

Graymills

Turbo Boost Filtration System

Operations and Maintenance Instructions

WARNINGS/CAUTIONS

Read all these SAFETY INSTRUCTIONS and those in the manual BEFORE installing or using this equipment. Keep this manual handy for reference/training.

- Turn off power before beginning maintenance on your Graymills Turbo Boost Filtration System. Follow lock-out procedures.
- Never attempt to open either the chip strainer basket (item C) or the Stainless Steel filter vessel (item E) while the pump (item D) is in operation. Opening these parts would expose you to severe injury.
- Be sure chip strainer and filter vessel are properly closed and sealed BEFORE turning on system. Failure to do so could cause severe injury.
- Always direct air bleeder discharge away from people, motor and electrical controls.
- Be sure to close drain valves and bleeder valves on pump volute and chip strainer basket when installing.
- Check weekly all hoses for leaks, cracks, deterioration. If found, replace before using system.
- In all electrical circuits, it is highly recommended that a ground fault interrupter (GFI) be installed.
- Connect 110 volt/single phase units to a wall plug which is dedicated to the filter system only. 1 hp motor requires 15 amp, 1.5 hp requires 20 amp outlet.
- Connect 230 volt/3 phase units to receptacle dedicated to filter system. 1 hp motor requires 8 amps, 1.5 hp requires 11 amps service.
- Do not use an extension cord to supply filter system!
- Filter must never be tested or subjected to air or gas under pressure. Doing so will create an extremely dangerous situation.

Never work with equipment you feel may be unsafe. Contact your Supervisor immediately.

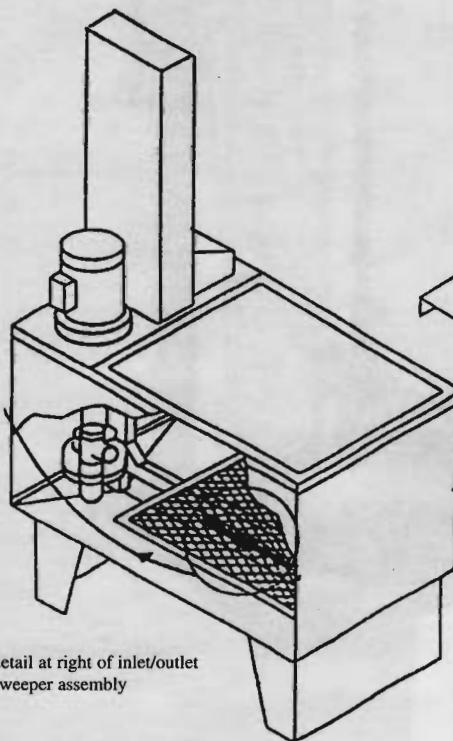


The Turbo Boost Filtration System is adaptable to additional Graymills models LKR36, LKR48, LKR60 and LKD60

DESCENDING PRESSURE SWITCH



INSTALLATION DRAWING

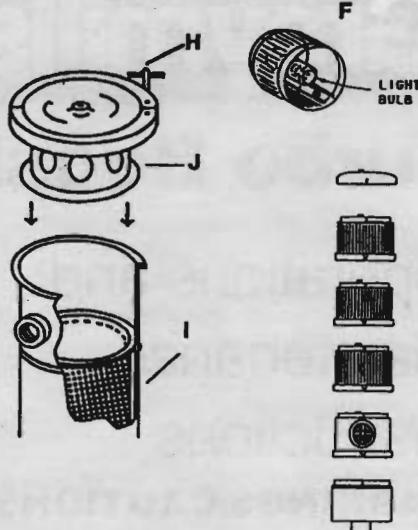


See detail at right of inlet/outlet and sweeper assembly

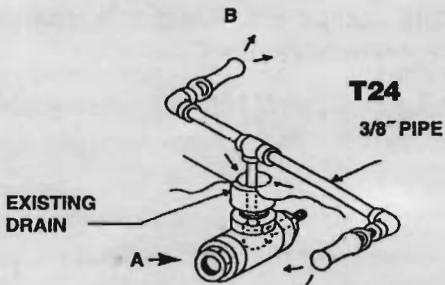
Differential pressure adjustment: Factory set spring tension to remain loose - do not adjust.

