

OPERATING INSTRUCTIONS

TYPICAL STARTUP AND OPERATING PROCEDURE - The following startup procedures must be followed prior to operating the System:

1. Close drain valve on the Pulper.
2. Check to ensure that the main power switch of the SOM-A-TROL[®] panels is in the "ON" position.
3. Unlock the Pulper "**STOP**" button. Turn "**EMPTY-RUN**" Selector Switch to the "**RUN**" position if so equipped. ****Newer systems will be equipped with a momentary pushbutton for the 'EMPTY/CLEAN' cycle. Press button once to engage clean cycle, press button second time to disengage clean cycle. You WILL NOT need to press the pushbutton to fill machine, if all lids are closed, and stop button is disengaged machine will fill with water **** The Pulper will begin to fill with water. When the water has reached the prescribed level, press the Pulper "**START**" button and wait until there is a continuous flow of return water. Then begin feeding waste to the Pulper either manually or by starting waste down the flushed trough, if so equipped.

Waste Feeding Instructions - Best results are obtained if the Pulper is fed waste at a **UNIFORM RATE**. *Under normal conditions, waste may be fed to the Pulper as long as a strong vortex is maintained in the tank. If waste is fed too fast the vortex will diminish to a point where it will no longer pull the material into the impeller for efficient grinding.*

*Don't "slug" the Pulper for short periods of time with excessive feeding. Overloading interferes with the grinding process and takes longer to dispose of a given quantity of waste than if the machine is fed at a **UNIFORM RATE**.*

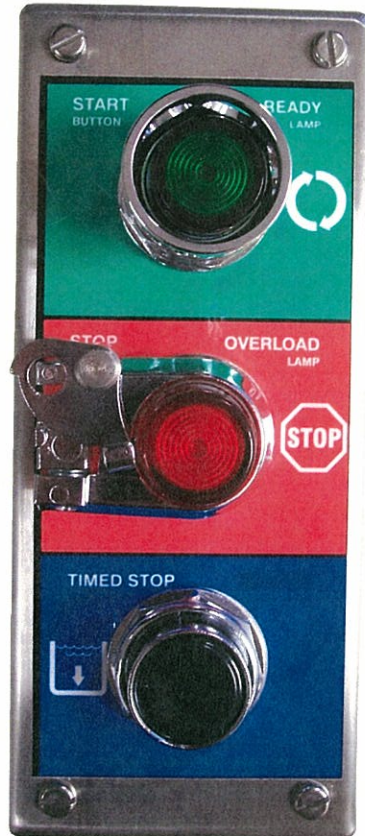
When shutting down the Pulper for short periods, it is not necessary to run the Pulper until all the waste has been pumped out of the tank. Run the Pulper for a few minutes to thin down the slurry and then shut off the machine.

SHUTDOWN PROCEDURES - The following shutdown procedures must be followed prior to performing necessary cleaning and maintenance duties.

1. Allow the Pulper to operate approximately fifteen minutes after the last waste has been fed.
2. With the Pulper still running, turn the Selector Switch to the "**EMPTY**" position, if so equipped, permitting the system to be pumped down automatically. Newer models have a momentary pushbutton for the spray rinse system. Depress button once to engage spray rinse system, system will then time out on its own. The Pulper will stop when the shutdown timer has timed out. ****Newer systems will be equipped with a momentary pushbutton for the 'EMPTY/CLEAN' cycle. Press button once to engage clean cycle, press button second time to disengage clean cycle. You WILL NOT need to press the pushbutton to fill machine, if all lids are closed, and stop button is disengaged machine will fill with water ****
3. Press the "**STOP**" button and engage the locking attachment. Turn **off** the electrical power at both the Pulper and Hydra-Extractor[®].
4. Open the drain valve on the Pulper.
5. Refer to the applicable Pulper and Hydra-Extractor[®] maintenance sections of this manual for daily, weekly and long term shutdown cleaning procedures and maintenance instructions.

