



**Michigan Department of Labor & Economic Growth  
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## **Bureau of Construction Codes Technical Bulletin**

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# **Discharge Valves for Sewage Pumps or Ejectors**

*“Providing for Michigan’s Safety in the Built Environment”*

Technical bulletins are issued to provide clarification on issues that arise regarding code administration and enforcement. The information provided in the bulletin is developed to promote uniform interpretation and enforcement of the state codes.

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## **DISCHARGE VALVES FOR SEWAGE PUMPS OR EJECTORS**

### **Issue**

The Michigan Residential Code requires a gate valve and a check valve on the discharge side of a pump or ejector. The Michigan Plumbing Code has an exception that does not require a gate valve with the check valve on the discharge side of a pump or ejector in one- and two-family dwellings.

### **Code**

The Michigan Plumbing Code states:

Section 712.2 Valves required. A check valve and full open valve, located on the discharge side of the check valve, shall be installed in the pump or ejector discharge piping between the pump or ejector and the gravity drainage system. Access shall be provided to such valves. Such valves will be located above the sump cover required by Section 712.1 or, where the discharge pipe from the ejector is below grade, the valves shall be accessibly located outside the sump below grade in an access pit with a removable access cover.

Exception: In one-and two-family dwellings, only a check valve shall be required, located on the discharge piping from the sewage pump or ejector.

The Michigan Residential Code states:

Section P3007.1 Sewage ejectors or sewage pumps.

A sewage ejector, sewage pump, or grinder pump receiving discharge from a water closet shall have minimum discharge velocity of 1.9 feet per second (0.579 m/s) throughout the discharge piping to the point of connection with a gravity building drain, gravity sewer or pressure sewer system. A non-grinding pump or ejector shall be capable of passing a 1.5-inch diameter (38 mm) solid ball, and the discharge piping shall be not less than 2 inches (51 mm) in diameter. The discharge piping of grinding pumps shall be not less than 1.25 inches (32 mm) in diameter. A check valve and a gate valve located on the discharge side of the check valve shall be installed in the pump or ejector discharge piping between the pump or ejector and the drainage system. Access shall be provided to such valves. Such valves shall be located above the sump cover or, when the discharge pipe from the ejector is below grade, the valves shall be accessibly located outside the sump below grade in an access pit with a removable access cover.

Exception:

Macerating toilet systems shall be permitted to have the discharge pipe sized in accordance with manufacturer's instruction, but not less than 0.75 inch (19.1 mm) in diameter.

## **Discussion**

The residential code is far more restrictive in requiring a gate valve for maintained work to be performed on the residential pump. The State of Michigan has not required the gate valves in former rules or past plumbing codes. This restriction is unwarranted due to a smaller pump or ejector waste volumes in the pipe residential piping.

## **Conclusion**

A gate valve will not be required for applications in the Michigan Residential Code on the discharge side of a pump or ejector which does include one- and two-family dwellings.

Questions regarding this technical bulletin may be directed to the Michigan Department of Labor & Economic Growth, Bureau of Construction Codes, Plumbing Division, P.O. Box 30254, Lansing, Michigan 48909, or by calling 517-241-9330.