

# DOCUMENT # 47556

#### **SPECIFICATIONS**

#### **Piping Connections:**

Inlet and Outlet: 2 inch NPTE, or option ordered
 Purge: 1.5 inch NPTE, or option ordered

Filter Element Type: Slotted, Defined Pore, or Perforated

Filter Body Volume: 4.0 US gallons (14.8 liters)
Contaminant Purge Volume: 25 US ounces (0.74 liters)
Design Pressure: Maximum Pressure: 150 PSIG (1035 kPa)
Minimum Operation Pressure: 30 PSIG (207 kPa)
Maximum Temperature:

Defined by the elastomer and cleaning disc selected Maximum Differential Pressure on filter element:

Slotted or Perforated Element: 110 PSID (760 kPa)
Defined Pore Elements: 50 PSID (345 kPa).

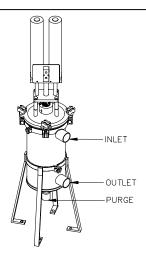
#### INSTALLATION INSTRUCTIONS

- 1. Secure the filter unit legs to a foundation.
- 2. Attach the inlet and outlet connections to the interconnecting piping (customer supplied). To properly support the filter unit, mount the filter in a vertical position. Take care to avoid excessive nozzle loading at the filter connections. Consult your pump manufacturer's installation guide for minimum pipe run length between the pump outlet and the inlet of the filter unit. NOTE: Isolation/block valves (supplied by others) are required on all process connections of the filter unit so the filter can be isolated from the process liquid in the event that service is required. Pressure gauges (supplied by others) are also recommended before and after the filter.
- Connect the drain line (customer supplied) to the filter unit's purge valve. To avoid restricting purge flow the drain line should be: 1) the same or larger diameter as the purge valve size, 2) as short as possible, and 3) at or lower than the height of the purge valve.
- See additional instructions for air and electrical installation instructions.

#### **CHECKLIST**

Complete this checklist before operating the system.

- Verify that all process connections are secure and free of leaks.
   -Element must be clean and free of damage.
   -Top and bottom element seals must be properly installed.
   -Proper element type must be used, as process requires.
   -Confirm that the gasket sealing the lid to the filter housing is in good condition and properly installed.
   Disassembly of the unit may be required to verify above.
- Check Star Packing Wheel and tighten as required.
   Urethane seal requires only finger tight. Teflon requires a tight fit with continued tightening adjustments as needed
- Verify that all lid bolts are tight.
- Verify that cleaning disc can be activated manually and automatically if so equipped.
- ☐ Verify that purge valve is operable and normally in the closed position for operation and start-up.
- Check that the purge line is directed in a suitable fashion to accept waste when purged.



### **OPERATION INSTRUCTIONS**

- The DCF-800 cleaning disc should stroke the element clean to keep the differential pressure between the inlet and outlet of the filter below 15 PSID. Stroking too frequently will shorten the life of all wear components. Note: The burst strength of the filter elements is 110 PSID differential pressures for slotted and perforated elements, and 50 PSID for defined pore.
- The filter unit is supplied with a valve used to purge the contaminants from the housing. This valve should be opened before the collected contaminants exceed the purge volume and causes a differential pressure increase.
- If filter element is removed from unit, avoid highpressure washing from the outside of the element.
   This may force contaminants into the filter media and cause permanent blockage and/or element damage.
- Always pressurize the unit slowly on start-up and watch for any leakage.
- The unit is equipped with a plug in the lid for placement of overpressure vents, for use as an air release and/or connect for fluid filling of vessel.
- Monitoring of the differential pressure between inlet and outlet pressures should be used to determine stroking and purging rates. Normal operation should exhibit low differential pressure that is maintained throughout.

## **WARNING!**

MAXIMUM WORKING PRESSURE IS 150 PSIG (1035 kPa).

CAUTION: PNEUMATIC CYLINDERS MAY MOVE FAST AND IN AN UNEXPECTED MANNER—KEEP AREA DIRECTLY ABOVE THEM CLEAR.

DO NOT STROKE CYLINDER WHEN BLOCK VALVES ARE CLOSED.

THIS FILTER UNIT MAY BE UNDER PRESSURE – EXTREME CARE MUST BE TAKEN WHEN INSPECTING OR SERVICING THE EQUIPMENT.

#### **MAINTENANCE**

To service unit: Isolate it from the process air and electric supply using proper lockout tagout plant procedures. De-pressurize and deenergize all sources of power.

- Disconnect all remote airlines running to the assembly, marking all airlines before removing. Loosen the 4 swing bolts from the lid and remove the lid assembly with cleaning disc attached.
- Inspect cleaning disc for excessive wear. If replacement is required see the spare parts drawing supplied with the unit and select the appropriate repair kit or contact Ronningen-Petter Customer Service. Refer to instructions included with disc repair kit.
- Remove element by using the element removal handle supplied with the unit (see the drawing below). Inspect element for damage and plugging. Clean or replace as needed. Remove lower "O" ring and clean.
- To reassemble, flush housing removing all dirt and contaminant. Clean and inspect all "O" rings for damage, replace as needed. Place lower "O" ring in the bottom of the housing making sure it lays flat and is centered on the ID of the housing (Attach top element "O" ring as needed.) Replace clean element in the housing with the handles up.
- To replace the lid and cleaning disc assembly, extend the center shaft to allow compression of the cleaning disc with the compression pliers supplied with the unit. Place the Lid "O" ring on the upper body flange checking to see that it is laying flat and centered on the housing. Insert the cleaning disc in the

- element and release the pliers and seat the lid double-checking the placement of the lid "O" ring. Replace the lid bolts and tighten.
- Reconnect the airlines
- Place the system back online using proper plant procedures.

For maintenance of other items such as lid seals, actuators, and valves, see instructions supplied with repair kits.

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