



Franklin Electric
FUELING SYSTEMS

VAPOR SHEAR VALVE

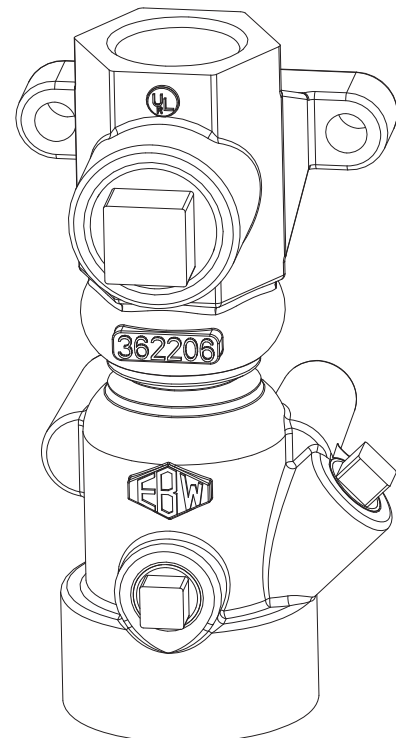
INSTALL GUIDE

F-6286 r4

MODEL NUMBER

36220613

36220631



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CONVENTIONS USED IN THIS DOCUMENT

This document includes safety precautions and other important information presented in the following format:

NOTE: This provides helpful supplementary information.

IMPORTANT: This provides important supplementary information and instructions to avoid damaging hardware or a potential hazard.

▲ CAUTION: This indicates a potentially hazardous situation that could result in minor or moderate injury if not avoided. This may also be used to alert against unsafe practices.

▲ WARNING: This indicates a potentially hazardous situation that could result in severe injury or death if not avoided.

▲ DANGER: This indicates an imminently hazardous situation that will result in death if not avoided.

OPERATING PRECAUTIONS

Franklin Electric equipment is designed to be installed in areas where volatile liquids such as gasoline and diesel fuel are present. Working in such a hazardous environment presents a risk of severe injury or death if you do not follow standard industry practices and the instructions in this document. Before working with or installing the equipment covered in this document, or any related equipment, read this entire document, particularly the following precautions:

IMPORTANT: To help prevent spillage from an underground storage tank, make sure the delivery equipment is well-maintained, that there is a proper connection, and that the fill adaptor is tight. Delivery personnel should inspect delivery elbows and hoses for damage and missing parts.

▲ CAUTION: Use only original Franklin Electric parts. Substituting non-Franklin Electric parts could cause the device to fail, which could create a hazardous condition and/or harm the environment.

▲ WARNING: Follow all codes that govern the installation and service of this product and the entire system. Always lock out and tag electrical circuit breakers while installing or servicing this equipment and related equipment. A potentially lethal electrical shock hazard and the possibility of an explosion or fire from a spark can result if the electrical circuit breakers are accidentally turned on while installing or servicing this product. Refer to this document (and documentation for related equipment) for complete installation and safety information.

▲ WARNING: Before entering a containment sump, check for the presence of hydrocarbon vapors. Inhaling these vapors may cause dizziness / unconsciousness, and if ignited, can explode causing serious injury or death. Containment sumps are designed to trap hazardous liquid spills and prevent environmental contamination, so they can accumulate dangerous amounts of hydrocarbon vapors. Check the atmosphere in the sump regularly while work is in process. If vapors reach unsafe levels, exit the sump and ventilate it with fresh air before resuming work. Always have another person standing by for assistance.

▲ WARNING: Follow all federal, state, and local laws governing the installation of this product and its associated systems. When no other regulations apply, follow NFPA codes 30, 30A, and 70 from the National Fire Protection Association. Failure to follow these codes could result in severe injury, death, serious property damage, and/or environmental contamination.

▲ WARNING: Always secure the work area from moving vehicles. The equipment in this document is usually mounted underground, so reduced visibility puts service personnel working on it in danger from moving vehicles that enter the work area. To help prevent this safety hazard, secure the area by using a service truck or other vehicle to block access to the work area.

▲ DANGER: Inspect the installation location for potential ignition sources such as flames, sparks, radio waves, ionizing radiation, and ultrasound sonic waves. If any potential ignition sources are identified, implement proper safety measures.

