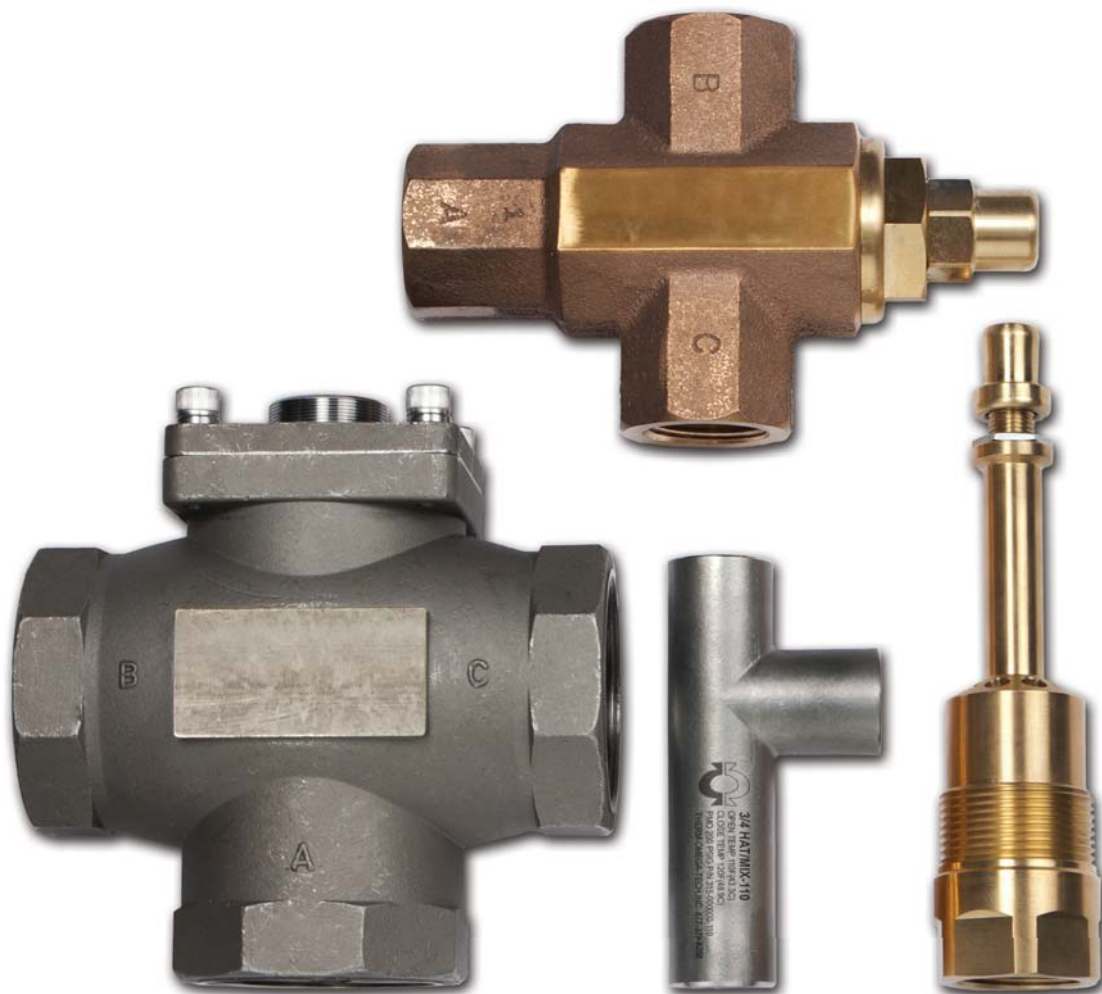




Drain Tempering and Plumbing



The Most Advanced, Reliable and Compact Self Contained Valves Available for Temperature Control, Freeze Protection, Steam Tracing and Conservation of Energy

www.ThermOmegaTech.com



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Many, if not all, municipalities have specified maximum temperature limits at which waste water can be sent to drain. Somewhere between 120°F to 140°F or usual maximum temperatures allowed. Please consult your local authority. Some of the applications where one might need to temper water are listed below.

