



MIXING VALVES



MIXING VALVES

hydraulic tempering valves

TV (34-200) SERIES



MIXING VALVES

These dependable thermostatic mixing valves are designed to provide non-ASSE extension of water heater capacity and hot water temperature control in residential hot water heater and hydronic heating applications. Numbered indicator control allows easy setup and fingertip control. Available in low or high temperature options depending on floor or baseboard application.

FEATURES

- Low temperature range (85°-120°F)
- Standard temperature range (120°-180°F)
- Made in USA
- Corrosion resistant bronze body
- Thermoplastic shuttle assembly
- Solder connections are standard
- Hot & cold water failure protection

Size (in.)	Connection	Low Temp (85° - 120°F)		Standard Temp (120° - 180°F)	
		Model	Series	Model	Series
1/2	Solder	TV12L1	34-203-L1	TV12	34-203-01
3/4	Solder	TV34L1	34-204-L1	TV34	34-204-01

To order Repair Kits use part numbers 34-200-01RK (high temp.), 34-200-L1RK (low temp.)

- Not intended for potable water



MVA (34ALF) SERIES



THERMOSTATIC MIXING VALVES

34ALF Series are ASSE 1017 certified mixing valves designed for hot water distribution systems; or “point of source” applications. High temperature versions are designed for radiant heat applications, to provide better control of hot water supply. Numbered indicator control allows easy setup and fingertip control. Available in standard or high temperature range options depending on application. Inlet check valves and Stainless Steel screens provide added protection of thermostat and cross flow control.

FEATURES

- New EPDM union washer/screen
- Standard temperature range (85°-140°F)
- High temperature range (120°-180°F)
- Corrosion resistant bronze body
- Supply pressures to 150 psig
- Union NPT, Solder, CPVC, Press and PEX connections
- Inlet check valves
- 30 mesh SS screens on both inlets
- High flow capacity
- Broad temperature adjustment range
- Hot and cold water failure protection
- CSA B125.3 approval
- Calibrated max 120°F setpoint option available
- Chloramine resistant elastomers
- Maximum flow 19 gpm @ 30 psid
- NSF/ANSI 372 Lead Free
- Non-Lead Free remain available and can be ordered (34Axxxxx)
- **Made in USA**

Size (in.)	Connection	Standard Temp (85° - 140°F)		Cal. Max. Temp (120°F)		Radiant	
		Model	Series	Model	Series	High Temp (120° - 180°F)*	
1/2"	Solder inlets X Solder outlet	MVAS12	34ALF213S	MVABS12	34ALF213BS	MVAHS12	34ALF213HS
	FNPT inlets X FNPT outlet	MVA12	34ALF213T	MVAB12	34ALF213BT	MVAHT12	34ALF213HT
	CPVC inlets X CPVC outlet	MVAC12	34ALF213C	MVABC12	34ALF213BC		
	PEX inlets X PEX outlet	MVAX12	34ALF213X	MVABX12	34ALF213BX		
	Solder inlets X CPVC outlet	MVASC12	34ALF213SC	MVABSC12	34ALF213BSC		
	FNPT inlets X CPVC outlet	MVATC12	34ALF213TC	MVABTC12	34ALF213BTC		
	PEX inlets X CPVC outlet	MVAXC12	34ALF213XC	MVABXC12	34ALF213BXC		
	CPVC inlets X PEX outlet	MVACX12	34ALF213CX	MVABXC12	34ALF213BCX		
	PRESS inlets X PRESS outlet	MVAPR12	34ALF213PR	MVABPR12	34ALF213BPR		
3/4"	Solder inlets X Solder outlet	MVAS34	34ALF214S	MVABS34	34ALF214BS	MVAHS34	34ALF214HS
	FNPT inlets X FNPT outlet	MVA34	34ALF214T	MVAB34	34ALF214BT	MVAHT34	34ALF214HT
	CPVC inlets X CPVC outlet	MVAC34	34ALF214C	MVABC34	34ALF214BC		
	PEX inlets X PEX outlet	MVAX34	34ALF214X	MVABX34	34ALF214BX		
	Solder inlets X CPVC outlet	MVASC34	34ALF214SC	MVABSC34	34ALF214BSC		
	FNPT inlets X CPVC outlet	MVATC34	34ALF214TC	MVABTC34	34ALF214BTC		
	PEX inlets X CPVC outlet	MVAXC34	34ALF214XC	MVABXC34	34ALF214BXC		
	CPVC inlets X PEX outlet	MVACX34	34ALF214CX	MVABXC34	34ALF214BCX		
	PRESS inlets X PRESS outlet	MVAPR34	34ALF214PR	MVABPR34	34ALF214BPR		
1"	Solder inlets X Solder outlet	MVAS1	34ALF215S	MVABS1	34ALF215BS	MVAHS1	34ALF215HS
	FNPT inlets X FNPT outlet	MVA1	34ALF215T	MVAB1	34ALF215BT	MVAHT1	34ALF215HT
	CPVC inlets X CPVC outlet	MVAC1	34ALF215C	MVABC1	34ALF215BC		
	PEX inlets X PEX outlet	MVAX1	34ALF215X	MVABX1	34ALF215BX		
	Solder inlets X CPVC outlet	MVASC1	34ALF215SC	MVABSC1	34ALF215BSC		
	FNPT inlets X CPVC outlet	MVATC1	34ALF215TC	MVABTC1	34ALF215BTC		
	PEX inlets X CPVC outlet	MVAXC1	34ALF215XC	MVABXC1	34ALF215BXC		
	CPVC inlets X PEX outlet	MVACX1	34ALF215CX	MVABXC1	34ALF215BCX		
	PRESS inlets X PRESS outlet	MVAPR1	34ALF215PR	MVABPR1	34ALF215BPR		