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1 Introduction

The EBW® vapor shear valve is *designed for use as an emergency breakaway on Stage II vapor recovery lines in fuel dispensers*. The double poppet design allows spring-loaded poppets inside the valve to seal vapors within both the dispenser riser and vapor piping in the event of dispenser displacement, providing maximum environmental protection.

1.1 Documentation

- This document is intended for qualified and certified installation persons.
- Instructions of this document are in English. All other language versions are translations of this original document.
- Illustrations in this document show a typical setup and are for instruction and description purposes only.
- Information given in this document is given as a guide only. It is the installer's responsibility to ensure that correct and safe procedures are followed at all times.
- This document and related documents are available from Franklin Electric at www.franklinfueling.com.

1.1.1 Symbol Legend



Wear Protective Headwear



Wear Eye Protection



Wear Protective Clothing



Wear High-Visibility Clothing



Wear Protective Gloves



Wear Safety Footwear



Refer to instruction guide



Ventilate Before & During Entering



Ensure Continuous Ventilation



Connect an earth terminal to the ground



Lockout/Tagout Electrical Equipment



Disconnect main plug from electrical outlet



Disconnect before carrying out maintenance or repair



General Warning



Warning: Electricity



Warning: Flammable Material



No open flame; Fire, open ignition source and smoking prohibited

2 Safety/Security

2.1 General Safety Information

- Only perform procedures in this document that you are qualified and certified to perform.
- Personnel working on or with energized equipment must be authorized by relevant regulatory bodies to carry out such work and must have the appropriate training. Check with your employer and relevant regulatory body's rules for working with energized equipment.
- Obey all local laws, rules, regulations, and instructions in this document. In case of inconsistency or contradiction between information contained in this document and any laws, rules and regulations, obey the stricter of the two.
- Keep unqualified personnel at a safe distance during installation.
- If it is necessary to remove safety/security devices, immediately reinstall the safety/security devices after completing the work.

2.2 Hazard Assessment

Prior to beginning work and prior to recommencing work after leaving and returning to the worksite, a worksite, *pre-job hazard assessment* must be performed to identify safety and environmental needs. At a minimum, this hazard assessment should:

- Identify possible hazards and risks.
- Identify the safety needs of the job.
- Identify the correct procedures, practices and equipment.
- Eliminate unsafe conditions and actions from the worksite.
- Identify the need for personal protective equipment.
- Inspect equipment before use.
- Confirm sheaths of all cables are secured and undamaged.
- Confirm plugs and connectors are properly connected and serviceable.
- Perform ongoing risk assessment during the project.

2.3 Required Personal Protective Equipment (PPEs)

These PPEs are required during all phases of installation.



Wear Protective Clothing



Wear Eye Protection



Wear High-Visibility Clothing



Wear Protective Gloves



Wear Protective Headwear



Wear Safety Footwear

3 Pre-Installation Overview

3.1 Pre-Installation Inspection

NOTE: The valve should come with a 1" plug in the side inlet port and .375" plugs in the pressure test ports.

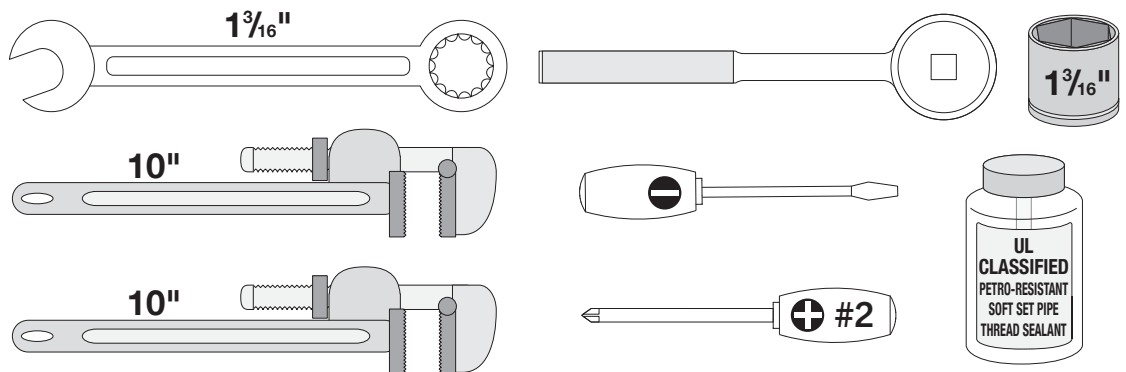
Upon Receipt of Item(s)

- Verify all items are in accordance with the order.
- Check all items for damage.
- If any item shows damage or is not in accordance with the order, inform Franklin Electric *immediately*.
- Remove the packaging material.
 - Follow all local laws, rules and regulations regarding disposal of discarded parts, packaging material or items and any subsequent components.

