

INSTRUCTIONS

WR SERIES ENGINEERED WASTE SYSTEMS

<i>MODEL</i>	<i>L-R OPERATION</i>	<i>R-L OPERATION</i>
<i>WR1000</i>	<i>ML-110372</i>	<i>ML-110373</i>

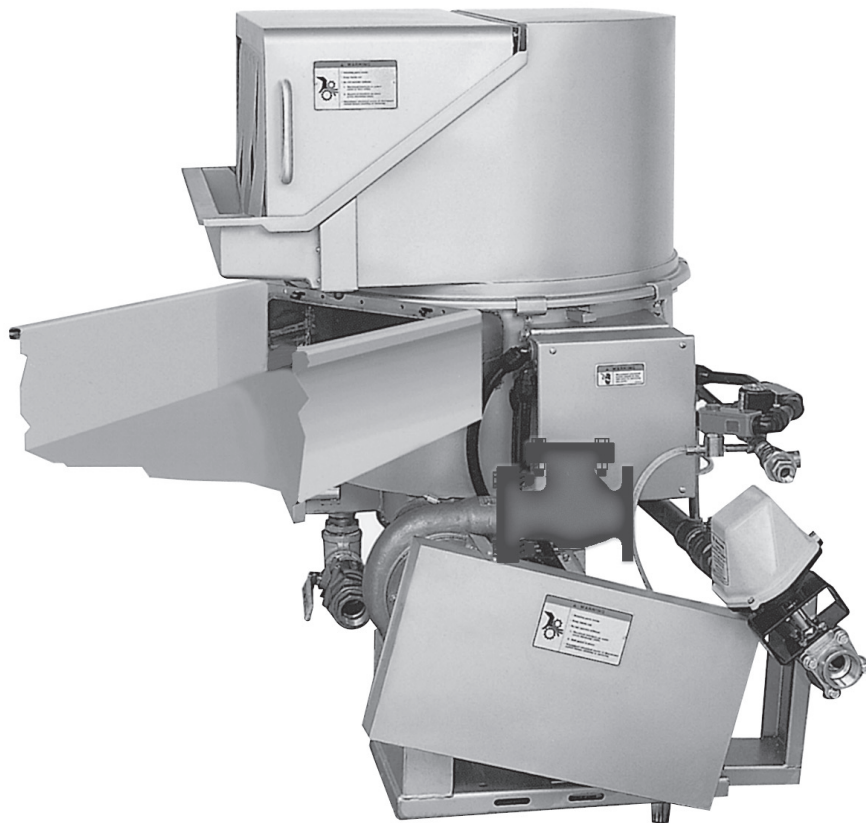


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Model WR1000

Installation, Operation and Care of WR SERIES ENGINEERED WASTE SYSTEMS

SAVE THESE INSTRUCTIONS

GENERAL

The WR Series Engineered Waste System is comprised of one or more pulpers, a piping system and a waterpress. The pulper uses a 7.5 horsepower motor, stainless steel components and carbide steel cutting edges to shred grindable waste to a pumpable slurry. The slurry is pumped through the piping system to the waterpress where a stainless steel screw squeezes out the moisture, compacts the waste and lifts the semi-dry pulp to the discharge chute — reducing the original volume significantly. Process water is pumped back to the pulper(s) where it recycles.

Modular design of the WR Series Engineered Waste System allows one or more pulpers to be located remote from the waterpress. Required piping to connect the waterpress to the pulpers is to be supplied by others and installed per Hobart piping drawing. Pumps, motors and controls are supplied per the order and the sales installation drawings. Because each installation is unique to the site, follow the sales installation drawings carefully during the installation process.

Additionally, the pulper may be installed undercounter with a water-tight trough connection; a silver-saver sink with lift-out basket (by others) can be installed with the trough.

INSTALLATION

Prior to installation, test the electrical service to make sure that it agrees with the specifications. Plan the location of plumbing and electrical components for operator safety, ease of operation and cleaning.

UNPACKING

Immediately after unpacking, check for possible shipping damage. If the units are found to be damaged, save the packaging material and contact the carrier within 15 days of delivery. Identify and group the components, matching with the proper units. Do not discard or misplace components. Do not mismatch components with the wrong units.

