumps have failed. If the alarm continues, please disconnect power, remove the top access cover of pit and clear the debris before using again. The alarm will automatically reset once level goes down. Ensure valve #2 leading to sewage pit is **OPEN**. If the problem persists, please call for assistance.

600 Gal Sewer Tank Operation

The 600 gal sewer tank is equipped with two floats. One high level alarm float to let you know that the tank is almost full and needs to be drained. If not drained, the second float will trip a contactor to turn power off to the water pump when the tank reaches its capacity to prevent it from overflowing. The alarm is located on the right side of the center exterior door. To restore power to the water pump and stop alarm, follow instructions to drain sewer tanks.

Instructions for Draining the Sewer Tanks

- Located on the right side of the trailer near the center exterior door, there is a 3” female camlock which is the drain pipe for the sewage tanks, which has a protective spill cover.
- Remove the protective spill cover and connect a 3” male camlock with a sewage hose from the vacuum truck to the 3” female camlock drain line on the trailer.
- **OPEN** sewage release valve #1 located to the right inside of the center exterior door to allow sewage to flow.
- Once sewage tank is empty, **CLOSE** sewage valve #1 and unhook the hose and reconnect protective cover into camlock connection.

Note: If you are draining into a municipal sewer line use adapter located inside mechanical room. The adapter fastens to the camlock on exterior of the unit. Once everything is connected, **OPEN** valve #1.

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Winterization Procedure Must be Completed by a Licensed Plumber.

Failure to properly winterize unit can result in thousands of dollars in damage.

Washroom Winterizing Tutorial

Water System Winterizing Instructions

Self-Contained System

Note: All drain valves (#3, 4, 5, 8, 9, 16, 19, 25, 26, 27, 28, 29, 30) should be OPEN to drain the trailer, then CLOSED prior to winterizing the unit.

All ball valves **NOT** charged with antifreeze need to be in the half **OPEN** position once winterizing is complete. If valve is fully **CLOSED** to hold pressure, **OPEN** and **CLOSE** that valve twice to allow any trapped water to be displaced. Failure to do so may cause damage to the valve and it will need to be replaced. To winterize, you will need about 30 gallons of antifreeze.

- Run the laundry sink water long enough to clear the sewer sump pit of sewage or about 5 minutes by allowing the sewage pump to cycle several times.
- Turn off the hot water heater (HWH) electrical disconnect and drain the HWH (**OPEN** valve #9) and **CLOSE** the valves feeding the HWH (valves #13, 15) so no antifreeze will be pumped into the HWH.
- **OPEN** valve #14 at the top of the HWH to cross feed antifreeze from the cold water line to the hot water line downstream of the HWH.
- **OPEN** valve #3 at the bottom of the 600 gal water tank to drain it.
- **CLOSE** the valves feeding each toilet, then flush the toilets to remove the water in the bowl and tank.
- **CLOSE** the flush valve at the urinal. To **CLOSE** valve, insert a flat head screw driver into the bottom of the valve and turn to the right. The flush valve is located to the far left of the lever handle on the water line. A black cap may need to be removed to access valve shut off. Repeat for each urinal.
- There is a 5-foot-long x 1 ¼“ clear hose near the water pump (valve #22) that is used to pump plumbers antifreeze thru the cold and hot water lines. Insert the end of this clear hose into a pail of antifreeze and **OPEN** valve #22 so that the water pump draws from the pail. Keep adding antifreeze to the pail as required.
- With the hot and cold water lines charged with plumber’s antifreeze use all the sinks hot and cold water taps until antifreeze appears. Run enough to fill all the P-traps with antifreeze. Also, run antifreeze thru each water pump. **OPEN** valves #20, 21 or #17, 18 of the pump not being used.
- **OPEN** the valves of the toilets just enough to allow the antifreeze into the toilet tank and bowl. Pour antifreeze into the stand pipe in the toilet tank. Sponge out or use a shop vac to clear any water out of the toilet bowl and tank. Then add 4” of plumber antifreeze in toilet bowls.
- **OPEN** the flush valves (turn to the left) on each of the urinals slowly while pulling down on the lever handle at the same time until the antifreeze is visible and enough to fill the urinal P-trap.
- To winterize the Liberty sewer sump pit and pumps press the “Pump Run” button on the pump controller (located on the back wall, between the tanks) to pump out the water in the sump pit. Next, ensure sewage pump power is unplugged and remove the small access cover on the sewage

sump pit (6 bolts). Use a shop vac to suck the remaining water out of the sewer sump pit or dump 10 gallons of antifreeze into the sewage sump. Reinstall the sewer sump pit cover. Have the 600 gal sewage tank drained as per instructions on Page 4.

Valve Position Guide for Winterizing a Self-Contained System

Note: Valve position guide is for winterizing using pump 1. If using pump 2, **CLOSE** valve #17, 18 and **OPEN** valve #20, 21. Please ensure both pumps contain antifreeze before finishing winterizing.

