

GREIG FILTERS, INC.

OPERATION MANUAL

**MODEL DCFH 3P 15/3 100 S4 DOE/222
DUAL CARTRIDGE FILTER HOUSING**

TABLE OF CONTENTS

I. INTRODUCTION

II. CARTRIDGE FILTER HOUSING UNIT

- A. OPERATION
- B. INSTALLATION
- C. TESTING UNIT
- D. ON - LINE OPERATION

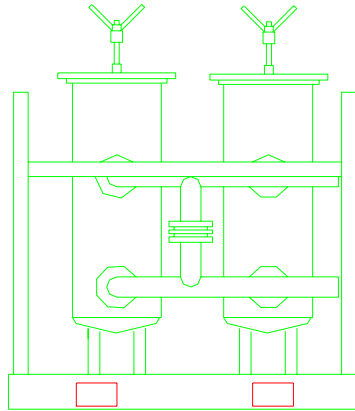
III. MAINTENANCE

- A. PRE - OPERATION CHECK
- B. VESSEL MAINTENANCE

IV. SAFETY

I. INTRODUCTION

Typical GFI Model DCFH Cartridge Filter Housing.



MANIFOLD - 3" stainless steel, T304

VALVES - ½", 2", 1" brass ball valves

"O" RING SEAL - non-typical 15 1/4"OD x 1/4"t, H 70 buna

MECHANICAL LID LIFT - davit arm

LID LUGS - 4 B-7 swing bolts with eye nuts for lid closure requiring only moderate torque to set o-ring gasket.

OPENINGS (NOZZLES) - inlet nozzle located in upper chamber, outlet nozzle located in lower chamber with respective drains.

CARTRIDGE SUPPORTS

- D.O.E. (double open end) seal with V - Tube and Cap-Spring top seal
- alternate, 222 o-ring seal receptacle

II. CARTRIDGE FILTER HOUSING UNIT

GFI's Model DCFH cartridge filter is designed and manufactured for ease of operation and maintenance. The housing is equipped with stainless steel cartridge receptacles to accept DOE / 222 o-ring seal cartridges.

A. OPERATION

- The GFI unit is equipped with upper and lower chamber drains, vessel vent, inlet and outlet openings and differential pressure gauge ports.
- Fluid flow is from the inlet in the upper chamber through the cartridges (outside/in flow) into the lower chamber exiting through the outlet nozzle.
- Care should be taken when placing the lid in position. The lid should be brought down evenly and only moderate torque applied to the lid lugs to seal the lid to the vessel, allowing the o-ring to seat properly.

B. INSTALLATION

- The Model DCFH unit should be installed in the process line with enough free space to allow servicing and maintenance of the unit. Attention should be paid to the overhead clearance required to remove and replace the filter cartridges.
- Proper piping from the upper and lower chamber drains and unit vent should be provided as required for the particular installation.
- Differential or individual pressure gauges should be provided to indicate cartridge "change out". Normally, 30 to 40 PSI differential pressure is recommended for cartridge change.

C. TESTING UNIT

- The Model DCFH unit has been designed and tested in accordance with the ASME Code Section VIII Div. 1 as indicated on the vessel name plate. Subsequent testing should be performed in the same manner.

D. ON - LINE OPERATIONS

- Upon installation of the filter housing and loading with the cartridges the following procedures should be followed:

Start Up:

- close all valves on the filter unit
- verify that the lid is properly closed and lid bolts are moderately tight
- slowly open the inlet valve allowing an equalizing of pressure in the vessel chambers
- slowly open the vessel vent allowing the trapped air to escape. Close when vented.
- slowly open the outlet valve

- note the pressures on the gauges or differential

gauge (NOTE: AT 35 PSI DIFFERENTIAL THE CARTRIDGES SHOULD BE CHANGED.)

Change Out:

- close the inlet valve, then the outlet valve and vent the unit to relieve any vessel pressure
- verify vessel to be free of any pressure and drain the upper chamber
- loosen lid lugs and swing the lid away from the vessel opening
- remove and properly discard expended cartridges
- place new cartridges in receptacles
- when inserting new cartridges, twist the cartridge approximately 1/4 turn while pressing down. Proper seating in receptacle can be felt. If there is any difficulty in seating cartridges, apply a small amount of lubricant to o-ring.
- close lid and tighten evenly to moderate torque
- follow procedure for start-up

III. MAINTENANCE

A. PRE-OPERATION CHECK

- Check unit for proper installation and operation function. Verify that the unit is installed in accordance with Section II item B and all connections are tight and functioning.

B. VESSEL MAINTENANCE

- Periodic visual inspections should be made of the exterior and interior of the vessel. Rust and or corrosion should be treated as soon as noticed according to the operators maintenance schedule.
- Periodic flushing of the upper and lower chamber should be done to prevent clogging of the drains.
- Lid o-ring gasket should be inspected when the vessel is opened to change cartridges and also changed if it shows signs of deterioration. O-ring size – non-typical 15-1/4"OD x 1/4"t

IV. SAFETY

- Pressure, even if very low can be dangerous. Do not attempt to open the vessel lid until you are certain that all pressure has been relieved from the vessel. Only at that time should the lid lugs be loosened and removed from the lid.
- Properly functioning pressure gauges should be used to prevent over

pressuring the filter unit. Regular calibration of the gauges is suggested.