LOCATION

Both the pulper and the waterpress should be located near a floor drain; floor should be pitched a minimum of $\frac{1}{4}$ " per foot to the floor drain. A suitable amount of space should be provided for machine operation, cleaning and service.

LEVELING

Vibration Isolation Pads (standard, Fig. 1) must be installed under each Leg of the pulper and slurry pump before making connections. Level by threading the Adjustable Feet up or down as necessary. After leveling, tighten the Setscrew on the Foot Flange.

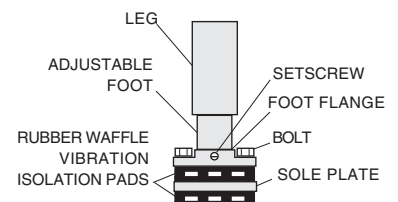


Fig. 1

FEED TRAY (Optional Lengths) AND HOOD (Standard)

The feed tray extending from the pulper is available in three lengths: Short (20"), medium (36" standard) or long (42"). The hood is positioned over the pulper and has an interlock. When the hood is lowered, material can move from the feed tray to the pulper through the curtains. The feed tray and hood can be installed in one of three 90° positions (Fig. 2).

TRAY FLUSH (Optional with Feed Tray and Hood)

When equipped, the tray flush is attached to the end of the feed tray. The tray flush is plumbed to the return water line, either at the factory or in the field by qualified installer or technician.

PULPER (Fig. 2)

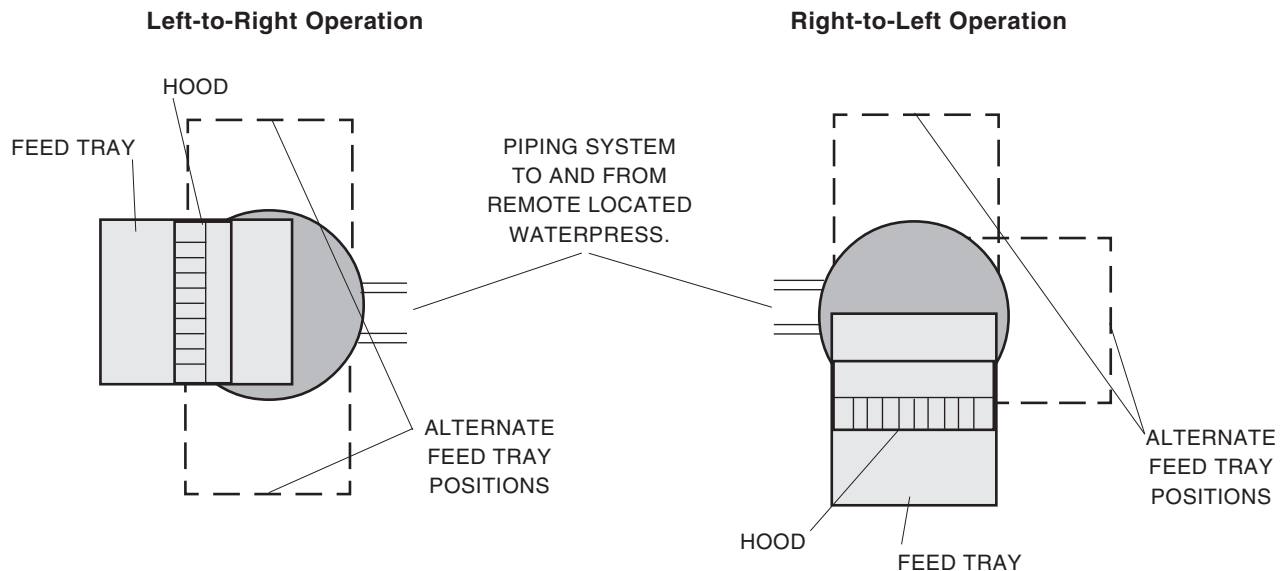


Fig. 2

UNDERCOUNTER (Optional)

Undercounter models use a feed table (by others) with transition ring (by Hobart) welded underneath the feed table per instructions (Fig. 3) instead of the Feed Tray and Hood. Install the reed switch packed at the junction box to the location indicated (Fig. 3). Undercounter models are provided with either a cover plate or a single opening feed hood, which must be placed over the pulper opening of the feed table. On undercounter models, either the cover plate or the single opening feed hood is the pulper cover.

