

Single and Multi-Round Cartridge Filter Housings

Installation guide



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1.0 SINGLE CARTRIDGE HOUSING

STEP 1. PREPARATION

Housing inlet and outlet have been capped to prevent contamination from outside housing, Figure 1.

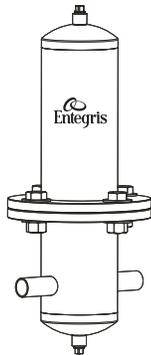


Figure 1.

1. Wet with isopropyl alcohol (IPA) wipes (recommended IPA >95%) to clean the inside and outside housing surface, Figure 2.

STEP 2. CARTRIDGE ASSEMBLY

1. Remove the bolts, nuts, and washers from middle of housing with appropriately sized wrench, Figure 2.
2. Carefully remove the top half of the housing, Figure 2.

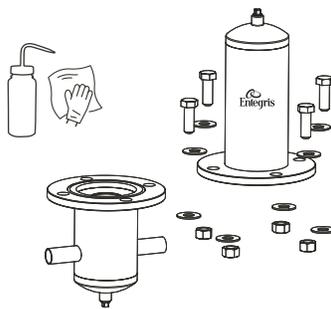


Figure 2.

3. Ensure the housing O-ring is seated properly on the cartridge O-ring grooves, Figure 3.

NOTE: O-ring misalignment will cause leakage.



Figure 3.

4. Carefully remove the cartridge packing.
5. Wet the O-rings with deionized (DI) water or IPA to ease insertion of the cartridge into the housing cartridge slot, Figure 4.

CAUTION! Ensure cartridge open end has two O-ring seals.



Sealing type:
O-ring seal
(single open end)

Figure 4.

6. Wiggle and press the cartridge with a little pressure because the cartridge O-ring is designed to fit tightly to ensure a better seal, Figure 5.

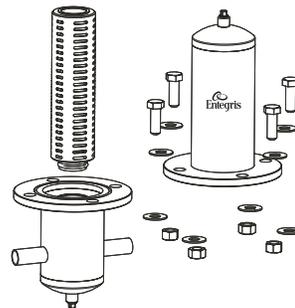


Figure 5.

CAUTION! Ensure the cartridge is properly aligned and fully seated, Figure 6.

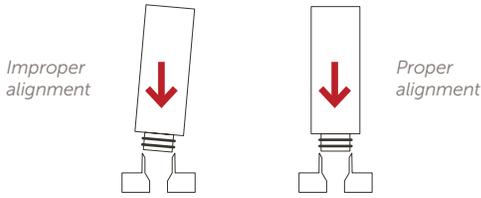


Figure 6.

STEP 3. FITTING INSPECTION

1. Verify the cartridge is fully inserted.
Refer to Figure 7 and ensure the cartridge is sitting properly on top of the cartridge slot.

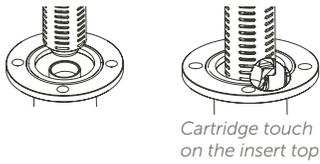


Figure 7.

2. If the cartridge is not fully inserted, the top housing flange will leave a gap between it and the bottom housing flange. In this case, return to Step 2. Cartridge Assembly and press the cartridge deeper until it is fully inserted, Figure 8.

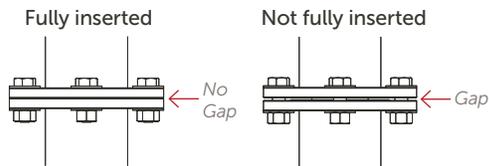


Figure 8.

STEP 4. FINAL ASSEMBLY

1. Close the housing top, tighten the flange bolts, nuts, and washers with appropriately sized wrench and recommended torque (refer to Table 1), Figure 9.

