



## Installation and Maintenance Instructions OPW Multi-Port Spill Containment Manholes

Please read these warnings and assembly instructions completely and carefully before starting. Failure to do so may cause product failure, or result in environmental contamination due to liquid leakage into the soil, creating hazardous spill conditions.

**IMPORTANT:** The OPW Spill Container is pre-assembled for your convenience and ease of installation. Check to make sure the unit is intact and undamaged and all parts have been supplied. Never substitute parts for those supplied. Doing so may cause product failure.

**WARNING-DANGER:** Using electrically operated equipment near gasoline or gasoline vapors may result in a fire or explosion, causing personal injury and property damage. Be sure that the working area is free from such hazards, and always use proper precautions.

**NOTE:** At all times when product is in the storage tank keep the riser pipe capped, so the vapors cannot escape into the environment.

**Notice:** OPW products must be used in compliance with applicable federal, state, and local laws and regulations. Product selection should be based on physical specifications and limitations and compatibility with the environment and material to be handled. All illustrations and specifications in this literature are based on the latest production information available at the time of publication. Prices, materials, and specification are subject to change at any time, and models may be discontinued at any time, in either case, without notice or obligation.

**OPW Standard Product Warranty Tag:** Notice: FlexWorks by OPW, Inc., VAPORSAVER™ and all other OPW products must be used in compliance with all applicable federal, state, provincial and local laws, rules and regulations. Product selection is the sole responsibility of the customer and/or its agents and must be based on physical specifications and limitations, compatibility with the environment and material to be handled. All illustrations and specifications in this literature are based on the latest production information available at the time of publication. Prices, materials and specifications are subject to change at any time, and models may be discontinued at any time, in either case, without notice or obligation.

OPW warrants solely to its customer (the initial purchaser and any subsequent purchasers within the warranty period) that the following products sold by OPW will be free from defects in materials and workmanship under normal use and conditions for the periods indicated:

PRODUCT	WARRANTY PERIOD
FlexWorks Primary Pipe	10 years from date of manufacture
All Products and replacement parts installed in the State of California Certified to California CP-201 and/or CP-206 Standards*	1 year from date of installation (proof of purchase from certified contractors/technicians required) OPW warrants ongoing compliance with the standards and specifications for the duration of the warranty period required by the State of California; this limited warranty is under the condition the equipment was installed and maintained by trained and certified contractors/technicians unless noted in Installation Manual.
All other Products and replacement parts	1 year from date of manufacture**
*Products certified to California CP-201 and/or CP-206 Standards have been factory tested and met all applicable performance standards and specifications and will have an OPW registration card enclosed/attached to the product.	

OPW's exclusive obligation under this limited warranty is, at its option, to repair, replace or issue credit (in an amount not to exceed the list price for the product) for future orders for any product that may prove defective within the applicable warranty period. (Parts repaired or replaced under warranty are subject to prorated warranty coverage for remainder of the original warranty period). Complete and proper warranty claim documentation and proof of purchase required. All warranty claims must be made in writing and delivered during the applicable warranty period to OPW at OPW 9393 Princeton-Glendale Road Hamilton, Ohio, USA 45011, Attention: Customer Service Manager. No products may be returned to OPW without its prior written authority.

This limited warranty shall not apply to any FlexWorks or VAPORSAVER™ product unless it is installed by an OPW attested installer and all required site and warranty registration forms are completed and received by OPW within 60 days of installation. This limited warranty also shall not apply to any FlexWorks, VAPORSAVER™

or other OPW product: unless all piping connections are installed with a nationally-recognized or state-approved leak detection device in each tank and dispenser sump (which are not for storage and from which all discharge hydrocarbons must be removed, and the systems completely cleaned, within 24 hours); unless testable sumps utilize FlexWorks pipe and access fittings; unless a sump inspection log or an EPA recommended/required checklist is maintained and the results are furnished to OPW upon request; and unless OPW is notified within 24 hours of any known or suspected product failure and is provided with unrestricted access to the product and the site. This limited warranty also shall not apply to any product which has been altered in any way, which has been repaired by anyone other than a service representative authorized by OPW, or when failure or defect is due to: improper installation or maintenance (including, without limitation, failure to follow FlexWorks Quick Reference Manual Installation Guide and all product warning labels); abuse or misuse; violation of health or safety requirements; use of another manufacturer's, or otherwise unauthorized, substances or components; soil or other surface or subsurface conditions; or fire, flood, storm, lightning, earthquake, accident or any other conditions, events or circumstances beyond OPW's control.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXCLUDED.