VALVE 1. CLOSED (MAIN SEWER DRAIN)
VALVE 2. OPEN (SEWER TO STORAGE TANK)
VALVE 3. CLOSED (WATER TANK DRAIN)
VALVE 4. CLOSED (WATER FEED FROM TANK)
VALVE 5. CLOSED (MUNICIPAL FEED)
VALVE 6. OPEN (FEED LINE FROM PUMP)
VALVE 7. CLOSED (PRESSURE TANK SHUT OFF)
VALVE 8. CLOSED (WATER LINE DRAIN)
VALVE 9. CLOSED (HOT WATER DRAIN)
VALVE 10. CLOSED (TAP FOR PUMP OR MUNICIPAL)
VALVE 11. CLOSED (TAP FOR PUMP OR MUNICIPAL)
VALVE 12. CLOSED (SOLENOID VALVE)
VALVE 13. CLOSED (HOT WATER TANK OUTLET)
VALVE 14. OPEN (BYPASS FOR HOT WATER)
VALVE 15. CLOSED (HOT WATER TANK COLD INLET)
VALVE 16. CLOSED (PUMP 1 DRAIN)
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VALVE 18. OPEN (TO FEED WATER LINE FROM PUMP 1)
VALVE 19. CLOSED (PUMP 2 DRAIN)
VALVE 20. CLOSED (TO FEED WATER PUMP 2)
VALVE 21. CLOSED (TO FEED WATER LINE FROM PUMP 2)
VALVE 22. OPEN (WINTERIZING)
VALVE 23. CLOSED (SHUT OFF BETWEEN PUMP + MUNICIPAL)
VALVE 24. CLOSED (EXPANSION TANK)
VALVE 25. CLOSED (DRAIN LAUNDRY SINK)
VALVE 26. CLOSED (DRAIN LAUNDRY SINK)
VALVE 27. CLOSED (DRAIN MALE WR UNDER SINK)
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Municipal System

Note: All drain valves (#3, 4, 5, 8, 9, 16, 19, 25, 26, 27, 28, 29, 30) should be OPEN to drain the trailer, then CLOSED prior to winterizing the unit.

All ball valves **NOT** charged with antifreeze need to be in the half **OPEN** position once winterizing is complete. If valve is fully **CLOSE** to hold pressure, **OPEN** and **CLOSE** that valve twice to allow any trapped water to be displaced. Failure to do so may cause damage to the valve and will need to be replaced. To winterize you will need about 30 gallons of antifreeze.

Note: Prior to winterizing, ensure crossover hose is hooked up between valve #10 and valve #11. When winterizing is complete the crossover hose should be disconnected and stored behind the pressure tank.

- Disconnect external water source from trailer
- Run the laundry sink water long enough to clear the sewer sump pit of sewage or about 5 minutes by allowing the sewage pump to cycle several times.
- Turn off the hot water heater (HWH) electrical disconnect and drain the HWH (**OPEN** valve #9) and **CLOSE** the valves feeding the HWH (valve #13, 15) so no antifreeze will be pumped into the HWH.
- **OPEN** valve #14 at the top of the HWH to cross feed antifreeze from the cold water line to the hot water line downstream of the HWH.
- **CLOSE** the valves feeding each toilet, then flush the toilets to remove the water in the bowl and tank.
- **CLOSE** the flush valve at the urinal. To **CLOSE** valve insert a flat head screw driver into the bottom of the valve and turn to the right. The flush valve is located to the far left of the lever handle on the water line. A black cap may need to be removed to access valve shut off. Repeat for each urinal.
- There is a 5-foot-long x 1 ¼“ clear hose near the water pump (valve #22) that is used to pump plumbers antifreeze thru the cold and hot water lines. Insert the end of this clear hose into a pail of antifreeze and **OPEN** valve #22 so that the water pump draws from the pail. Keep adding antifreeze to the pail as required.
- With the hot and cold water lines charged with plumber’s antifreeze use all the sinks hot and cold water taps until antifreeze appears. Run enough to fill all the P-traps with antifreeze. Also, run antifreeze thru each water pump. **OPEN** valve #20, 21 or #17, 18 of the pump not being used.
- **OPEN** the valves of the toilets just enough to allow the antifreeze into the toilet tank and bowl. Pour antifreeze into the stand pipe in the toilet tank. Sponge out or use a shop vac to clear any water out of the toilet bowl and tank. Then add 4” of plumber antifreeze in toilet bowls.
- **OPEN** the flush valves (turn to the left) on each of the urinals slowly while pulling down on the lever handle at the same time until the antifreeze is visible and enough to fill the urinal P-trap.
- To winterize liberty sewer sump pit and pumps press the “Pump Run” button on the pump controller (located on the back wall between tanks) to pump out the water in the sump pit. Next, ensure sewage pump power is unplugged and remove the small access cover on the sewage sump pit (6 bolts). Use a shop vac to suck the remaining water out of the sewer sump pit or dump 10 gallons of antifreeze into the sewage sump. Reinstall the sewer sump pit cover. Have the 600 gal sewage tank drained as per instructions on Page 4.

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Valve Position Guide for Winterizing a Municipal System

Note: Valve position guide is for winterizing using pump 1. If using pump 2, **CLOSE** valve #17, 18 and **OPEN** valve #20, 21. Please ensure both pumps contain antifreeze before finishing winterizing.

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VALVE 4. CLOSED (WATER FEED FROM TANK)
VALVE 5. CLOSED (MUNICIPAL FEED)
VALVE 6. CLOSED (FEED LINE FROM PUMP)
VALVE 7. CLOSED (PRESSURE TANK SHUT OFF)
VALVE 8. CLOSED (WATER LINE DRAIN)
VALVE 9. CLOSED (HOT WATER DRAIN)
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VALVE 29. CLOSED (DRAIN FEMALE WR UNDER SINK)
VALVE 30. CLOSED (DRAIN FEMALE WR UNDER SINK)
VALVE 31. OPEN (ISOLATION VALVE)
VALVE 32. OPEN (ISOLATION VALVE)
VALVE 33. OPEN (ISOLATION VALVE)
VALVE 34. OPEN (ISOLATION VALVE)