If equipped with a cover plate, rotate the cover plate so the magnet aligns with reed switch and the cover plate will drop flush into the feed table opening.

If equipped with the single opening feed hood, the magnet is factory installed in the location opposite the feed opening. This location is appropriate only if the feed opening is oriented 180° from the slurry pump assembly. If the feed opening is positioned at either 90° orientation, relocate the magnet assembly so it aligns with the reed switch. The single-opening feed hood drops into the table opening so it is level and the magnet operates the reed switch.

The magnet and reed switch will always be located next to the slurry pump assembly.

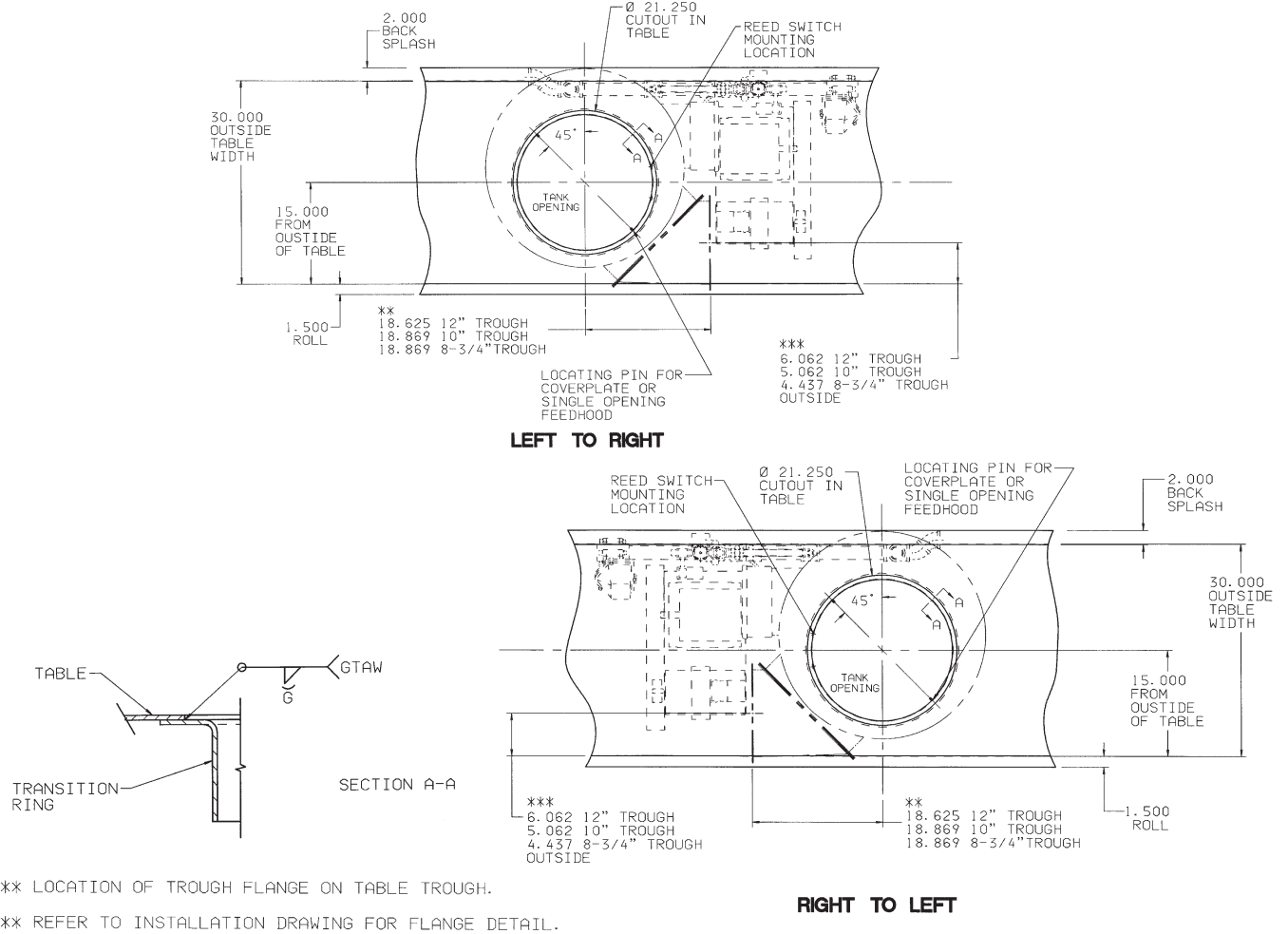


Fig. 3

PIPING SYSTEM

Follow the piping details, piping schematic and installation drawings when installing the piping system. Note the plumbing installation tips, page 6.

RETURN PUMP

The return pump is mounted on the waterpress to pump the recycled water back to the pulper for reuse.

PLUMBING CONNECTIONS

WARNING: PLUMBING CONNECTIONS MUST COMPLY WITH APPLICABLE SANITARY, SAFETY AND PLUMBING CODES.

Water Connections

Incoming water supplies to the pulper and waterpress should be connected to the 3/4" NPT connector provided. Incoming water pressure must be between 25 psig and 45 psig flowing.

Drain Connections

The drains for both the pulper and the waterpress must be plumbed to a suitable drain per local code. Refer to installation drawings.

Slurry Line, Return Line, etc.

Connect the slurry line and the return line and other piping connections per the installation and piping drawings. Pressure test piping system for leaks at 150 psig.

PLUMBING INSTALLATION TIPS

Use recommended pipe sizes. Do not increase or decrease pipe sizes from those recommended.

Use copper piping for the slurry line and return line. Keep track of the direction of flow while plumbing the slurry and return lines (mark with a marker pen as you go along). Use only long radius T - Y type cleanouts or lateral type fittings and 45° elbows (Fig. 4). Install cleanouts at all turns and every 50 feet of straight pipe runs. Make sure cleanouts are accessible. Install cleanouts so the water does not flow into the cleanout to avoid probable jamming and clogging (Fig. 4).

Do not use 90° elbows or right angle turns — jams could occur and stop the flow.

Plan piping layouts without drastic elevation changes that could cause airlocks and stop the flow.

Terminate slurry and return lines with union or flanged type fittings.

Install a manual shutoff valve on incoming fresh water lines to allow servicing.

Install all valves and other components as shown on the installation drawings.

Piping must run uphill to trough connection if feed table is equipped with a trough.

