



**SPECIFICATIONS**

**Piping Connections:**

- Inlet and Outlet: 3 inch NPTE, or option ordered
- Purge: 2 inch NPTE, or option ordered

**Filter Element Type:** Slotted, Defined Pore, or Perforated

**Filter Body Volume:** 13.5 US gallons (51 liters)

**Contaminant Purge Volume:** 1.6 US gallons (6 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).

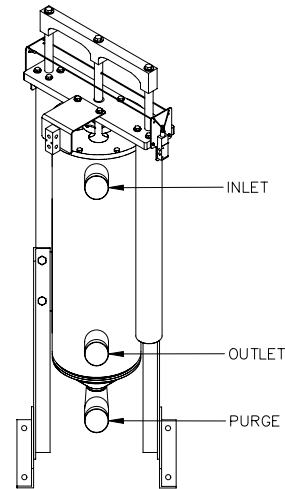
**INSTALLATION INSTRUCTIONS**

1. Secure the filter unit frame 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.
3. 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.
4. 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.
- 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.
- Check that safety switch is operational and functional



**OPERATION INSTRUCTIONS**

1. The DCF-1600 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.
2. 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.
3. If filter element is removed from unit, avoid high-pressure washing from the outside of the element. This may force contaminants into the filter media and cause permanent blockage and/or element damage
4. Always pressurize the unit slowly on start-up and watch for any leakage.
5. The unit is equipped with a plug in the lid for placement of overpressure vents, use as an air release and/or connect for fluid filling of vessel.
6. 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).**

**OPERATE EQUIPMENT ONLY WITH SUPPLIED SAFETY DEVICES -WHICH ARE PROVEN TO BE CORRECTLY INSTALLED AND OPERATIONAL.**

**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 the unit: Isolate it from the process air and electric supply by using proper lockout/tagout procedures. Depressurize unit by opening purge valve and deenergize all sources of power.

- Disconnect all remote airlines running to the assembly, marking all airlines before removing. Remove the center shaft connection bolt and the four bolts holding the twin assembly to the lid. Remove the twin assembly.
- Remove the 8 bolts from the lid. Tighten packing compression wheel. Remove lid assembly with cleaning disc attached.
- Inspect cleaning disc for excessive wear. If replacement is required, refer to instructions included with replacement disc.
- Remove element by first removing compressor assembly and upper "O" ring. Remove element using attached handles. 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 contaminants. Clean and inspect all "O" rings for damage, replace as needed. Place lower "O" ring in bottom of the housing making sure it lays flat and is centered on the ID of the housing. Replace clean element in the housing with the handles up. Place the upper element "O" ring on top of the element insuring that it lays flat and is centered on the ID of the housing. Place the clean compressor assembly on top of the element and align it so the bars are not obstructing the inlet assembly.
- Place the lid "O" ring on the upper body flange, again, flat and centered. Replace lid and cleaning disc assembly by compressing the cleaning disc with the compression pliers supplied with the unit. Lid may need to be raised to make room for pliers. Insert the cleaning disc in the element and release

- the pliers. Seat the lid on the unit. Double-check the placement of the lid "O" ring, replace the lid bolts and tighten.
- Replace the twin assembly insuring that the safety device is in place and operating.
- Loosen the packing compression wheel to proper specification.
- Reconnect the airlines.
- Place the system back on line using proper plant procedures.
- Test the safety device by tripping it while the unit is in motion. The unit should stop moving. If this does not work, lock the unit out and contact Ronningen-Petter customer service. If unit operates correctly, reset the safety switch and put the unit back online.

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

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DEFINED PORE SIZES		
P/N	RETENTION (MICRON)	
63089	0.001"	25
63090	0.0015"	38
63076	0.002"	50
63048	0.003"	75
63049	0.004"	100
63050	0.006"	150
63051	0.009"	230
63052	0.015"	380
63053	0.024"	610
63054	0.030"	760
63055	0.045"	1140

NON-STOCK ITEMS:  
ALLOW 6-8 WEEKS  
FOR DELIVERY.

SLOTTED ELEMENT SIZES		
P/N	RETENTION (MICRON)	
42631	0.0006"	15
42632	0.001"	25
40668	0.0015"	38
42633	0.002"	50
42634	0.003"	75
42635	0.004"	100
42636	0.006"	150
47332	0.007"	175
42652	0.008"	200
42637	0.009"	230
42638	0.015"	380
47341	0.024"	610
42653	0.030"	750
47331	0.045"	1125

PERFORATED ELEMENT SIZES		
P/N	RETENTION (MICRON)	
42650	0.062"	1550
47330	0.125"	3125
42661	0.250"	6250

CLEANING DISC (WIDE EDGE)		
MATL	ASSY	REP. KIT
UHMWPE	40632	31338
KYNAR	40633	47307
TEFLON	40634	47308
NYLON	47141	40712
URETHANE	40703	40707
TEF / SOFT	45483	

O-RINGS		
MATL	LID	ELEMENT
VITON	42622	42626
TEFLON	42624	42628
EPT	42623	42627
BUN	42621	42625
*NIT	45421	45422

\* WHITE, FDA APPROVED  
FOOD GRADE.

