

# Graymills

## Model Chillter™ Heat Exchanging Filter

### Operations and Maintenance Instructions

Be sure anyone operating this unit reads and understands all warnings and instructions. Keep this manual available for reference/training.

### SAFETY WARNINGS

You will find various types of safety information on the following pages and on the labels attached to Graymills equipment. The following Safety Statements explain their meaning:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid personal injury or death.



**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



**CAUTION**, without the safety alert symbol, is used to address practices not related to personal injury.

### READ BEFORE OPERATING



- Electrical work must be done in accordance with all National and Local Codes by qualified personnel.
- Electrical equipment must be suitable for the environment in which it is used. Chillter units are not meant to be used in solvent environments, such as Class I, Division 1, Group D and EEx-d, Zone 1, Group IIB. If in doubt, check your local electric codes.
- Never use any electrical components or wiring to lift or move pump. Check cords, wires, and air lines. Replace any that are damaged prior to use. FAILURE TO DO THIS COULD RESULT IN SEVERE INJURY OR DEATH.
- All pumping systems must be properly grounded for the environment in which they are used, including static prevention.

## WARNING

- Never work with equipment you feel may be unsafe. Contact your supervisor immediately if you feel a piece of equipment is in an unsafe condition.
- We strongly recommend all electrical installations include a Ground Fault Interrupter (GFI).
- Failure to permanently ground the unit and controls before connecting to electrical power can cause shock, burns or death.
- Install ground and wiring according to local and national electrical code requirements.
- Install a fused disconnect switch on all power legs near the unit
- Disconnect and lockout electrical supply before installing or servicing unit.
- Unit must be properly grounded to prevent electric shock hazard. Connect only to three-prong outlet. Should cord become cracked, frayed or damaged in any way, it should be repaired or replaced immediately by a qualified electrician. Never use an extension cord.

## CAUTION

- Before doing any maintenance work, disconnect electrical power or air supply.
- Do not attempt to repair electrical components. Direct all electrical repair questions to the factory.
- Do not allow liquids to come in contact with the internal electrical components of the controller. This could result in injury to the operator, or damage to the unit.

## OPERATING VOLTAGES

Non-Explosion Proof Chillters:

Chillter-A:	115 VAC	60 Hz	1 Phase
Chillter-B:	230 VAC	50/60 Hz	1 Phase

## OPERATING PRESSURE

## CAUTION

Do not exceed 30 psi on chilled fluid (non-ink) supply.

## ABOUT CHILLTERS™

Graymills' CHILLTER™ systems are designed to keep ink at the desired temperature. To do so, the CHILLTER™ system combines a heat-exchanging ink filter with an electronic controller. The controller measures the temperature of the ink and opens and closes valves to release chilled water into the main CHILLTER™ body. The CHILLTER™ can also be used to heat ink, if desired, by using heated water in the system. (Changing some settings would be required.)

## INSTALLING CHILLTERS™

- Install CHILLTER™ Filter Body
  - Ink enters the CHILLTER™ filter through the bottom port and exits through one or both, as needed, of the top ports. Graymills recommends the use of full-port quick connect fittings – contact your local representative.
  - Filter can be mounted by attaching bottom port to rigid NPT pipe on the discharge of your ink pump or by bolting to a flange via four bolt holes on back.
  - Install filter cartridge, set lid on filter body, and firmly tighten both thumb nuts.
- Install CHILLTER™ Controller
  - The CHILLTER™ controller mounts via four bolt holes on the back of the unit.
  - The CHILLTER™ controller may be bolted to any vertical surface via the bolt holes.
  - If the CHILLTER™ filter is mounted on a pipe, the CHILLTER™ controller may be attached to the filter body. Screw four bolts into threaded holes on the filter body and slide controller onto the body.
  - Check fuses in Power Inlet Module located next to plug receptacle.
  - Using provided power cable, attach female end to receptacle on controller.
  - Plug in unit and flip switch on Power Inlet Module to ON (I).
- Run Ink Lines
  - If the filter is not attached to a rigid NPT pipe, connect the entry port on the bottom to the discharge of your ink pump.
  - Connect one of the outlet ports to the inlet on your ink chamber or pan.
  - The unused port may be used for bypass-style viscosity controls, bypass systems for flow control, or may be blocked off with included plug.