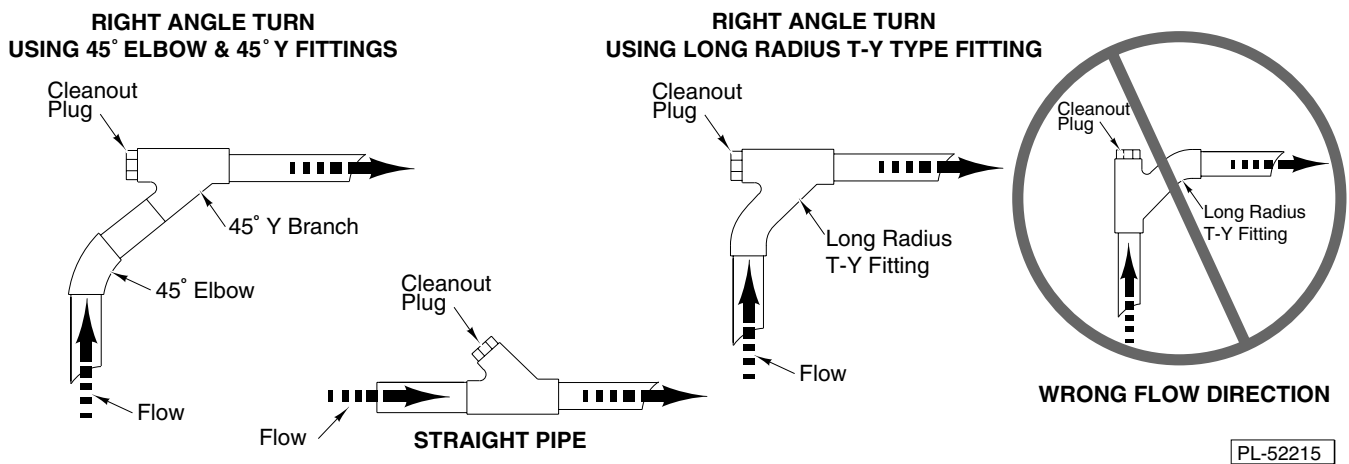


Fig. 4

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE CIRCUIT.

Refer to the electrical diagram located on the inside of the control box and the installation drawings.

MAIN POWER CONTROL PANELS

Each main power control panel (NEMA 12) is typically located nearby but remote from the respective pulper or waterpress it serves. Each main power control panel is identified by the serial number of the respective pulper or waterpress it is designed to serve. Match the serial numbers to make sure the correct main power control panel is connected to the proper pulper or waterpress. Separate incoming power must be supplied to each main power control panel. To facilitate field wiring, terminal blocks inside each main power control panel are labeled for the interconnecting wiring of the corresponding serial numbered pulper or waterpress as well as the terminal blocks in the enclosures located on the respective pulper or waterpress. Conduit and wiring (by others) should be installed according to the electrical diagram and the installation drawings.

REMOTE START – STOP STATIONS

One or more remote junction boxes with push-button Start and Stop switches may be provided as ordered. These should be installed in suitable and convenient locations per local codes, the electrical diagram and the installation drawings. They should be securely mounted and located at a convenient location for ease of operation, but not where they can be damaged or bumped.

INTERCONNECTING WIRING INSTALLATION TIPS

All pulper control panels must be interconnected with the waterpress control panel. Also, connecting wires (not supplied) must be connected from individual main power control panels to system components, such as start-stop stations, interlock switches, 3-phase drive motors, motorized valves, solenoid valves, slurry and return pump(s), etc. — all according to the electrical diagram, the installation drawings and the code numbers on the terminal blocks.

Motor Rotation

The pulper motor, waterpress motor, slurry pump motor and return pump motor must be checked for correct rotation after the machine has filled. Arrows are provided to indicate the correct directions of motor rotation. Motor shafts are visible to make this verification.

To check motor rotation, turn power on. Start and stop the machine. Observe direction of motors.

If incorrect direction of rotation is observed, **DISCONNECT ELECTRICAL POWER SUPPLY.** Interchange two power supply leads to any motors that have incorrect rotation. Close electrical access panels. Reconnect electrical power. Turn machine on momentarily to verify correct motor rotation.

OPERATION

WARNING: THE PULPER COVER AND THE DISCHARGE CHUTE ARE EQUIPPED WITH INTERLOCK DEVICES. THE PULPER COVER MUST BE IN PLACE AND THE DISCHARGE CHUTE MUST BE LOWERED BEFORE THE MACHINE IS USED.

CONTROLS (Fig. 5)