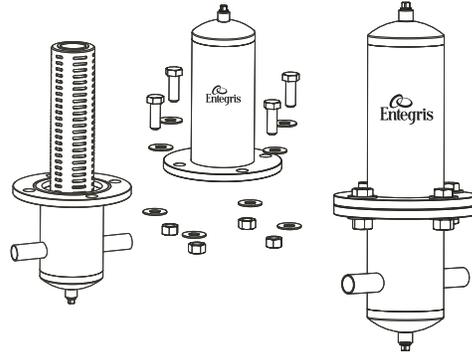


Figure 9.

2. Follow the bolting pattern shown in Figure 10.

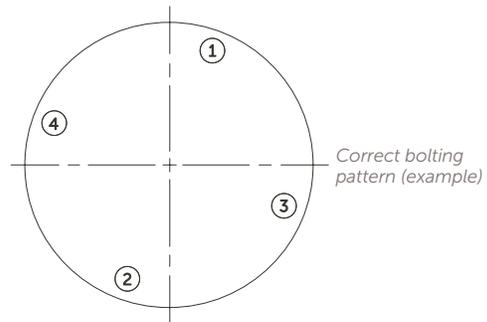


Figure 10.

NOTE: Metal housing and gas cartridges are shipped separately unless specified.

2.0 MULTI-ROUND CARTRIDGE HOUSING

STEP 1. PREPARATION

Housing inlet and outlet have been capped to prevent contamination.

1. Clean the inside and outside housing surfaces with wet IPA wipes (recommended IPA >95%), Figure 11.

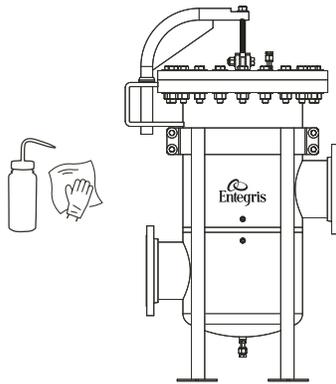


Figure 11.

STEP 2. CARTRIDGE ASSEMBLY

1. Remove the bolts/studs, nuts, and washers from top of housing flange with appropriately sized wrench, Figure 12.

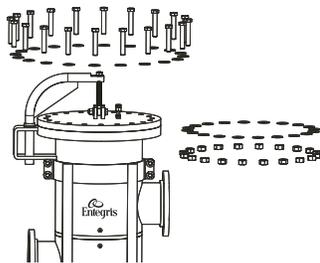


Figure 12.

2. Turn the bolt on the davit arm clockwise to lift the housing top flange, Figure 13.

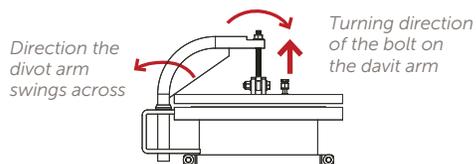


Figure 13.

3. Carefully swing the davit arm to move the housing top flange to the side.
4. Ensure the housing O-ring is seated properly on the cartridge O-ring grooves, Figure 14.

NOTE: O-ring will cause leakage.



Figure 14.

5. Remove the wing nuts and washers from the cartridge hold-down plate, Figure 15.

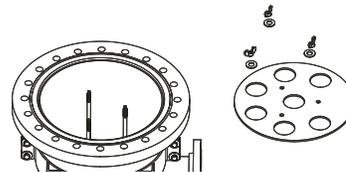


Figure 15.

6. Carefully remove the cartridge packing.
7. Wet the O-rings with DI water or IPA to ease insertion of the cartridges into the housing cartridge slot, Figure 16.

CAUTION! Ensure cartridge open end has two O-ring seals (Savana UP Mini filter) or single O-ring seal (Savana UP filter)



Figure 16.

- Wiggle and press the cartridge with a little pressure because the cartridge O-ring is designed to fit tightly to ensure a better seal, Figure 17.