3.2 Required Tools

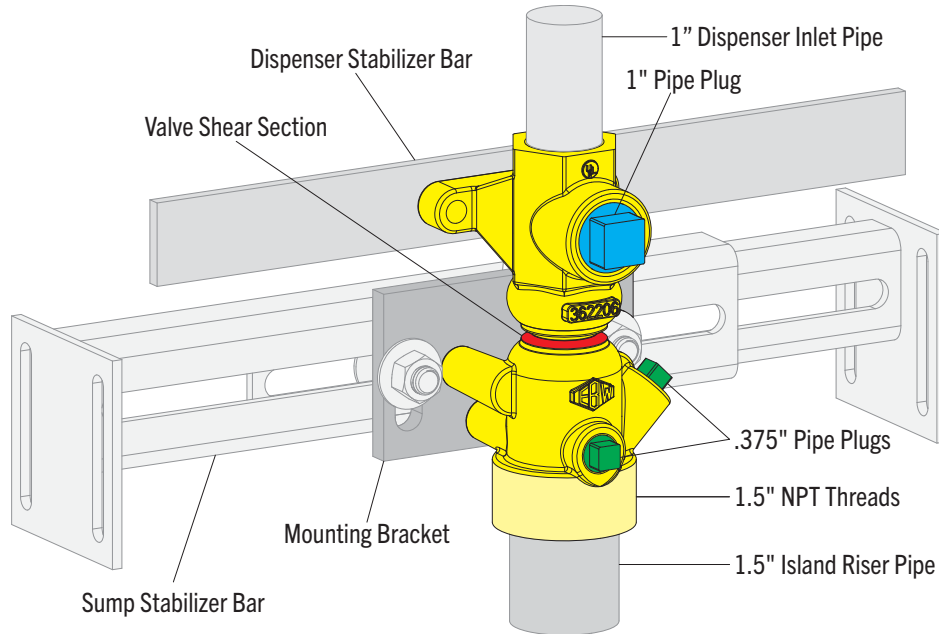
▲ WARNING: All tools used during all installation, inspection, testing, and maintenance work *must be certified non-sparking type*. DO NOT use power tools or any equipment that might create a spark (or other ignition source) in the vicinity of the dispenser sump or anywhere gasoline, gasoline vapor, diesel fuel, or any other combustible substances might be present.

NOTE: Piper Cutter/Saw & Pipe Threader (optional)*



4 Technical Overview

4.1 Component Identification



4.2 Torque Value Specifications

⚠ CAUTION: Do not tighten beyond torque limits. Overtightening can crack the valve body and allow vapor to leak.

Target Torque Values

Tighten threads to the following torque specifications:

- 1.5" outlet: 90 to 135 ft-lb
- 1" inlet: 75 to 100 ft-lb

Chain/Torque Wrench Offset Values

To tighten to these torque values, an EBW 901-101-01 chain wrench and a .75" drive torque wrench with at least a 125 ft-lb rating can be used. Due to the chain and torque wrench offset, the actual torque wrench readings for the above limits are:

- 1.5" outlet: 75 to 115 ft-lb
- 1" inlet: 60 to 85 ft-lb

Pipe Plug Torque Values

Apply thread sealing compound to the pipe plugs and torque to the following values:

- .375" plug: 25 to 35 ft-lb
- 1" plug: 25 to 35 ft-lb

5 Installation



⚠ WARNING:

- Make sure the valve is grounded to earth through either the inlet or outlet pipe.
- The valve body must be rigidly anchored to a structural member within the island to ensure that the shear section breaks in the event of a severe impact. *Failure to provide a strong anchor may result in the valve not closing or, in the event of severe impact, the inlet pipe could break resulting in a hazardous condition.*
- Only apply a UL classified, gasoline-resistant, soft-set pipe compound to the threads of the inlet and outlet pipe before attaching to the valve. *DO NOT use PTFE pipe tape.* PTFE tape may allow excess torque to be applied during installation, thereby causing the valve to crack, or if there is an impact to the dispenser, this tape can prevent the valve from sealing properly.
- Only use mating parts (inlet/outlet pipe; fittings), conforming to ANSI/ASME B1.20.1 (NPT) or ISO 7-1 (BSPT). Failure to do so may result in a leaky connection and/or damage to the valve due to undersized/oversized mating parts.