OPW shall have no other liability whatsoever, whether based on breach of contract, negligence, gross negligence, strict liability or any other claim, including, without limitation, for special, incidental, consequential or exemplary damages or for the cost of labor, freight, excavation, clean-up, downtime, removal, reinstallation, loss of profit, or any other cost or charges. No person or entity is authorized to assume on behalf of OPW any liability beyond this limited warranty. This limited warranty is not assignable.

**\*\* Date of manufacture on this product is located on the ID Tag on the mounting ring of the bucket.**

In California it is prohibited to use spill container drain valves on spill containers that are exclusively used for vapor return risers. Install only 1-2100 Series Thread-On spill container models equipped with drain plug P/N 1DP-2100.

### Multi-Port Performance Specifications:

This Spill Container drain valve has been manufactured and tested to the following California specifications:

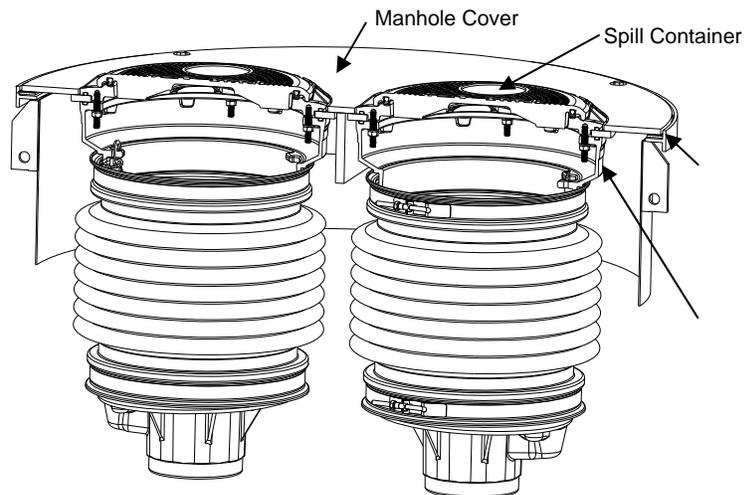
Leak Rate at 0.17 CFH @ 2.0" W.C.

### Torque Specification:

**Spill Container 4" NPT**, 125 ft-lbs minimum to 250 ft-lbs maximum.

**4" Nipple, 4" NPT**, 125 ft-lbs minimum to 250 ft-lbs maximum.

**NOTE:** All 4" NPT threads are to be torqued progressively lower from the tank up.



**Drain Valve Clamps**, 5/16-18 UN thread, 11.5 ft-lbs minimum to 13.5 ft-lbs maximum.

**Mounting Ring Stud and Cover Bolts**, 5/16-18 UN thread, 15 ft-lbs minimum to 20 ft-lbs maximum.

**Roto-Lock Bolt**, 1/2-13 UN thread, 40 ft-lbs minimum to 50 ft-lbs maximum.

### OPW MULTI-PORT SPILL CONTAINER MANHOLE INSTALLATION INSTRUCTIONS

1. Mark off finish grade. (See Figure 1).

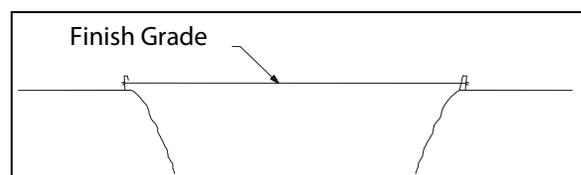


Figure 1

Set multi-port manhole assembly (skirt, ring, and cover) to 1 inch minimum (for slope) above the final grade position. The weight of the multi-port assembly must be supported when set into place, this may require a partial backfill and support structure. (See Figure 2.)