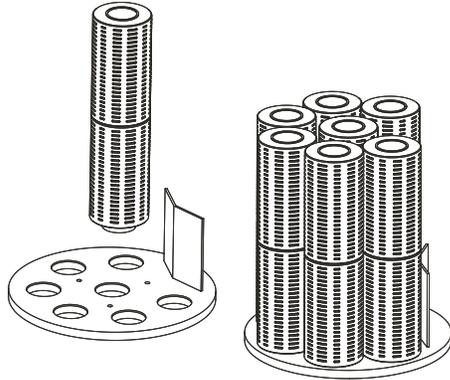


Figure 17.

CAUTION! Ensure the cartridges are properly aligned and fully seated. The upper end of each cartridge has a raised boss that must fit in the associated hole in the hold-down plate, Figure 18.

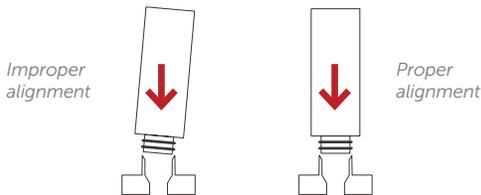


Figure 18.

- Tighten the wing nuts and washers on the cartridge hold-down plate, Figure 19.

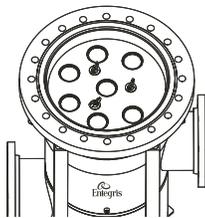


Figure 19.

STEP 3. FITTING INSPECTION

- Verify the cartridges are fully inserted.
- The cartridge hold-down plate will be tilted if any cartridge is not fully inserted, causing wing nut not to be flush with the hold-down plate surface, Figure 20. In this case, return to Step 2. Cartridge Assembly and press the cartridge deeper until it is fully inserted.

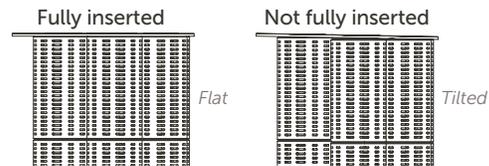


Figure 20.

STEP 4. FINAL ASSEMBLY

- Push the arm to move the housing top flange back to the center, Figure 21.

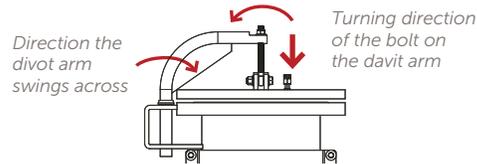
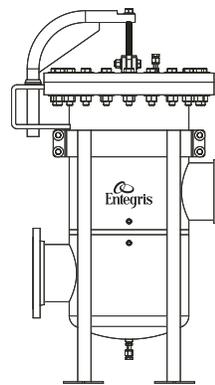


Figure 21.



- Turn the bolt on the davit arm counterclockwise to lower the housing flange.
- Tighten the flange bolts, nuts, and washers with appropriately sized wrench and recommended torque (refer to Table 1).

4. Follow the bolting pattern as shown in Figure 22.

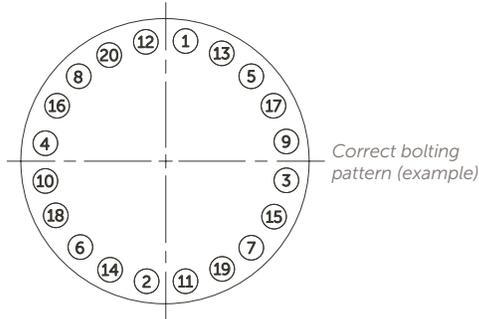


Figure 22.

NOTE: Metal housing and gas cartridges are shipped separately unless specified.

Recommended Torque for Lubricated Threads

BOLT SIZE	BASIC MATERIAL	SPECIFICATIONS	NM	FT-LBS
M16	SS 304	A2-70	135	100
M20	SS 304	A2-70	187	138
M22	SS 304	A2-70	360	266
M24	SS 304	A2-70	457	337
M27	SS 304	A2-70	670	494

Table 1.

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