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## MicroMix II Water Heater

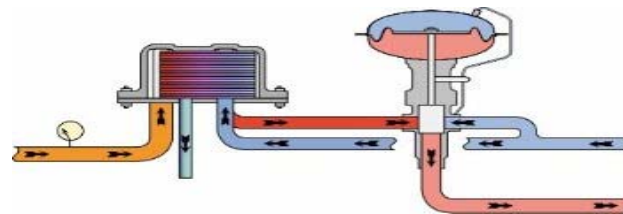
### Product overview



[Heliflow<sup>®</sup> heat exchangers](#)  
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[MicroMix<sup>®</sup> II water heaters](#)  
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Operation - Graham MicroMix II water heaters use steam to instantly produce up to 120 gallons per minute of hot water, yet have a footprint less than 6 square feet. These units combine our highly efficient, compact [Heliflow heat exchangers](#) with our special 3-way blending valves. Each MicroMix II is capable of supplying hot water at a set temperature at flow rates up to the maximum capacity of the unit.

The unit consists of two main components, the heat exchanger and the blending valve. The blending valve is a 3-way valve which mixes cold water with overheated water to provide the outlet temperature desired. A portion of the cold water is admitted to one port on the valve, while the remainder traveling through the heat exchanger is overheated, and then flows to the port of the valve. The valve plug is positioned to allow proper proportions of cold and overheated water to mix. Note that the steam never comes into contact with the water.



The blending valve incorporates a diaphragm that responds to changes in differential pressure. Above the diaphragm, supply water pressure is introduced via a sensing line. Below the diaphragm is the downstream water pressure. During no flow conditions, the pressure on both sides of the diaphragm is equal and the valve plug is in the closed position. As demand for hot water occurs, instantly the pressure differential forces the diaphragm, valve stem, and valve plug to travel into the open position. The greater the demand, the larger the pressure differential will be. The valve plug opens or closes corresponding to demand. Accuracy is +/-4 degrees F through all flows.

This "instantaneous" or "feedforward" method of control provides hot water immediately based on demand. Even when flow demands change rapidly, the outlet water temperature is maintained with no overshooting or undershooting the desired

temperature.

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