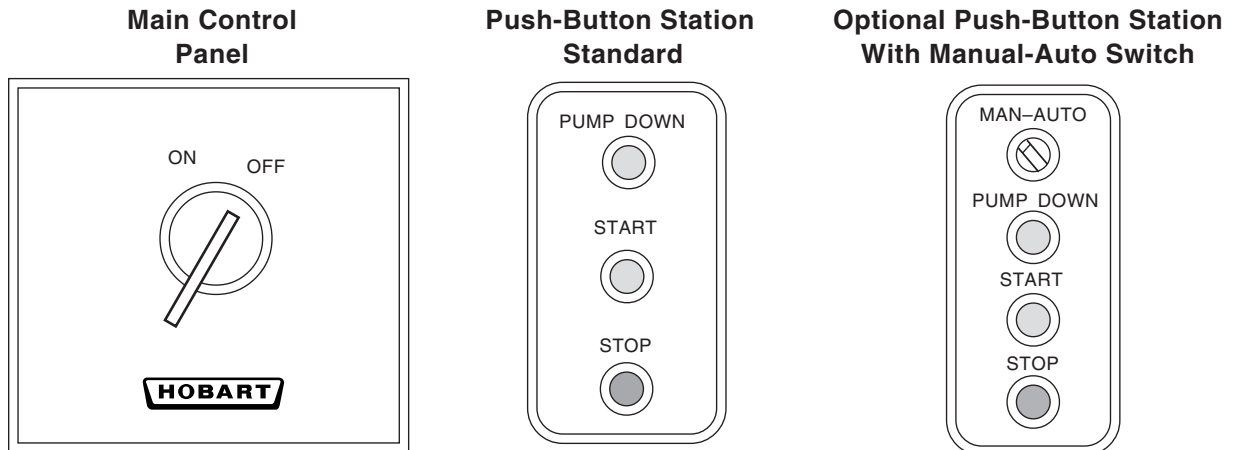


Fig. 5

The operator controls should be conveniently located near the pulper.

Power disconnect to the machine may be provided by the building electric system or by turning the handle on the Main Control Panel OFF.

- START** — Turns ON the water supply and fills the tank. As soon as the tank is full, the pulper motor, waterpress and slurry and return pumps come on, and the motorized valve opens.
- STOP** — Turns OFF the water supply valve, pulper motor, waterpress motor and slurry and return pumps. The motorized valve closes.
- PUMP DOWN** — Opens motorized valve at waterpress, closes motorized valve at pulper. This diverts water in the system to the drain. Pulper will shut down after preset time has expired.
- MAN – AUTO (Optional)** — MANUAL operation is normal operation. AUTO operation will allow the machine to run for a preset amount of time before it automatically shuts off the machine.

Using the Pulper

1. The pulper's feed hood curtains should be in place and the feed hood must be closed (when equipped). Lower the discharge chute and replace the door on the waterpress.
2. The drain valves located at waterpress and pulper must be closed. The water supply valve must be open. The Main Power switch must be ON.
3. Press the START button. The machine begins filling with water. When the machine has filled to the proper level, the pulper, waterpress, slurry and return pump motors start automatically. Allow an additional 2 minutes after the motors come on before feeding waste. During operation, water may intermittently enter the tank through the fill port. After the motors have come on, the system is controlled by the START and STOP buttons.

Feeding Waste

Waste material should be fed into the pulper no faster than the machine can process it. **DO NOT OVERLOAD PULPER.** A good gauge for correct feed rate is to feed waste as fast as possible, provided the material continues to rotate in the pulping tank. If the rotation or vortex is stopped due to overfeeding, wait a few minutes until rotation resumes. Production can be improved by mixing the waste whenever possible. Corrugated boxes, for example, can be mixed with food service waste that would come from a typical dining area. During normal operation, there should be a strong flow of water returning to the pulper from the waterpress. This flow is a clue to the performance of the machine since a sharp reduction in this flow indicates the pulper is overloaded. If this occurs, stop feeding for a few minutes until return water resumes its normal flow.

Avoid slugging the machine with greasy swill or overloading the pulper with bread or pastry. Mix these items with bulky waste such as corrugated boxes. The pulper will always perform better with clean, cold water. It is good practice to drain the machine of dirty water after every meal cycle.

It is recommended that the discharge receptacle (garbage can) not be taller than the bottom of the discharge chute. Empty receptacle whenever necessary.

Add corrugated boxes at regular intervals while processing.

Special Feeding Instructions

Some waste materials require special feeding techniques to utilize the equipment most efficiently. Heavy printed matter, computer cards, bulletins, computer printouts, Styrofoam and catalogs should be fed gradually to avoid overloading.

If waste material is delivered in large plastic bags, tear open and feed one bag at a time. Unopened bags can fill with air and float, hampering machine operation.

DO NOT FEED glass or metal containers; if present in the plastic bags, sort them out. Glass and metal containers are highly abrasive and accelerate machine wear. It is better to recycle glass or metal containers using a can or bottle crusher to reduce the volume.