IMPORTANT:

- Read, understand, and follow information in § 2, § 3 and § 4 before beginning any process in this section.
- The outlet end of the valve must be rigidly attached to the sump stabilizer bar. Three bosses, with $\frac{3}{8}$ -16 UNC threads, are provided to attach to the bracket of the appropriate stabilizer bar kit.
- Make sure to support the shear valve during installation to prevent forces from being transmitted to the shear section, which may damage the valve and prevent proper operation.

NOTE:

- An optional sump installation hardware kit is available.
- The riser pipe going to the inlet end of the valve must be cut so that the shear section of the valve is level with the top of the island $\pm \frac{1}{2}$ ". *If the riser pipe must be cut (and threaded), make sure to have the optional tools listed in § 3.3, and carefully follow the warning below:*

⚠ WARNING: To help prevent the possibility of serious injury or death, carefully follow the operation and safety information provided by the manufacturer of the pipe threader. Move the island riser pipe to an open, well-ventilated area. Make sure no gasoline, gasoline vapor, diesel fuel, or any other combustible substances are present. If there is any residue that may be combustible on the riser pipe, clean it thoroughly before cutting.

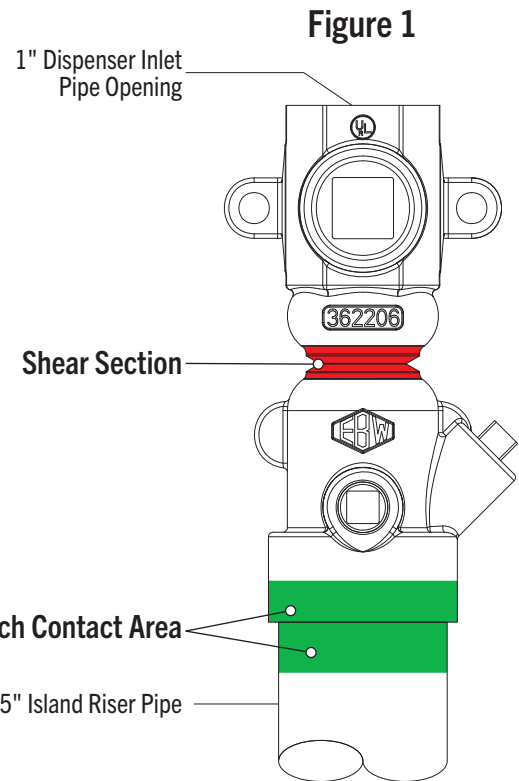
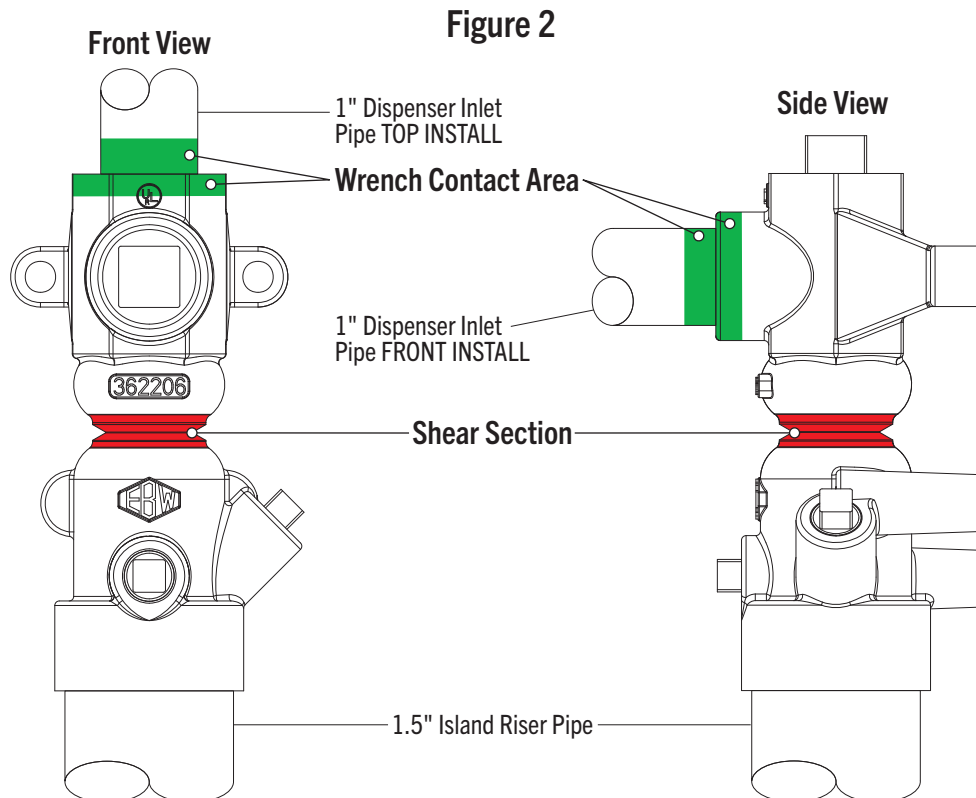
5.1 Instructions