Close nipple
1/4" Air bleeder

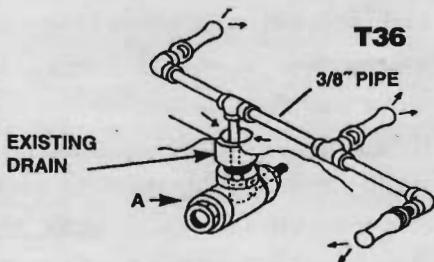
FILTER SERVICE BEACON



SWEEPER AGITATION PACKAGE



Clean fluid returns through a header with eductors to move dirty fluid to filter inlet.



SYSTEM FEATURES

Your Graymills Turbo Boost Filtration System has been specifically engineered for continuous contaminant removal from the Graymills parts washer it is servicing.

The basic concept is to sweep the bottom of the parts cleaner at a rate fast enough to remove contaminant on a continuous basis.

The benefits are:

- Increased agitation for more effective cleaning.
- Constant fluid quality throughout the entire cycle which enhances the cleaning capability of the wash.

- No redepositing of loose contamination on freshly clean parts.
- Increased solution life.
- Eliminate sludge buildup on the bottom of the parts cleaner.
- Greatly reduced heater element fouling.

SYSTEM COMPONENTS

Note: Letters correspond to drawings above

A Inlet/Outlet Fitting:

A fast easy connection which installs easily to the existing 2" drain post located on the bottom of the parts cleaner.

B Sweeper/Agitation Package:

This package easily installs onto the inlet/outlet fitting which includes four to one eductors. The eductors enhance agitation.

Pump/Bag Filter System:

- C Chip Strainer Basket:** located on the pump inlet to collect large particles and to protect the pump impeller from clogging.
- D Heavy Duty Centrifugal Pump:** includes a heavy duty mechanical seal and standard frame motor. Pump also includes a seal vent for prolonged seal life.
- E Large Capacity Stainless Steel Bag Filter Vessel:** constructed of 304 Stainless Steel which has been electro-polished (including welds). This offers a wide range of fluid compatibility. Standard seals are Buna N.; Viton is available when required. This contains a fill size #2X filter bag with 4 sq. ft. of surface area. These bags are available in all micron sizes in either disposable polyester felt or cleanable nylon monofilament mesh. Consult factory for proper selection.
- F Filter Service Beacon:** The system is designed with a green running light to indicate the pump is running, and a red flashing light to indicate filter change-out. **Red light will also flash due to plugged strainer basket.**

SET UP AND INSTALLATION

Your Graymills Turbo Boost Filtration System has been pressure and leak tested prior to shipping. (See text tag on filter vessel) All drain valves and bleeder valves have been left open to avoid freezing.

1. Refer to system installation drawing at left.
2. Close all drain valves and air bleeders.
3. Open installation kit which contains all plumbing components and pipe dope.
4. Connect system inlet and outlet per drawing. Be sure to close drain valves and bleeder valves on pump volute and chip strainer basket.
5. Open filter vessel and check for the following:
 - Filter bag (**I**) is in place under Stainless Steel hold down (**J**) to assure proper seal.
 - When replacing lid, point air bleeder away from people, motor and electrical controls. Be sure clamp is tight.
6. Tighten clamp (**H**).
7. Connect 110 volt/single phase units to a wall plug which is dedicated to the filter system only, 1 hp motor requires 15 amp, 1.5 hp requires 20 amp outlet.

Do not use an extension cord to supply filter system!

Three phase units must be wired accordingly. Overload protection and 110 volt control voltage is supplied in Graymills system control panel (**G**). Be sure to check motor rotation prior to system startup.