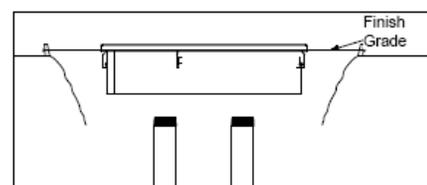
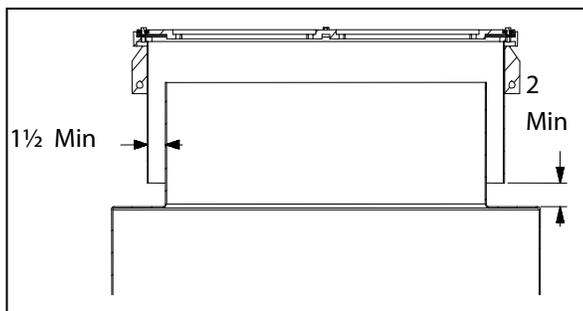


Figure 2

**Note: It is strongly recommended that OPW covers be installed with the following minimum clearances. Sheet metal skirts should have adequate clearance between the tank sump riser side-wall and or the sump top hat. A minimum of one and a half inches clearance on all sides is recommended between the OPW skirt and the tank sump wall or the sump top hat wall. A minimum of two inches clearance is recommended between the bottom of the OPW skirt and the horizontal surface of the tank sump or sump top hat. These clearances are recommended to allow adequate water migration away from the sumps. Great care should be used to maintain the recommended clearances when setting the rings and pouring the concrete. (See Figure 3.)**

- Remove the cover and measure the distance from the top of the tanks to the final grade.



**Figure 3**

- Cut the riser(s) from the underground tank so that both the fill and vapor risers are set below the final grade. Use the dimensions below:

Spill Container	Inches below top of multiport (L)
5 Gal. Cast Iron Base	18-1/2"
5 Gal. Composite Base	19-5/8"
7.5 Gal. Cast Iron Base	22-1/2"
7.5 Gal. Composite Base	23-5/8"

**NOTE: Add an extra 3-1/4" when using an OPW FSA-400 and add an extra 1 3/4" when using the FSA-400S Face Seal Adaptor. (See Figure 2.) (Offset add extra 6").**

- Deburr and thoroughly clean riser pipe(s).
- Apply pipe dope to riser(s). The pipe dope is to be a non-hardening, gasoline resistant, pipe thread seal compound.
- Install OPW FSA-400 Face Seal Adapter onto riser. (Recommend Torque, 4" NPT, 125 ft.-lbs. min. to 250 ft.-lbs. max.). Apply pipe dope to FSA-400.

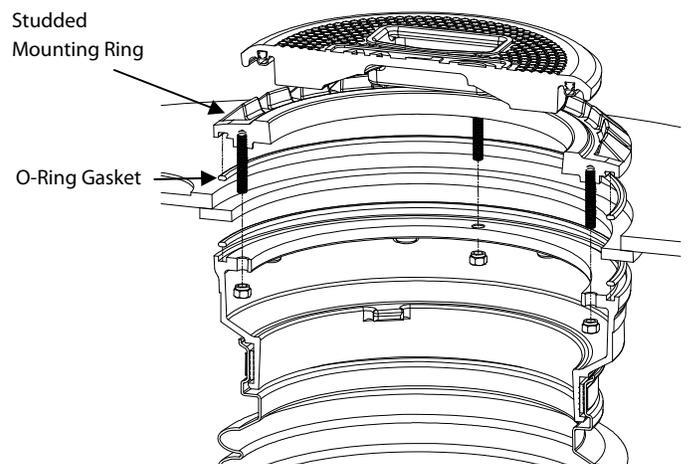
The pipe dope is to be a non-hardening, gasoline resistant, pipe thread seal compound. This is optional for spill containers that are on the vapor lines.

- Thread on spill containers
- Using the 61SA-TOOL, tighten the spill container (s) onto the riser(s) with a minimum torque of 125 ft.-lbs. and a maximum torque of 250 ft.-lbs.