BOILER BLOWDOWN

It is necessary to drain water on a regular basis from a point in the boiler where solids might collect to protect the boilers from scaling or corrosion as a result of these solids. This drain water will need to be tempered, by adding cold water, prior to sending to drain.

STEAM CONDENSATE

Though condensate is often recycled, there are many times it is sent directly to drain. Most times it will be necessary to temper this water.

Steam is one of the most widely used sources of energy for heating, running turbines, etc. Wherever there is steam there is condensate.

HOT WATER

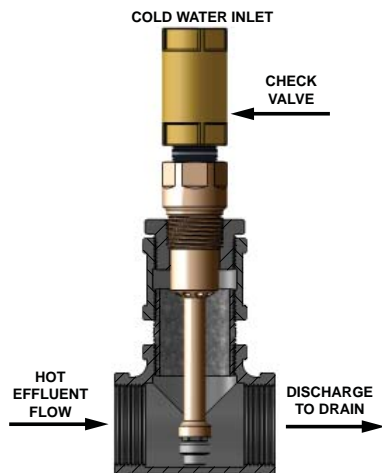
Water at elevated temperatures is used for numerous purposes. Some obvious uses are dishwashing, laundry, showers, etc. This water generally goes directly to drain or to a sump to then be pumped to drain.

Hospitals, hotels or any commercial building with a kitchen or laundry are facilities that are most likely to need control of draining fluids.

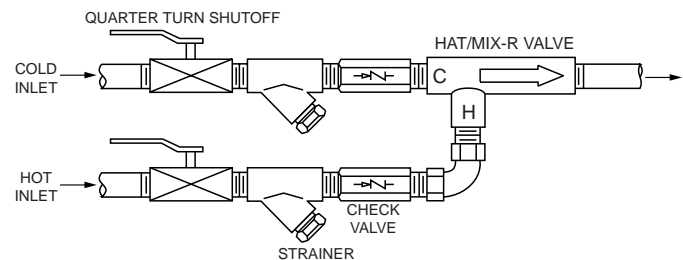
As with all Therm-Omega-Tech valves, the drain tempering valves are self operating. These valves utilize our Thermoloid actuators. Compared to other solutions on the market the TOT valves are extremely inexpensive solutions.

SAMPLE APPLICATIONS

DTV



HAT/MIX-R



Therm-Omega-Tech recommends these valves for your drain tempering and plumbing applications



1" and 3/4" DTV

DTV: This valve provides a convenient, economical, and easy to use method of tempering hot effluent flows. Since the **DTV** is open only when the effluent exceeds the specified setpoint temperature, it also conserves water by automatically turning off cold water when not needed. The hot effluent to be tempered is connected to the drain/sewer line using a suitably sized tee fitting and piping sized to handle the effluent flow rates. The hot effluent passes over the thermal actuator of the **DTV** valve and this actuator controls the cold water inlet port. If the hot effluent is above the specified setpoint, the **DTV** opens the cold water inlet port to allow injection of cold water. As the hot effluent cools, the **DTV** valve automatically modulates to reduce the cold water inlet flow. At about 10°F below the full open temperature, the cold water inlet is fully closed to conserve water.

HAT/MIX-R: The hot fluid connects to the side, pass through connection on the **HAT/MIX-R** valve. This connection is never regulated so it always remains open regardless of temperature or valve position.

The hot fluid flow then passes over the thermal actuator which controls the cold fluid inlet port for tempering. If the hot liquid temperature is above the valve setpoint, the cold fluid port is open. As the hot liquid cools, the valve automatically modulates to reduce the cold fluid inlet flow. If the hot fluid is below the specified temperature, the cold fluid inlet port is closed, since no additional cooling is required.

The **HAT/MIX-R** is most often used to control condensate discharge from steam traps, condensate return headers, boiler blowdown drain lines and for process discharge tempering



M/D: The Therm-Omega-Tech Model **M/D** (Mixing/Diverting) valve can also be used for higher flow drain tempering applications. These valves are available in sizes up to 2" with CV ratings up to 18. When ordering **M/D** valves for drain tempering, this must be clearly specified.

Therm-Omega-Tech, Inc. is an Industry Expert and Leading Manufacturer of Custom Thermostatic Valves, Actuators and Controls serving domestic and international markets for over 25 years.



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