START UP

Fill parts cleaner to approximately 6" below the rim, then start filter system pump. Excess air is automatically bled from vessel through auto vent located on lid. As air is bled out pressure gauges will begin reading pressure. Once air is bled out, shut system down and top off water level in parts cleaner. Now you can begin your process. (Filter system must run during and after washing process to maintain cleanliness level.) Off-line run time should be based on level of contaminant removed from parts.

FILTER MAINTENANCE

See WARNINGS regarding pressure test.

To remove and replace filter bag:

1. Turn off pump. **Failure to do this can result in severe injury.** In case of duplex system (two tandem filter vessels), isolate vessel with ball valves.
2. Open unit by loosening clamp (**H**).
3. Lift out filter bag for change-out (**I**).
4. Make sure all dirt particles are removed from rim gasket.
5. Replace filter bag.
6. Replace Stainless Steel hold down (**J**).
7. Tighten clamp.
8. Return vessel to service. Excess air is automatically bled from vessel through auto vent located on lid.

SERVICE BEACON MAINTENANCE

Be sure power is shut off before performing maintenance on service beacon (F).

To change light bulb:

1. Lenses stack on one another anchored with a captive screw atop each lens. Loosen screw and remove cover allowing access to lens.
2. Loosen captive screw in lens and lift off. In case of multiple lenses, remove each unit until lens with burned out bulb is reached.
3. Gently remove bulb by turning counterclockwise slightly and pulling out.
4. Insert new bulb and turn to lock in place.
5. Replace lens by lining up arrow and notch.
6. Reset captive screw.
7. Replace cover.

The Stainless Steel hold down (**J**) supplied with your unit may vary in appearance from the drawing shown, depending upon your filter element. The most appropriate design of the hold down has been supplied with the unit.

WARRANTY

Graymills Corporation warrants that the equipment manufactured and delivered, when properly installed and maintained, shall be free from defects in workmanship and will function as quoted in the published specification. **Graymills** does not warrant process performance, nor assume any liability for equipment selection, adaptation, or installation.

Warranty does not apply to damages or defects caused by shipping, operator carelessness, misuse, improper application or installation, abnormal use, use of add-on parts or equipment which damages or impairs the proper function of the unit, and modifications made to the unit. Warranty does not apply to expendable parts needing replacement periodically due to normal wear and tear.

A new Warranty period shall not be established for repaired or replaced materials or products. Such items shall remain under Warranty for only the remainder of the Warranty period of the original material or product.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER ORAL, WRITTEN, EXPRESSED, IMPLIED OR STATUTORY. **GRAYMILLS CORPORATION** MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE

AFORESTATED OBLIGATION ARE HEREBY DISCLAIMED BY **GRAYMILLS CORPORATION** AND EXCLUDED FROM THIS SALE. **Graymills** warranty obligations and Buyer remedies (except to title), are solely and exclusively stated herein. In no case will **Graymills** be liable for consequential damages, loss of production, or any other loss incurred due to interruption of service.

Graymills' obligation under this Warranty shall be limited to:

- (a) Repairing or replacing (at **Graymills** sole discretion) any non-conforming or defective component within one year from the date of shipment from **Graymills**.
- (b) Repairing or replacing (at **Graymills** sole discretion), components supplied by, but not manufactured by **Graymills**, to the extent of the warranty given by the original manufacturer.

Buyer must give **Graymills** prompt notice of any defect or failure.

If you believe you have a Warranty claim, contact **Graymills** at (773)248-6825. Any returned material must have an RMA number on the outside of the package and shipped prepaid or shipment will be refused. **Graymills** will promptly examine the material and determine if it is defective and within the Warranty period.

Graymills

Graymills Corporation 3705 N. Lincoln Ave. Chicago, IL 60613-3594 (773) 248-6825 FAX (773) 477-8673 www.graymills.com