- Graymills recommends the use of full-port quick connect fittings – contact your local representative.
- d) Run Chilled Water Lines
  - Attach supply line from chilled water supply to  $\frac{1}{2}$ " NPT supply port on right side of valve located on CHILLTER™ controller.
  - Attach line from exit of valve (left side) to either  $\frac{1}{2}$ " NPT port on the CHILLTER™ filter cover.
  - Attach return line from chilled water supply to unused  $\frac{1}{2}$ " NPT port on CHILLTER™ filter cover.
  - Graymills recommends the use of full-port quick connect fittings – contact your local representative.



## OPERATING CHILLTER™

### 1) Programming the CHILLTER™:

CHILLTERS™ come from the factory pre-programmed and locked in the cooling function and showing Fahrenheit. Use these instructions to reprogram the control after a hardware reset or to change between Celsius and Fahrenheit.

- a) Unlocking Temperature Control
  - Press and hold both INDEX and ENTER buttons for three seconds
- b) Change Unit of Measurement
  - Press and hold ENTER button for three seconds
  - Press INDEX button once – “tPUn” appears
  - Set to “C” (Celcius) or “F” (Farenheit) using UP and DOWN buttons
  - Press ENTER button
- c) Total Reset

#### Setting Input Type:

- Press and hold ENTER button for three seconds
- “InPt” appears
- Press UP or DOWN buttons until “K2” appears. (The k will appear like a backwards “y”)
- Press ENTER button

#### Setting Unit of Measurement

- Press and hold ENTER button for three seconds
- Press INDEX button once – “tPUn” appears
- Set to “C” (Celcius) or “F” (Farenheit) using UP and DOWN buttons
- Press ENTER button

#### Set Operation Type

- Press and hold ENTER button for three seconds
- Press INDEX button four times – “Ctrl” appears
- Set to “onoF” using UP and DOWN buttons
- Press ENTER button

#### Set Heat/Cool Functionality and Lock Control

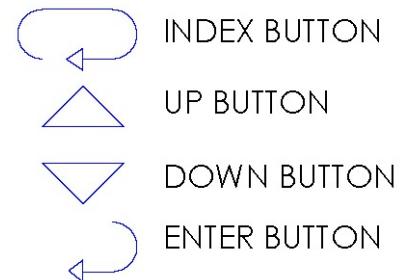
- Press and hold ENTER button for three seconds
- Press INDEX button five times - “S-HC” appears
- Set To “Cool” using UP and DOWN buttons
- Press ENTER button
- Press INDEX button twice – “LoC” appears
- Set to “LoC2” using UP and DOWN buttons (this locks the control settings from being tampered with)
- Press ENTER button

### 2) Setting CHILLTER™ temperature

- The actual temperature (present value) is shown in red on the top of the screen (PV).
- The desired temperature (set value) is shown in green on the bottom of the screen (SV).
- Using the UP and DOWN arrows set the desired temperature and press ENTER to set.

### 3) Cleaning the CHILLTER™

- The CHILLTER™ controller body can be wiped down with mild cleaning detergents. Use care not to allow cleaning fluids to enter the body of the controller. Use care not to allow cleaning detergents to contact the controller screen.
- The CHILLTER™ filter body is Teflon®-coated for easy cleanup and may be cleaned a variety of ways:
  - Flushed out with water by the ink pump
  - Detached and cleaned by hand or industrial parts washer
- The CHILLTER™ filter cartridge may be removed and cleaned by hand or in an industrial parts washer. Graymills recommends ultrasonic parts washers. Contract your local representative for more information.



## 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 impair 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.