

Schweitzer's

PLUMBING CENTRE

Why is there a mixing valve above my hot water tank and what does it do?

The Ontario government has enacted and passed legislation requiring the maximum temperature of **hot water** to **faucets** and **fixtures** in a residential home to not exceed 49°C (120°F). The only exceptions are dishwashers and clothes washers. Because water at 66°C (150°F) can cause third degree burns to an adult in two seconds and water at 60°C (140°F) can cause burns in six seconds, provincial legislators are concerned about the many documented cases of children under the supervision of adults who have been scalded with hot water. These legislators decided that a device was required that would control and regulate the maximum temperature of hot water to the plumbing fixtures in your home and keep that temperature below 49°C (120°F). And so the **mixing valve** became law.

Risks of Improperly Heated Water

While a **lower water temperature** to the faucets and fixtures in your home sounds ideal, lowering the temperature of the water in a hot water tank is not. When the temperature of water in a hot water tank is lowered to between 35°C and 46°C (95°F and 115°F), the ideal temperature range for the growth of Legionella bacteria may be created. Legionella is a form of bacterial pneumonia found commonly in water, can be safely ingested, but can cause severe illness when inhaled into the lungs. The risk is that water containing Legionella when dispensed from a showerhead or faucet could be inhaled and cause illness.

The solution is to raise the temperature of the water in the hot water tank to 60°C (140°F) which will kill any Legionella bacteria. However, raising the temperature of the hot water to that level can cause severe burns to unprotected skin. The **thermostatic mixing valve** solves this problem by allowing the water in the hot water tank to be raised to 60°C (140°F), while at the same time the hot water you get at your home's faucets and fixtures will stay at a maximum temperature of 49°C (120°F).

Is Your Hot Water Heater Working Correctly?

The **thermostatic mixing valve** is designed to prevent hot water scalding and burns to your children and grandchildren. It is the law and must be installed on your **hot water tank** when it is replaced. Failure to do so could result in legal consequences should someone be injured or you may have to live with the knowledge that a family loved one was injured in your home because you chose to disregard their safety.

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