

Start-Up Check List Procedure

Remote systems

This check list will cover One on One Remote Systems and Multiple Remote Systems. This Start-up Check List will go through a step by step procedure on how to perform a start-up and then a Demonstration for the customer.

Because of individual circumstances SOMAT cannot predict all of the problems that you may find, therefor if you have questions please call the service department for help and or clarification at 800-237-6628 ext.126

Walk through the system with the contractor so that he can show you the location of all the equipment and the location of all electrical disconnects. **Make sure that the serial numbers on the Pulper matches with the serial numbers on the Electrical Control Panel !**

These are matched sets and are not to be mixed up !

Drawings:

The (F) Final drawing may have more then one drawing; be sure to look at all the drawings. Sheet one of the (F) drawing will show lay-out of the equipment and the height dimension. This may need to be checked if the equipment interfaces with wall openings etc. Sheet two of the (F) drawing will show the piping diagram. It also shows the plumbing as to what was supplied by SOMAT and what was to be supplied by " Others ".All equipment has been manufactured to approved prints.

Be sure to look over everything that's on the drawings. (Read the print notes !)

The (FE) Final Electric drawing will show all information needed by the electrician plus the control logic for the system. This drawing will show what was wired by SOMAT and what was to be supplied / wired by " Others ".

Pulpers; General Layout

1. Equipment installed Per Dwg. F (final)
2. Anti-Vibration Pads installed under the pulper and the slurry pump.
3. Check that the unit is level and plumb.
4. Gasket installed between the pulper inlet and the trough.
5. If the unit has a tray (High Tank Models) be sure the gasket and anti-bacterial curtain are installed.
6. If the unit is a UDT model; Refer to Detail A on the (F) Drawing.
 - A. Check that the cone adapter is welded in properly.
 - B. Distance between the top of the pulper and the table 2" (Must have for motor removal)
 - C. Inspect the UDT gasket for proper installation. (common error)
 - D. Be sure the lid fits properly and the limit switch activates.

Plumbing Piping sizes are NOT to be reduced !

1. Confirm all piping is in accordance with Dwg. F- (final)
2. Fresh water supply line for SP-30 and SP-50 is 1/2" and for SP-75 3/4". The equipment must have adequate water supply to operate properly. See (F) Drawing for PSI required.
3. Insure proper pipe bracing and cleanouts.
4. Review trough piping details, making sure each nozzle is properly sized (no 1/2 " nozzles), all trough nozzles / inlets must be valved with supplied 1" gates. (no ball valves accepted)
5. Inspect the slurry and return piping to the prints for proper installation. (Crossed lines?)
6. Air line / stand pipe: On the side of the pulper tank is 3/4" x 10" stand pipe. At the top of the stand pipe is connected a poly-flow air line. The 3/8" air line runs back to the pressure switch located in the control panel. On a one-on-one remote system this pressure switch only controls the fresh water solenoid valve. When a multiple unit system is installed, the pressure switch is a dual switch. One side of the switch controls the fresh water solenoid valve, the other controls the return water Motorized Operated Valve (MOV) flood stage to the pulper.

Disposer(s); General Layout

1. Equipment installed Per Dwg. F- (final)
2. Anti-Vibration Pads installed under the disposer and the slurry pump.
3. Check that the unit is level and plumb.

Disposer(s); Plumbing

1. Confirm all piping is in accordance with Dwg. F- (final)
2. Fresh water supply line; 1/2"
3. Insure proper pipe bracing and cleanouts.
4. Drain piped to floor sink.

HYDRA-EXTRACTORS; General layout

1. Equipment installed Per Dwg. F- (final)
2. Rubber pads installed under extractor stand and extractor stand lagged down to the floor.
3. Check that the extractor is level and plumb.
4. Make sure that the proper clearance is correct at the top of the extractor. (Min. 6 inch)
5. If the chute goes through the wall to discharge into a dumpster make sure that the distance is correct between the wall and the extractor. (Ref. F Dwg.) The chute must drop at a 45°angle or better.
6. If the chute comes with a boot attached to the end, once they have placed the trash can or dumpster you will need to trim the boot so that it only sticks down about one foot inside the container .
7. Some systems are designed to have curbing around the extractor. Look at the (F) drawing for the size and location of the curbing.

