

# HUGHES MODEL TMVE®

Hughes #1 Selling Emergency Valve Technology

### Product Description

Hughes's TMVE® is specifically engineered to provide safe, tepid water to emergency showers and eyewash systems requiring bypass rates of 7 – 22 GPM. Model TMVE® is engineered to respond instantaneously if the hot water supply is interrupted, by continually delivering cold water. If the cold water supply fails, the valve's positive hot water shut-off will provide protection from exposure to dangerously hot water.

### Capacities model TMVE®

Pressure Drop-PSI	5	10	20	30	45
GPM	9	13	17	25	27
LPM	34	49	64	94	102
Cold Bypass GPM	7	10	14	21	22
Cold Bypass LPM	26	37	53	79	83

### Product Performance

Hughes's Model TMVE® helps meet ANSI Z358.1-2009 and accurately controls outlet temperature in accordance with ASSE 1071 standards. Model TMVE® also exceeds ASSE 1071 performance standards upon cold water failure.

Valves that simply meet ASSE 1071 standards are allowed to pass up to 2 GPM of dangerously hot water when the cold water fails. Hughes's emergency valves exceed the ASSE 1071 standards with positive hot water shut-off upon cold water failure.

To ensure maximum safety, specify "ASSE 1071 with positive hot water shut-off."

### PERFORMANCE CONDITIONS

- Reduction to 2 GPM
- Hot and cold water pressure must be equal in no draw periods
- 20% intermittent drop in inlet supply pressure

temperature range 70° F to 90° F	set point 85° F
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Feature	Benefit
Patented Thermostat Protection	Provides comfortable water regardless of changes in incoming hot and cold water temperatures
Integral Cold Water Bypass	Reliable cold water delivery if hot water supply is interrupted
Positive Hot Water Shut-Off	Eliminates the delivery of scalding water to a drenching showers and/or eyewash units
Single Valve Technology	Design simplicity, space & cost efficiency
Rugged Construction: • Powerful Liquid Piston & Liner • Motor Stainless Steel • Tamper Resistant Control Adjustment	Ensures dependability and reliability
In-Line Maintenance	Repairs are fast and easy
Patented Design • 5,011,074 • 5,379,936	Proven, distinct performance advantages

- Applications
- Schools
  - Manufacturing/ Distribution Facilities
  - Chemical Plants
  - Laboratories
  - Waste Water Treatment Facilities
  - Anywhere emergency fixtures are required.

- Applicable Standards
- ASSE 1071
  - ANSI Z358.1-2009

Options  
Hughes's TMVE® emergency thermostatic controller is available in a variety of piping configurations and cabinet designs to meet your requirements.

**Typical Installation**

After installing the mixing valve, be sure to flush the system thoroughly. Typical Installation # 1 (Figure 1)  
When installed at or near the water heater and without a recirculation system.

**Install the valve as shown in Figure 1**

With the mixing valve positioned below the hot water tank or heater. If this is not possible, pipe in a heat trap as shown.

**Typical Installation #2 (Figure 2)**

When installed away from the water heater with recirculating pump on the hot water supply line.

**Design Consideration:**

When installed 20 feet or more from the water heater, it is important to recirculate the hot water supply to the mixing valve.

When installing the mixing valve as shown in Figure 2. The dead leg should be limited to 10 feet. In order to circulate stagnant water on a "dead leg" piping run, it may be necessary to install a timer and solenoid switch at the farthest point to flush the system on a weekly basis.

Figure 1

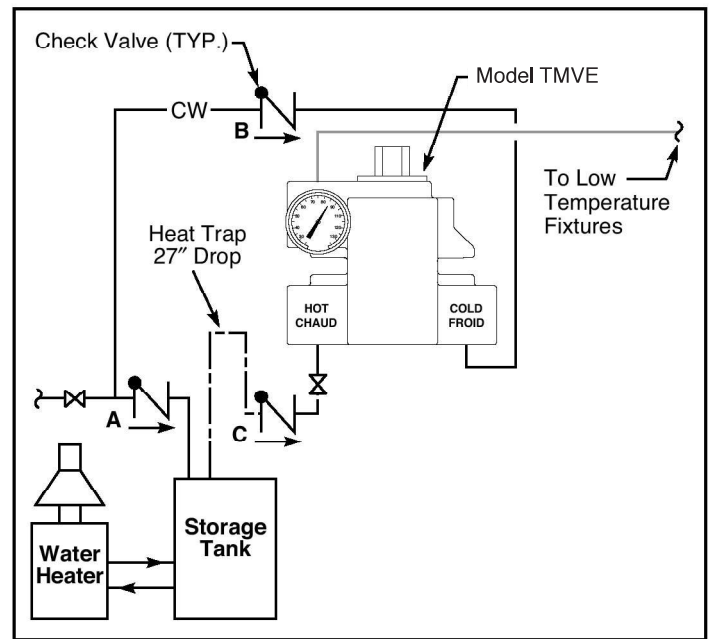
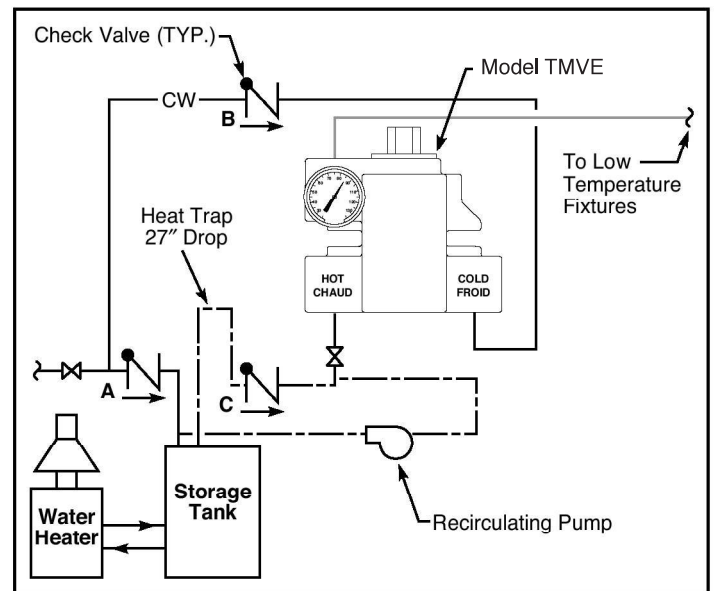


Figure 2



Caution: When maintaining and adjusting the mixing valve, all fixtures should be isolated from use. Hughes North America., Inc. recommends that you work safely at all times and in a manner consistent with the OSHA Lock/Tagout standard, 29 CFR 1910.147 and other applicable standards.

Note: Valve must be installed with check valves. If shut off valves are installed in the shower line for maintenance purposes, provisions shall be made to prevent unauthorized shut off.