Light Codes:

Newer SOMAT systems employ a micro-computer to control many of the unit functions. If a fault or overload is detected, the system will flash a series of codes by lights located either on the pushbutton station OR on the panel enclosure itself. Below is a list of the most commonly used for Close Coupled machines.



Solid **Green**: All safeties are latched and secure, system is ready to run

Flashing **Green**: System is in timed stop mode, extractor will spray, after less than 10 minutes system will shut down.

Two **Green** flash, pause, and repeat: All safeties are latched and secure, tank is filling.

Solid **Red**: One of systems 3 motors is overloaded and must be reset.

Flashing **Red**: Lid switch on pulper or extractor lid is open, shut lid to resume normal operation.

** For all other **RED** lights, please refer to your Electrical Print **

SPECIAL OPERATING CONDITIONS - While applications vary widely the following conditions could occur and should be watched for:

- A. Overfeeding - The SOMAT[®] Pulper is designed as a continuous process machine. In general, the feed rate should not exceed one tenth of the rated hourly capacity in any six minute period. Exceeding this will cause the machine to bog down and operate under its rated capacity.
- B. Foaming - this is caused by contaminants in the water, or by certain materials in the waste, such as glue in corrugated cardboard. Add a de-foamer, such as Somat[®] Neutro Plus, or any of a number of commercial preparations.
- C. Corrosion - If the water and/or the waste are acidic or alkaline, use a buffering agent to neutralize the water. Regular testing is recommended, since rapid corrosion due to acidic or alkaline conditions can result in costly repairs.
- D. Freezing - All equipment and piping should be protected from freezing. Insulation and heating cable are often used where equipment is exposed.
- E. Non-Pulpables - The SOMAT[®] Pulper is designed to handle a limited amount of non-pulpable material. The lighter items are eventually ground and the heavier material is discharged into the junk box. However, the SOMAT[®] Pulper is not designed to handle heavy masonry materials or tramp iron and other materials of this nature. Such items will break away the cutting teeth and seriously reduce the machine's ability to handle material of any kind.

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Occasionally, the amounts of non-pulpables may become excessive and, due to their slower processing rate, create a material build-up in the Pulper tank. Safely stop the Pulper, scoop out the non-pulpable matter, and then re-start the Pulper.

- F. Wear - Moving parts, and their mating surfaces, will wear with service, especially those which are part of cutting mechanisms. Your routine maintenance and inspection, as described in the applicable component sections, will disclose which parts are wearing and provide an indication as to when replacement will be necessary. The maintenance plan should include pre-ordering of spare parts and scheduled replacement.
- G. Rotating blades may be re-sharpened. To remove blades please follow instructions located in the "Cutting Mechanism" section of this manual.

CLEANING INSTRUCTIONS

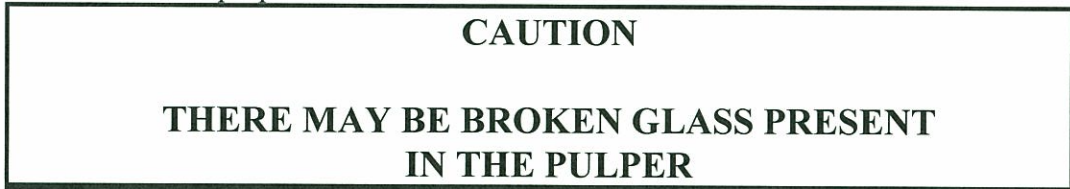
After feeding waste to the SOMAT[®] System has been completed for the day, the equipment should be thoroughly cleaned. The cleaning operation requires only a few minutes daily and, if properly done, will keep the machine free of odor and at top-operating efficiency. A regular cleaning program will eliminate costly maintenance and unsatisfactory operation.