Plumbing (Refer to the prints)

1. Fresh water supply; a 1/2" hot water line installed on the extractor.
2. Slurry Line; This pipe is connected at the bottom coming to the extractor.
3. Return Line; This pipe is connected at the return pump and goes back to the pulpers.
4. Insure proper pipe bracing and cleanouts.
5. Siphon Break; installed correctly(if required). There is a siphon break detail on the (F) print.
6. Over flow; Piped to drain. (floor sink)
7. Auto drain valve (MOV). Piped to the drain. (floor sink)

Important that piping sizes are NOT reduced !

ELECTRICAL: Refer to the (FE) final electric prints.

1. Confirm that Som-A-Trol panel is properly installed.
2. Check for proper voltage (3 Phase) according to electric print / Dwg. FE- (final electric)
3. Inspect interconnecting control wiring **between panels and junction boxes**. (confirm proper connections). The controls wires come from the Master panel (extractor). All the control wire power comes from the transformer that is inside the master panel. On the print you will see a dotted line in the middle of the page, this indicates separation of the master panel from the pulper or disposer panel. The interconnecting wires are numbered and also have a dotted line going from one panel to the other panel. The electrical contractor is to run conduit between these panels and pull control wires from the extractor panel and the pulper or disposer panel(s). Somat supplies a pre-wired junction box on the side of the extractor, pulper shell or disposer. Inside these junction boxes is a terminal strip and all the motors and control wires are wired into this box. The electrical contractor installs a piece of conduit between the junction box and the panel(s), pulls the motor power wires and control wires through the conduit and terminates the connections.
4. Set timers; Pulper(s) at 8 minutes, Extractor at 10 minutes.
5. Set / confirm overload settings per Dwg. FE- (final electric)
6. Check motor rotations and correct as needed.
(Disposer(s), pulper(s) drive, extractor drive, slurry and return pumps)
 - The pulper motor turns counter clockwise,
 - The extractor turns clockwise,
 - The return pump and slurry pump turn counter clockwise looking at the fan.
7. The push button station is not pre-wired by Somat, the customer or the electrical contractor has to install the push button station. The electrician can either install conduit to the pre-wired junction box or install the conduit to the panel, pull the wires and terminate them inside either boxes.

START-UP / Power ON testing

1. Turn the main disconnect handle on all the panels to the 'ON' position.
2. Turn open the valve handles to the fresh water assembly on the pulper(s), disposer(s), and the spray bar assembly on the extractor.
3. Close all drain valves, disposer(s), pulper(s) and silver-saver(s).
4. Make sure that the pulper(s) lid(s) are closed.
5. Close the chute lid on the extractor.
6. Release the latch on the stop button, turn the selector switch to the run position, this will activate the fresh water solenoid valve to pre-fill the pulper. Adjust the pre-fill level.