To order Repair Kits use part numbers 34A200HRK (high temp.), 34A200RK (std. temp.)

* High temperature models are not ASSE certified.

MIXING VALVES

dual purpose



MVB (34BLF) SERIES



SCALD PROTECTION MIXING VALVES

ASSE 1017 and 1070 certified mixing valves are designed for “point of source” or “point of use” applications with high flow. These valves use a thermostatic element that senses outlet temperature and will compensate for fluctuating inlet temperature and pressure. The mixed water temperature range is 85°-120°F and will hold a desired temperature within $\pm 3^\circ\text{F}$. The 34BLF also features adjustable temperature limit stop to prevent the valve from being set above 120°F.

FEATURES

- High flow rates
- Stainless steel spring
- Corrosion resistant bronze body
- NPT, Solder, Pex, CPVC connections
- CSA B125.3 approval
- ASSE 1017 for hot water source apps.
- ASSE 1070 for multiple fixture apps.
- Inlet check valves
- New flat EPDM union washers with 20 mesh screen
- Cold water failure protection
- Adjustable temperature limit stop
- Supply pressures to 150 psig
- Tamper resistant locking cap
- Chloramine resistant elastomers
- 1.5 GPM minimum flow rate
- For lower flow applications recirculation pump downstream is recommended
- 34B available while stock remains

Size (in.)	Connection	Model	Series	LF Series
1/2"	Solder inlets X Solder outlet	MVBS12	34B213S	34BLF213S
	FNPT inlets X FNPT outlet	MVB12	34B213T	34BLF213T
	CPVC inlets X CPVC outlet	MVBC12	34B213C	34BLF213C
	PEX inlets X PEX outlet	MVBX12	34B213X	34BLF213X
	Solder inlets X CPVC outlet	MVBSC12	34B213SC	34BLF213SC
	FNPT inlets X CPVC outlet	MVBTC12	34B213TC	34BLF213TC
	PEX inlets X CPVC outlet	MVBXC12	34B213XC	34BLF213XC
	CPVC inlets X PEX outlet	MVBCX12	34B213CX	34BLF213CX
3/4"	Solder inlets X Solder outlet	MVBS34	34B214S	34BLF214S
	FNPT inlets X FNPT outlet	MVB34	34B214T	34BLF214T
	CPVC inlets X CPVC outlet	MVBC34	34B214C	34BLF214C
	PEX inlets X PEX outlet	MVBX34	34B214X	34BLF214X
	Solder inlets X CPVC outlet	MVBSC34	34B214SC	34BLF214SC
	FNPT inlets X CPVC outlet	MVBTC34	34B214TC	34BLF214TC
	PEX inlets X CPVC outlet	MVBXC34	34B214XC	34BLF214XC
	CPVC inlets X PEX outlet	MVBCX34	34B214CX	34BLF214CX
1"	Solder inlets X Solder outlet	MVBS1	34B215S	34BLF215S
	FNPT inlets X FNPT outlet	MVB1	34B215T	34BLF215T
	PEX inlets X PEX outlet	MVBX1	34B215X	34BLF215X