CLEANING THE PULPER:

With the system properly shut down, in accordance with the System "Shutdown Procedures", perform the following:



1. Clean the Junk Box of non-pulpable material



2. Wash the interior of the Pulper shell with a hose, suitable brush, detergent and deodorant or other cleaning solution. Exercise particular care in cleaning the underside of the upper shell flange.
3. Wipe down the equipment exterior.
4. Close the drain valve. The Pulper is now ready to be started as soon as the Som-A-Trol[®] panel is turned on.
5. Remove the standpipe by unthreading the vertical 12" nipple from the elbow near the base of the pulper tank. Clean the standpipe and nipple by suitable means. Reinstall the standpipe. **** Applies to older machines not equipped with an Electronic Water Level Sensor ****

CLEANING THE HYDRA-EXTRACTOR[®]:

1. With high pressure hose, wash down screens and interior walls of Hydra-Extractor[®] housing. If necessary, a long-handled brush can be used.
- B. Long Term Shut Down Procedure** - If the Pulper is to remain idle for a relatively long period (four weeks or more), special procedures should be taken to protect the equipment. These procedures are as follows:
1. Perform the daily cleaning procedure, and then circulate a solution of a cleaning and disinfecting agent through the lines to combat bacteria growth and odor.
 2. Remove the impeller from the Pulper, (refer to Pulper Maintenance Section). Do not remove the mechanical seal. Using a hose and brush, thoroughly clean the mechanical seal, slurry chamber, and the underside of the impeller.

CLEANING COMPOUNDS

The ideal cleaning compounds available for use with SOMAT[®] equipment combine four important functions: detergency, disinfection, pH buffering and odor counter action.

In order to help our customers overcome the problem of selecting chemicals for use with their SOMAT[®] System, we offer the chemicals that we believe will best meet their needs.

We offer:

SOMAT[®] NEUTRO PLUS (72000)

Designed for use in the SOMAT[®] System to keep it clean, to deodorize, and to reduce grease build-up. This is an industrial strength product. The surfactants in this detergent/deodorant are bio-degradable.



SOMAT[®] DEFOAMER (73000)

A neutral, liquid silicone emulsion specifically designed for suppressing and controlling undesirable foam. This is an industrial strength product. The surfactants in this de-foamer are bio-degradable.

Dilution: Five (5) parts water to one (1) part de-foamer.

Please direct all orders, whether by mail, phone, or by email to our SERVICE DEPARTMENT. If you have any questions, please feel free to contact us at this office. Phone- 717-397-5100, Fax-171-291-0878, parts@somatcompany.com

CAUTION – CORROSION

In isolated cases, depending on local water supply characteristics and operating conditions, the mild steel components in the SOMAT[®] System can be subject to corrosion.

This condition is generally associated with food service machines. Corrosion may occur in steel piping, pulping tanks, fittings, and pump parts. Corrosion works very rapidly and the pitting of metal parts can cause early failure, requiring extensive repairs.

Acid corrosion is caused by low pH level in the system water, but it can be easily controlled by the addition of commercial grade soda ash. Soda ash is readily available and costs only a few cents a pound in bulk lots.

Alkaline Corrosion is caused by high pH level in the system water. While damages done by this condition does not occur as quickly as that of Acid corrosion, neutralizing agents should be added to the system to help eliminate potential corrosion problems. The proper pH level of the system water should be maintained at a minimum of 7.0 and not over 8.5. The pH level can be determined by a simple test using litmus paper indicators.

GENERAL TEST AND TREATMENT PROCEDURE

1. After the system is in operation under normal load conditions, dip litmus test paper in grinder slurry (or return water from Hydra-Extractor[®]) and determine whether the liquid is acid or alkaline.
2. Neutral water is neither acidic nor alkaline and will have a pH of 7.0. An acid liquid will have a pH of less than 7.0, as is indicated by the color change of the litmus paper.
3. If the liquid is neutral (a pH of 7.0) no treatment is required.

NOTE: SOMAT Company cannot be responsible for failure due to corrosion resulting from improper water conditions.