- Open the panel door at the pulper and locate the pressure switch to adjust the water inside the pulper tank. Adjust the fresh water level at the trough entrance inside the pulper. If a multi- unit system, with a dual switch it will be on the 'right' marked 'L'.
 - The other side (Marked 'H' for High level) of the pressure switch will control the flood stage. The flood stage is for when too much return water enters into the pulper. The MOV will close until the water level in the pulper tank drops down and then the MOV will open again. To adjust this level;
 - Turn the main disconnect 'off' to the pulper panel only.
 - Do the procedure to fill the system.
 - Push the start button. (this opens the MOV and lets return water flow into the pulper via the return nozzles.)
 - As soon as the return water is half way up the trough adjust the pressure switch to close the MOV.
 - Push the stop button and lock 'IN'.
 - Turn the main disconnect to the pulper back on and then re-start the system.
7. Balance the system; Place an AMP meter on the return pump.
 8. At the pulper is a 1 1/2" gate valve, close this valve unless the trough is very short.(<3')
 9. Trough valves, tray valves- adjust from furthest valve to closest to pulper.
 10. Adjust flows to approx. 40 gpm total for SP-30,50 and 60 gpm for SP-75. Silversaver nozzle (if equipped) should just trickle in enough to keep waste from settling in sump area.
 11. After the valves are adjusted, a constant level will be seen in the pulper and the extractor should have minimal over flow. If the flow is extreme, readjust valves at pulper to let more flow in, adjust flow until pulper and extractor are balanced to each other (1-3 gpm overflow at extractor). If the system has multiple pulpers and / or disposers, all need to be run independently as well as together for proper adjustment.
 12. Disposer(s); (If Equipped)
 - Fresh Water Supply to Seal "ON"
 - Release the 'Stop' lock latch.
 - Push 'Start' button.
 - Adjust the bowl flush nozzles as open as possible without splashing out of the bowl.
 - Adjust the 1½" gate valve that supplies return water to the slurry pump. This is normally about 1½ to 3 turns open. Do not open too far or the slurry pump will over-amp and trip the overloads. Monitor the amp draw while adjusting. When adjustments are final, remove the handle to the 1½" valve 'only' ! to prevent operators from changing the setting. The valve for the nozzles may need to be opened occasionally to clear if they become clogged so do not remove this handle.
 13. Auto - rinse, 1-1/2" drain gate valve adjustment;
 - Start with valve closed.
 - Turn selector switch at pulper to "EMPTY" (Activates HOT water spray rinse and opens the MOV at the extractor)
 - adjust open the gate valve to purge off the dirty water, adjust not to flood the drain but that at the end of the time cycle most of the water is purged out.
(approx. 1-1/2 turns open)
 14. Monitor correct amp draw on all motors (**special attention to return pump motor**).

15. Default Settings / Throttling Valves

After the system is balanced and running properly the default settings of the throttling valves need to be recorded. Record the settings on the table located inside the electric panel and also on the start up form to be sent back to the factory. Start at the end farthest away from the pulper and work towards the pulper. Turn the valve closed and count the number of turns. Record this on the table as number of turns open, re-open and confirm setting as correct. NOTE: Even ¼ turn change is critical on some systems. Continue with the remainder of the throttling valves until all are correct and recorded properly.

These settings are important should the operators should make un-authorized adjustments, in order to eliminate nuisance service calls !

16. Fill out SOMAT's forms completely with good address and phone numbers.

17. Demo to Customer. Refer to demonstration page.

Demonstration to the Customer / Operators (Remote Systems)

1. Turn main disconnect on all panels to the “ON” position.
2. Close All drain valves, pulper and silver-saver.
3. Close all pulper and chute lids.
4. At pulper; Turn the selector switch to the run position
5. Release the latch on the stop button. (Explain the ‘pre-fill’ for the system)
6. While the pulper is pre-filling instruct them on what can be put into the equipment; all food waste, paper products, cooked bones, Styrofoam and some small plastic. Also explain what not to put into the system, like metal (silverware), glass, rags anything that would be considered non-pulpable.
7. Instruct on feeding; not to put food waste into the trough without the system turned on and the return flow coming down the trough to push the waste into the pulper. Do not ‘slug feed’ the system. (Dumping large quantities of waste at one time, the system is designed for steady continuous feeding.)
8. After they have put the last of the waste into the system for the day, tell them to let the machine run for a few minutes to finish processing the waste. Instruct to turn the ‘Empty-Run’ switch to ‘Empty’ after the last waste is fed. The system will automatically shut down after the timer sequence is completed.
9. Lock in “stop” button with latch.
10. Turn the main disconnect off.
11. Open the pulper lid and scoop out any of the floatables left.
12. Open the drain valves at the pulper and silver-saver.
13. Disposer (if Equipped) Explain food waste ONLY, no paper or plastic.
 - Start up
 - Close drain valve and Release stop latch.
 - Push start button.
 - Shut down
 - Push stop button and lock in.
 - Open drain valve.
14. With a hot water hose and toilet bowl brush clean the inside of the pulper. Make sure that the underside of the lip is cleaned. Remove any waste and non-pulpables left in the bottom of the pulper.
15. Remove the access door from the extractor, using the hot water hose and brush clean the inside of the extractor shell and screen.
16. Have the operators start and shut down the system to insure they understand the proper procedures.
17. Have the managers and operator sign the start-up form and turn the system over to them.
18. Wish them happy pulping.