DO NOT FEED rags, mop heads, wooden crates, oyster or clam shells or heavy uncooked bones to the pulper. The waste system cannot efficiently reduce the volume of these items.

Foaming

Waste materials with a glossy finished paper or a high glue content tend to create foam in the pulper tank. If there is excessive foaming in the pulper, it can interfere with the pulping process. Special anti-foaming chemicals and metering pumps to inject the chemicals at a uniform rate are available from chemical supply companies.

CLEANING

Cleaning requires only a few minutes daily, but must be done on a regular basis and proper facilities must be available. **NOTE:** If daily cleaning schedules are not followed, the machine will become unsightly and odors will develop. A hose with a good quality, lever-operated nozzle should be available, preferably with hot water, for clean-up of both the machine and the surrounding area.

Save several boxes of paper trash or corrugated cardboard boxes and send them through the pulper at the end of the operating period.

If equipped with the automatic shutdown option, turn the selector switch to the auto mode. The system will process the final load for 15 minutes before automatically shutting down.

If not equipped with automatic shutdown, allow at least ten minutes for the final load of paper or cardboard trash to be processed. Press the STOP button and wait for the pulper disk to stop rotating.

WARNING: DISCONNECT ELECTRIC POWER SUPPLIES AT CONTROL BOXES. PLACE TAGS AT THE DISCONNECT SWITCHES INDICATING THAT YOU ARE WORKING ON THE CIRCUITS. WAIT FOR MACHINES TO COME TO A COMPLETE STOP BEFORE PERFORMING ANY CLEANING PROCEDURES.

Pulper

Open the feed hood or pulper cover plate and remove materials that may be floating on the water — use a strainer or skim tool.

If equipped with the feed hood and tray option, remove the curtains from the clips on the hood. Open drain valve and drain the machine. Scoop any loose trash remaining in the pulper into a trash container. Use a hose and wash the inside of the pulper tank (and feed hood and curtains, if equipped).

Open and remove the trash box (Fig. 6). Empty and clean the trash box. Clean inside the trash box receptacle area. Replace the trash box.

Waterpress

Remove the waterpress access door. Use the hose at high pressure to wash down the interior of the housing and screen. Lift the chute and remove any loose pulp remaining in the discharge chute and at the top of the waterpress screw. Flush lightly with the hose. It is not necessary to dig out the plug of pulp remaining at the top of the waterpress screw. After the machine has been cleaned, wash down the floor, close the drain valve and dispose of any objects removed from the discharge chute. Replace all removed parts.

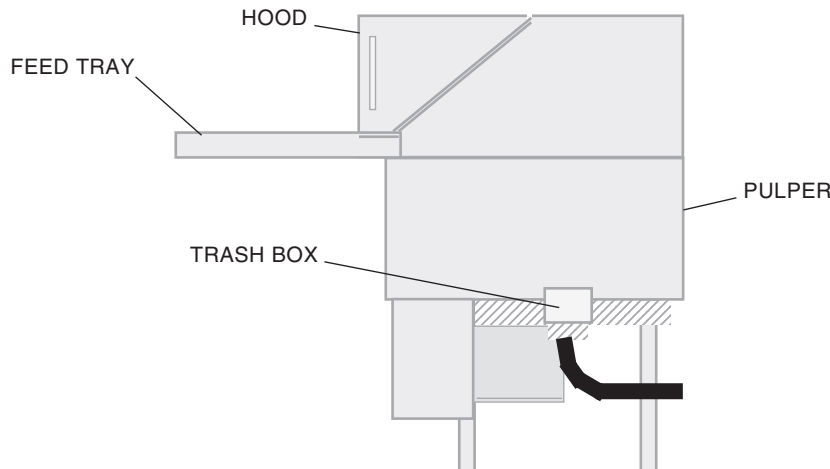


Fig. 6

MAINTENANCE

WARNING: DISCONNECT ELECTRIC POWER SUPPLIES AT CONTROL BOXES. PLACE TAGS AT THE DISCONNECT SWITCHES INDICATING THAT YOU ARE WORKING ON THE CIRCUITS. WAIT FOR MACHINES TO COME TO A COMPLETE STOP BEFORE PERFORMING ANY MAINTENANCE PROCEDURES.