**NOTE: Do NOT attempt to completely tighten the containment bucket by using the containment bucket mounting ring at the top of the bucket.**

**NOTE: Ground riser pipe(s) to nearest grounding rod.**

- Inspect the containment bucket O-Rings and Mounting Ring O-Rings for damage. Replace the gasket(s) if they are damaged.
- Install Optional Multi-Port Water Shroud (MPWS). See separate instructions.
- Remove Spill Container Cover and Spill Container Mounting ring from Manhole Cover.
- Replace the multi-port cover, centering the riser (s) as close as possible in the containment openings. Be very careful not to move or damage the O-Rings.
- Remove lock washers and nuts from the studded mounting ring.
- Place the mounting ring over the containment buckets and rotate the mounting ring until the studs are aligned with the bucket ring holes. (See Figure 4.)



**Figure 4**

- Thread nut and lock washer onto studded mounting ring. Tighten the mounting ring retaining bolts until the containment bucket o-rings

make contact with the multi-port cover. Then, in a crossing pattern, torque the bolts down between 15 to 20 ft.-lbs. 6 Point Ratcheting box wrench is recommended. (See Figure 5.)

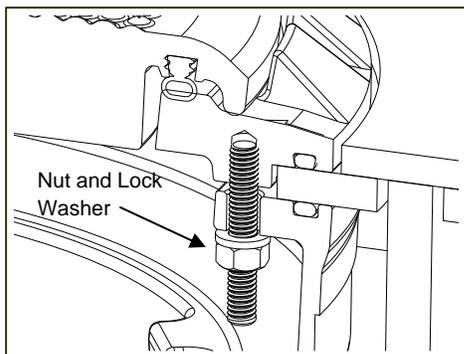


Figure 5

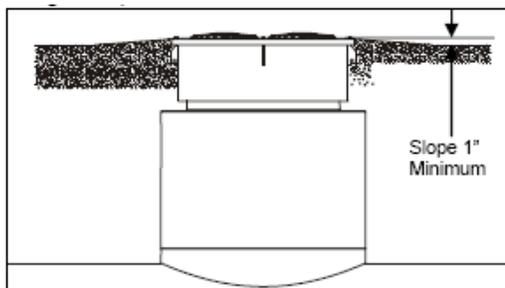


Figure 7

16. Install the spill bucket covers.
  17. (Optional): Install the product identification disc on the spill bucket cover and multi-port cover in the I.D. disc recess.
  18. Cover the multi-port perimeter ring and cover with plastic to prevent concrete from settling in the drainage areas.
  19. It is required that the perimeter ring and skirt assembly, and the multi-port cover be set as an assembled unit, with the bolts engaged. Failure to engage the bolts may result in the distortion of the ring and improper fit of the ring to cover after the concrete is poured. Mounting ring bolts should be torqued to 15 ft.-lbs minimum to 20 ft.-lbs maximum. Roto-lock bolts should be torqued to 40 ft.-lbs minimum to 50 ft.-lbs maximum.
  20. When pouring the concrete, hand shovel or trowel the concrete around the multi-port assembly to prevent the unit from moving or shifting, which can cause alignment problems and future maintenance problems .
- NOTE: Do not stand on the multi-port before the concrete has set up.**
21. It is required that the paved contours around POMEKO covers be adequately sloped to direct water flow away from the cover, and directing water runoff from adjacent areas away from POMEKO covers. Minimum slope is 1" from grade to the top of the ring of the manhole. Note that this slope must be taken into consideration when cutting riser lengths in earlier steps. (See Figure 7.)

22. Remove the plastic after the concrete has set up. In areas where excessive surface water may be seen, it is recommended to caulk joint around perimeter of cover and perimeter ring with SL1100 sealant.
23. After installation is complete, water test the multi-port fixture. The recommended water test procedures include:
  - a. Spraying water on cover(s) for 5 to 10 minutes, using a commonly available watering device such as a lawn sprinkler.
  - b. Standing water test, not to exceed 1/2" in water depth for a period of 5 to 10 minutes.

If water is found on the interior of the spill container or on the skirt (which can be checked through the observation port) that is not due to condensation; determine the root cause of the leak, repair the seal, and retest the unit.

