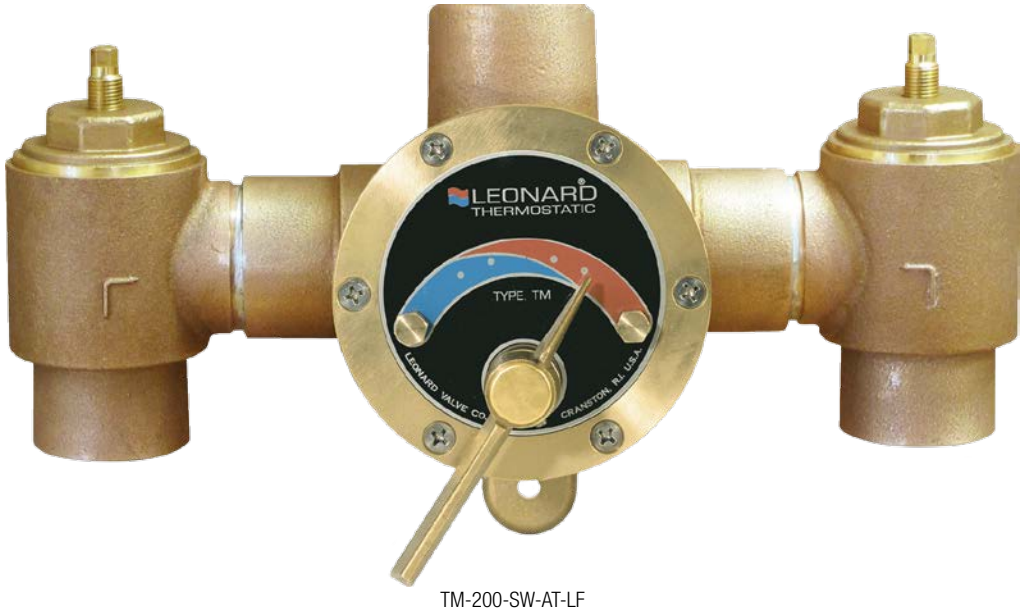
LEONARD®
WATER TEMPERATURE CONTROLS

Alternate Temperature Thermostatic Mixing Valves

Leonard Alternate Temperature Thermostatic Mixing Valves

Control water temperature for commercial, institutional and industrial applications

TM-50-AT-LF

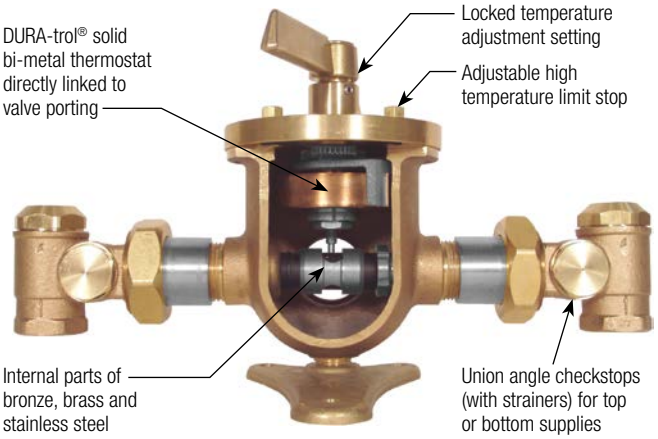


TM-200-SW-AT-LF

Alternate Temperature Thermostatic Mixing Valves

All Alternate Temperature valves are furnished factory-assembled and include:

- DURA-trol® solid bi-metal thermostat directly linked to the valve porting to control the intake of hot and cold water and regulate mixed water temperature. Solid bi-metal thermostatic control (element cannot puncture or fatigue and is not subject to high temperature limitations)
- High temperature limit stop which is adjustable to 120°F (49°C) or higher
- 8°F (4°C) minimum differential between supply and outlet temperature
- Integral hot and cold supply checkstops, strainers, integral wall supports and locking temperature regulators
- Dependable control of water temperature when correctly sized, installed, and maintained
- Mixed water capacities up to 200 GPM (757 l/min)
- Bronze, brass, and stainless steel construction
- Color-coded dial indicator
- Factory-preassembled and tested
- Toll-free technical support



Selection/Specification Guide

Type TM – (Models) – (Finish) – (Option)

Models

TM-50-AT-LF	3/4” inlets, 1” outlet, 8-71 GPM (30-289 l/min)
TM-80-AT-LF	1” inlets, 1-1/4” outlet, 13-78 GPM (49.2-295 l/min)
TM-150-AT-LF	1-1/4” inlets, 1-1/2” outlet, 18-175 GPM (68.1-662 l/min)
TM-200-SW-AT-LF	2” inlets/outlet, 30-200 GPM (113.6-757 l/min)