IMPORTANT: Read and understand all information presented § 5.0.

1. Attach the mounting bracket to the valve with the provided mounting screws. *DO NOT attach the mounting bracket (with the valve) to the sump stabilizer bar.*
2. Apply sealing compound (see § 3.2 for sealant type) to the outlet pipe threads; then install the valve onto the outlet pipe *hand-tight*.
3. Tighten the valve with pipe wrenches at the locations shown (see Figure 1), to the recommended torque values (see § 4.2).

NOTE: The dispenser pipe may be connected to the top or side inlet port (see Figure 2). If using the side inlet port, remove the 1" plug, apply the sealing compound to the threads, and install the plug into the top inlet port.

IMPORTANT: The dispenser inlet end of the valve must be rigidly attached to the dispenser. Two cast-in clearance holes, for 3/8-16 UNC fasteners, are provided to attach to the dispenser stabilizer bar or the appropriate bracket for the dispenser.



4. Apply sealing compound (see § 3.2 for sealant type) to the inlet pipe threads; then thread the inlet pipe into the valve until it is hand-tight.
5. Tighten the dispenser inlet pipe with pipe wrenches at the locations shown in Figure 2, to the recommended torque values (see § 4.2).

IMPORTANT: Use one wrench to hold the valve in place (so that the valve is not twisted) while using the other pipe wrench to tighten the inlet pipe.

▲ WARNING:

- **DO NOT** use a wrench on the valve above the shear section.
 - **DO NOT** over-torque any of the connections, as this may damage the valve, resulting in improper operation.
 - Make sure not apply twisting or bending moments to the shear valve. *If tightening the fasteners causes any twisting or bending moments, adjust the position of the brackets on the stabilizer bars until you can tighten the mounting fasteners without causing any twisting or bending moments.*
6. Tighten the inlet and outlet mounting fasteners to the stabilizer bars.
 7. Upon completing the physical connections, perform a Pressure Decay Test to make sure there are no leaks. *Make sure to restrict the pressure for the test to a maximum of 10" of water column.*

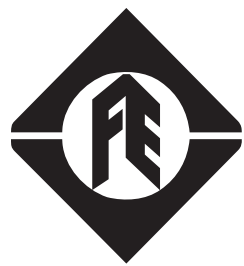
6 Appendix

6.1 Inspection

If there is an impact to a dispenser, check its vapor shear valve. If the valve is damaged, replace it.

6.2 Certification

Agency	Certification	Models Covered	Standards
UL	File: MH9253	36220613, 36220631	UL 842
ATEX	  0539 II 1G Ex H IIB T3 Ga DEMKO 17 ATEX 1914 EN 13617-3 Class 3	36220631	EN ISO 80079-36: 2016 EN ISO 80079-37: 2016 EN 13617-3: 2021 Class III



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