**NOTE:** The containment bucket consists of three components cast iron ring, bellows, and bucket bottom. These parts are held together with stainless steel retaining bands.

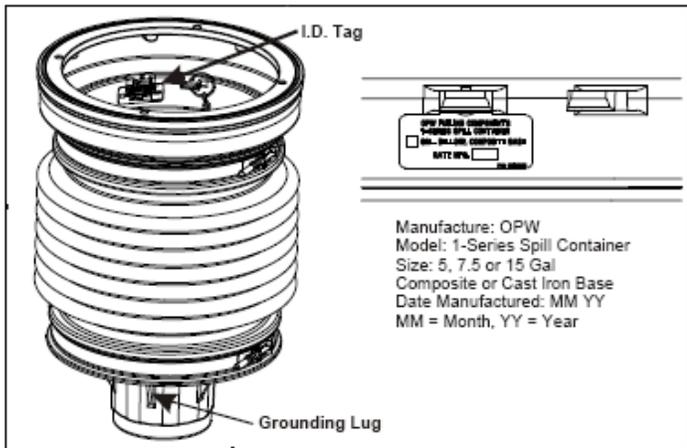
DO NOT loosen the stainless steel retaining bands securing the bellows to the containment bucket top ring or the containment bucket bottom. Loosening the retaining bands voids any and all warranties on this product.

**WARNING: If the cover is removed, for any reason, follow the Service and Maintenance Instruction (Part Number 202490) as noted. Always inspect and replace damaged O-rings and install new O-rings. Never reuse damaged O-rings as it may result in an improper seal.**

#### Operation and Maintenance:

Annually: Inspect and clean the interior of the spill container and drain valve screen. Remove accumulated dirt and grit. If the drain valve screen becomes clogged, remove the valve, soak in water and use high-pressure air to clean. Reinstall the drain valve to

its proper position and test the valve per the appropriate TP201-1C Test Procedure. If problems persist, replace the drain valve with P/N 1DK-2100-EVR (specified torque 11.5 ft-lbs min to 13.5 ft-lbs max, 5/16-18 UN thread). The sealable cover (1SC) adjustment nut is set at the factory, but due to environmental conditions it may be necessary to adjust it to either improve sealing or ease cover removal.



### Testing Spill Containers

Use TP201-1C or TP201-1D Test Procedures. Their Test Procedures will check the seals between the drain valve, nipple and rotatable adapter. To test the spill containers base and bellows fill the container with water. A drop in the water level of 1/16" or greater after one hour means that a leak exists. To determine where the leak is, look for a steady stream of bubbles coming from one of the joints or water leaking on the outside of the bucket. NOTE: Do not drain the water into the UST after the test is complete. Water must be disposed of per local requirements for hazardous waste. If the leak cannot be corrected the spill container should be replaced with another.

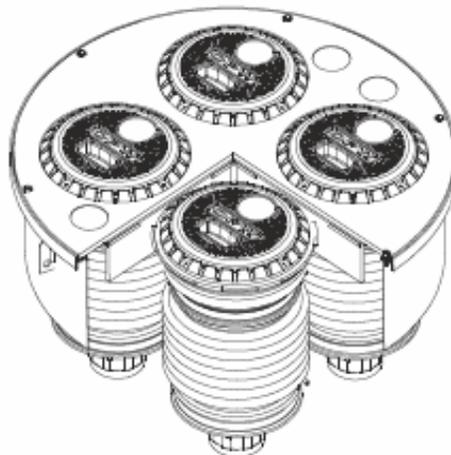
OPW recommends periodic inspection of covers and seals as a part of the regularly scheduled maintenance program. If any of the seals are damage they should be replace. Only qualified, competent, well-

trained technicians should perform maintenance.

**NOTE:** Common sense and good judgment should always be exercised. The contractor's understanding of all related site conditions prior to starting the project is essential. If the contractor does not have a clear understanding of the required work and site conditions, the contractor is advised to seek clarification prior to starting any portion of the project.

**IMPORTANT: Leave these instructions with the Station Operator as per CARB Requirements.**

### Alternative Construction





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