Finish

RF	Rough Bronze

Option

LWS	Less Wall Support

TM-80-AT-LF

TM-150-AT-LF

Flow Capacities

Models	In	Out	Minimum Flow GPM	PRESSURE DROP 5	10	15	20	25	30	35	40	45	50	PSI
			L/MIN	0.3	0.7	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.4	BAR
TM-50-AT-LF	3/4"	1"	8.0	19	29	38	45	51	56	62	67	71	74	GPM
	(19.1mm)	(25.4mm)	30.3	72	109	143	170	193	212	235	254	269	280	L/MIN
TM-80-AT-LF	1"	1 1/4"	13.0	22	34	42	50	56	62	68	73	78	80	GPM
	(25.4mm)	(31.6mm)	49.2	83	129	160	189	212	235	257	276	295	302	L/MIN
TM-150-AT-LF	1 1/4"	1 1/2"	18.0	53	72	88	103	117	133	147	161	175	177	GPM
	(31.6mm)	(38.1mm)	68.1	200	273	333	382	443	503	556	609	662	670	L/MIN
TM-200-SW-AT-LF	2"	2"	30.0	90	120	140	155	170	180	190	195	200	205	GPM
	(50.8mm)	(50.8mm)	113.6	341	454	530	587	644	681	719	738	757	776	L/MIN
				MAXIMUM FLOW CAPACITY										

NOTE: The AT model must be selected based upon the following:

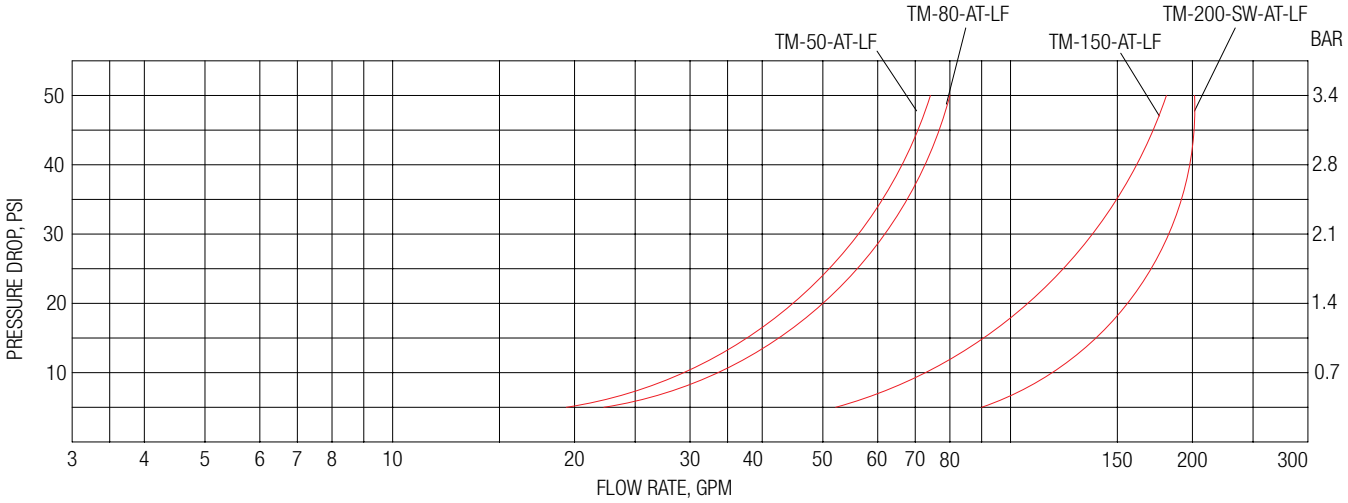
– Maximum system demand for mixed water

– System pressure drop

– Designer's estimated minimum mixed water flow requirement

System pressure drop = the pressure available at the inlet of the mixing valve minus the pressure required to operate the farthest fixture in the building

NOTE: Valves manufactured from low lead materials



CAUTION: All thermostatic water mixing valves have limitations. They will not provide the desired accuracy outside of their flow capacity range. Consult the above chart and graph and make certain minimum flow is greater than as shown above.

Alternate Temperature Thermostatic Mixing Valves

Sample Specification

Leonard Model TM- _____-AT-_____ (specify finish)

_____" inlets, _____ "outlet

_____ GPM minimum flow capacity (see chart, page 3)

_____ GPM maximum flow capacity @ _____ PSI system pressure drop

TYPE TM thermostatic mixing valve, DURA-trol® solid

bi-metal thermostat, color coded dials, locking temperature regulator handle, adjustable limit stops set for 120°F (49°C) (130°F for TM-200-SW-AT-LF), hot and cold supply checkstops with unions, color-coded dial indicator, integral wall support, internal parts of brass, bronze and stainless steel.

TM valve shall be installed and piped according to Leonard's Required Piping Method.

Required Piping Methods

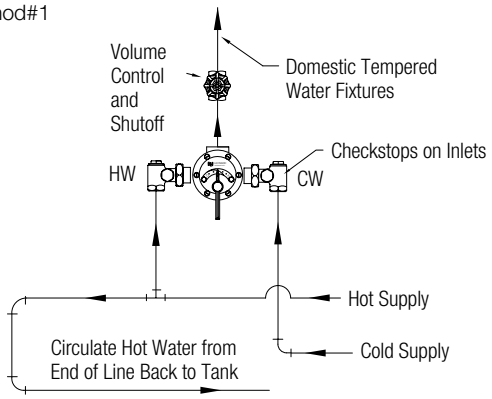
Required when the hot water supply is to only be circulated up to the TM thermostatic water mixing valve which is located a substantial distance from the hot water source.

NOTE: The engineer must determine the maximum distance which can be run (i.e. the maximum allowable time for hot water to reach the user with one fixture running).

Required Piping Method #1

(For bi-metal valves only, including Type TM Series)

Method#1



Note: All specifications are subject to change without notice!

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