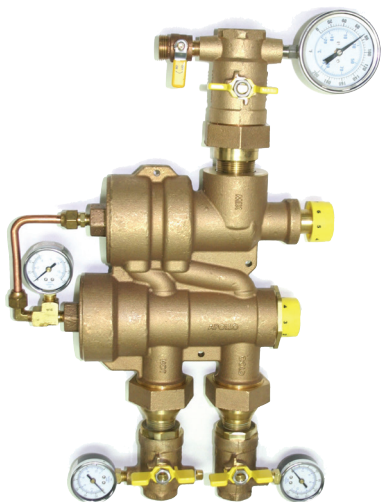
To order Repair Kits use part number 34B200RK.



MIXING VALVES

automatic temperature controller

MVHL (34HL) SERIES



STANDARD APPROVALS

ASSE 1069 - Automatic Temperature Control Mixing Valves

This device will control outlet water temperature to individual or multiple fixtures within 3.6°F to reduce the risk of scalding or thermal shock. This device is intended to be installed where the bather has no access to the temperature adjustment, and where no further mixing occurs downstream of the device.

The Apollo 34HL ATC will meet the performance requirements of ASSE 1069 at flow as low as 1.5 GPM up through maximum flow rate.

ASSE 1017 - Temperature Actuated Mixing Valves for Hot Water Distribution Systems

This device will control outlet set water temperature to hot water distribution systems near the hot water source within 3°F below 2 GPM and within 5°F above 5 GPM.

INNOVATION FROM APOLLO®...THE FIRST MULTIPLE-FIXTURE HI-LO MIXING VALVE THAT MEETS ASSE 1017 AND THE NEW ASSE 1069 STANDARD

Only Apollo® offers fast delivery on the first water temperature mixing assembly to meet ASSE 1017 and the strict performance levels required by the new ASSE 1069 Standard.

The new 34HL Automatic Temperature Control Mixing Valve uses proven Apollo thermostatic control to produce a consistent mix of water from low through high flow range.

This single assembly controls mixed water temperatures to multiple-outlet shower and sink installations. It's the ideal choice in new construction or retrofits in nursing homes, prisons, hospitals, schools, gymnasiums, airports and other facilities where constant safe water temperature needs to be maintained at several outlets without the use of independent ASSE 1016 shower valves.

FEATURES

- The Apollo 34HL Automatic Temperature Controller is an advanced thermostatic mixing valve capable of maintaining safe, consistent temperature control of water at low and high flows to within $\pm 3.6^\circ\text{F}$.
- The 34HL will provide consistent temperature control at flow rates as high as 60 GPM and as low as 1.5 GPM, including mid-range flow between high and low.
- This high quality Apollo valve performs its function without requiring recirculation pumps like other systems in order to achieve low flow control.
- Integral strainers and checks are provided at the hot and cold supply inlets for greater reliability and performance.
- These cast bronze thermostatic mixing valves are manufactured to the same exacting standards that have made the Apollo name famous for durability and reliability.