MOTORS

Motors should be kept free of dirt, and ventilation openings must not be restricted.

WATERPRESS DRIVE

The waterpress drive consists of a motor and speed reducer. The motor requires no lubrication maintenance. The speed reducer is oil lubricated and the oil level should be checked every two or three months. With the machine stopped, remove the oil level plug. If the oil level is not high enough to drain out of the case, add a small quantity of Mobil SHC-634 or equivalent until it just starts to run out of the hole.

TROUBLESHOOTING

Symptom	Possible Cause	Possible Remedy
Pulper will not start.	<ol style="list-style-type: none"> 1. Circuit breaker tripped at building power supply. 2. Power handle on main control panel at either waterpress or pulper is Off. 3. Pulper cover not in proper position. 4. Waterpress chute is not in its proper position. 5. No water or insufficient make-up water. 6. Handle on motor circuit breaker has tripped or is Off. 	<ol style="list-style-type: none"> 1. Replace fuse or reset circuit breaker. 2. Turn handle on main control panel to On position and push Start. 3. Put pulper cover in proper position. 4. Put waterpress chute in its proper position. 5. See "No water or insufficient make-up water." 6. Turn circuit breaker to On position.
Waterpress will not start.	<ol style="list-style-type: none"> 1. Circuit breaker tripped at building power supply. 2. Power handle on main control panel at either pulper or waterpress is Off. 3. Pulper cover not in proper position. 4. Waterpress chute is not in its proper position. 5. No water or insufficient make-up water. 	<ol style="list-style-type: none"> 1. Replace fuse or reset circuit breaker. 2. Turn circuit breaker to On position. 3. Put pulper cover in proper position. 4. Put waterpress chute in its proper position. 5. See "No water or insufficient make-up water."
No water or insufficient make-up water.	<ol style="list-style-type: none"> 1. Main water supply valve is closed. 2. Shutoff valve is closed. 3. Pump Down switch may have been pushed, or the selector switch is on AUTO. 4. Drain valve is open. 	<ol style="list-style-type: none"> 1. Open main water supply valve. 2. Open all shutoff valves in supply line. 3. Restart machine. 4. Close drain valve.

TROUBLESHOOTING (continued)

Symptom	Possible Cause	Possible Remedy
Waterpress jammed.	<ol style="list-style-type: none"> 1. Discharge chute outlet obstructed. 2. Hardened plug in waterpress. 3. Trash container full and pulp backing up in discharge chute. 	<ol style="list-style-type: none"> 1. Turn off machine at main control panel. Remove residual pulp. 2. Turn off machine at main control panel. Remove hardened waste material. 3. Empty trash container and remove loose pulp from discharge chute.
Will not drain or drains very slowly.	<ol style="list-style-type: none"> 1. Trash box full. 2. Pulper full of unpulped material. 3. Drain hose clogged. 	<ol style="list-style-type: none"> 1. Turn off machine at main control panel. Do not remove trash box. Wear protective gloves and clean out from inside pulper tank. 2. Run pulper until pulp is processed. If it will not process, turn off machine at main control panel and clean out pulper tank. 3. Remove cleanout plug (installed by plumber) and use water pressure to eliminate clog.
Excessive foaming in waterpress.	<ol style="list-style-type: none"> 1. Pulping of certain materials, such as glossy paper, cardboard and potatoes, produces large quantities of foam. 	<ol style="list-style-type: none"> 1. <ol style="list-style-type: none"> a. Use a defoaming agent. b. Drain machine and refill with fresh water. c. Turn pulper off when not feeding waste.
Pulper jammed.	<ol style="list-style-type: none"> 1. Pulper overloaded. 2. Pulping disc jammed with scrap metal or heavy material. 	<ol style="list-style-type: none"> 1. Turn machine off at main control panel. Clean pulper tank and restart. 2. Turn machine off at main control panel. Remove metal or heavy material.

SERVICE

Contact your local Hobart-authorized Service Office for any repairs or adjustments needed on this equipment.