

# Model 301

## Excess Flow Check Valve



**METAL GOODS  
MANUFACTURING**

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## **WARNING**

Please read this manual carefully before installing and operating the valves:

1. The valves are only to be used at their intended pressure and temperature ratings. **DO NOT OPERATE VALVES BEYOND THE PARAMETERS SPECIFIED ON THE TAGS, NAMEPLATES, OR PRODUCT STENCILING.**
2. User is responsible for the installation of safety device on the line where the valves are to be installed to prevent over pressurization.
3. Industry standard safety practices must be strictly adhered to while working with the products. Only properly qualified and trained personnel should perform any task or work on this product. Users of these products should contact MGM with any questions prior to installation and operation of the products.
4. Extra caution should be exercised during start-up and shut-down.
5. Products should be inspected and maintained periodically to avoid damage or injury.

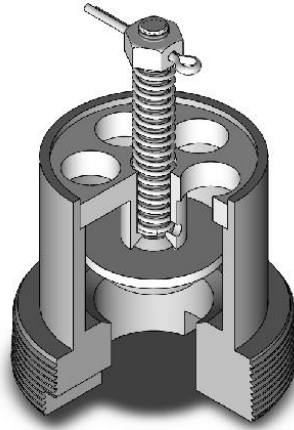


Figure 1: Valve Cutaway

## **FUNCTION**

MGM model 301 excess flow check valves (EFCVs) are spring loaded check valves. When properly sized and installed, they are designed to close and shut off flow of fluid from a source when the rated flow capacity is exceeded. Each valve is clearly marked with the shut off flow rating, which is stenciled onto the outside of the valve body. To operate properly, EFCVs must be correctly sized for each specific application. The valve must also be installed correctly to offer the proper protection.

Please follow the installation directions below to ensure valve is in the proper orientation. The valve will allow flow in both directions, but will only check in one direction so orientation is critical.

## **INSTALLATION**

1. The MGM model 301 excess flow check valve is designed for use in threaded tank nozzles. Male pipe threads are provided on the bottom end of the valve.
2. All installations must be in accordance with NFPA Standards 58 and 59 as well as state, provincial and local regulations.
3. It is recommended that the valve be located such that there are at least 10 diameters of unrestricted line downstream of valve (i.e. no elbows, pumps, etc.).
4. Each valve will have an arrow stenciled on the outside of the valve body. Proper orientation of the valve will have the **arrow pointing in the same direction as closing flow**
5. Please call MGM for technical support if you have any questions regarding installation.



### **OPERATION INSTRUCTIONS**

1. Excess flow check valves are normally open valves and should always remain open during normal operation. If the valve closes prematurely or chatters during operation, these are indications of a problem.
2. When opening a valve upstream of an excess flow valve, it should be done gradually to avoid a sudden surge of flow that may cause the excess flow valve to close unnecessarily.
3. An excess flow valve that is opening and closing in rapid succession (chattering) is a sign that it is being operated too close to the closing flow rate. The flow rate should be decreased to a level that stops the chattering. Allowing a valve to chatter for extended periods of time will cause valve failure.

### **MAINTENANCE INSTRUCTIONS**

- No special maintenance is required on MGM EFCVs
- Valves do not have an elastomeric seat or seal that require periodic maintenance
- Valve inspection should be performed during the same intervals as other valve maintenance programs
- Items to inspect:
  - Damaged Seat
  - Broken Spring
  - Broken Poppet
  - Excessive corrosion

If any part of the valve is questionable please contact MGM for repair or replacement recommendations. **DO NOT TAMPER WITH DEVICE.** Any and all maintenance shall be performed by MGM.

### **TESTING INSTRUCTIONS**

Testing the EFCV requires flow through the valve to exceed the designated closing flow rate of the valve. Example: if the valve is designed to close at 100 GPM, the system flow must exceed 100 GPM in order for the valve to close properly.