PRODUCT SPECIFICATIONS

Maximum Static Pressure	150 psig (1034 kpa)
Maximum Water Temperature	200° F (93° C)
Minimum ASSE 1017 Flow	0.5 gpm (1.9 lpm)
Minimum ASSE 1069 Flow	1.5 gpm (5.7 lpm)
Temperature Adjustment Range	90° F - 140° F
Maximum Inlet Pressure Differential	30 psi (207kpa)
Inlet Connection	1" NPT
Outlet Connection	1-1/4" NPT
Temperature Gauge	0-200°F
Pressure Gauge	0-160 psi
Shipping Weight	36 lbs

OPTIONS

34HL10517	Nickel plated
34HLBOX01	Cabinet, flush mount, SS
34HLBOX02	Cabinet, flush mount, CS powder coat
34HLBOX03	Cabinet, wall mount, SS
34HLBOX04	Cabinet, wall mount, CS powder coat



MVHL (34HL) SERIES (CONT.)

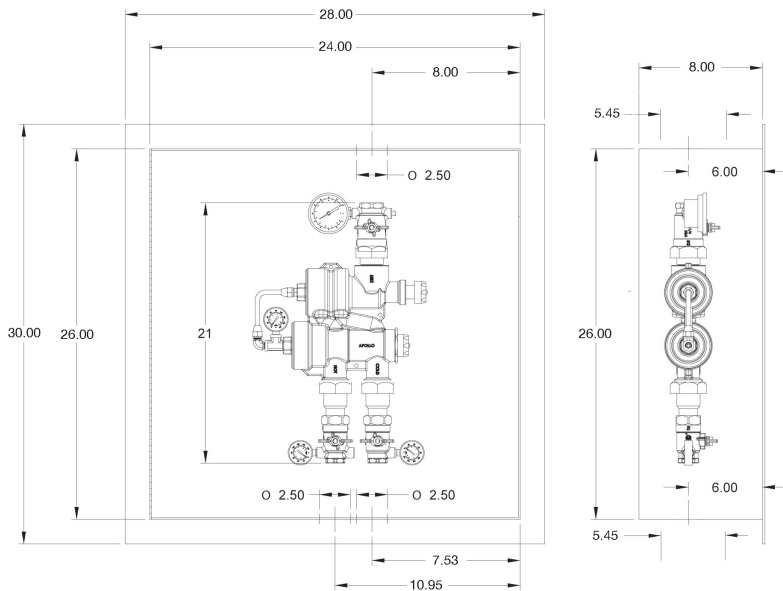
OPERATION

- The 34HL design is patented with a variable fluid flow assembly and dual thermal actuated controls for either low or high flow conditions.
- The passages are calibrated to control water temperature during all flow conditions without a “dead zone” between low and high flow.
- The 34HL also provides fluid shutoff as required by ASSE 1069 in the case that either the hot or cold supply lines fail (or are shut off for any reason) to prevent scalding or thermal shock.
- The valve can be tamper-resistant to limit the water temperature from exceeding safe conditions as required by ASSE 1069.
- The valve also meets the requirements of ASSE 1017 for Point of Source Applications.

This device will service end-use fixture fittings, including but not limited to, gang showers and sitz baths, by supplying tempered water at a preset temperature through a single supply pipe and will meet ASSE standard 1069 2005. ASSE 1069 devices are designed to reduce the risk of scalding and thermal shock during changes in hot or cold water supply pressure or temperature, or loss of cold water supply.

Model	Series	Min. Flow to ASSE 1069	Pressure Drop Across Valve			
			10 psi (69 kpa)	20 psi (138 kpa)	30 psi (207 kpa)	45 psi (310 kpa)
MVHL1	34HL10501	1.5 gpm	22 gpm	42 gpm	52 gpm	60 gpm
		6 lpm	83 lpm	159 lpm	197 lpm	227 lpm

Figure 1: Typical Valve Dimensions with Stainless Steel Recessed Cabinet Option



To order Repair Kits:

- Major (low side) – 34HL105RKL1
- O-Ring (low side) – 34HL105RKL2
- Handle – 34HL105RKH
- Major (high side) – 34HL105RKH1
- O-Ring (high side) – 34HL105RKH2

OPTIONS:

- 34HL10517 - Nickel plated automatic temperature controller
- 34HLBOX01 - Cabinet, flush mount, SS
- 34HLBOX02 - Cabinet, flush mount, CS powder coat
- 34HLBOX03 - Cabinet, wall mount, SS
- 34HLBOX04 - Cabinet, wall mount, CS powder coat

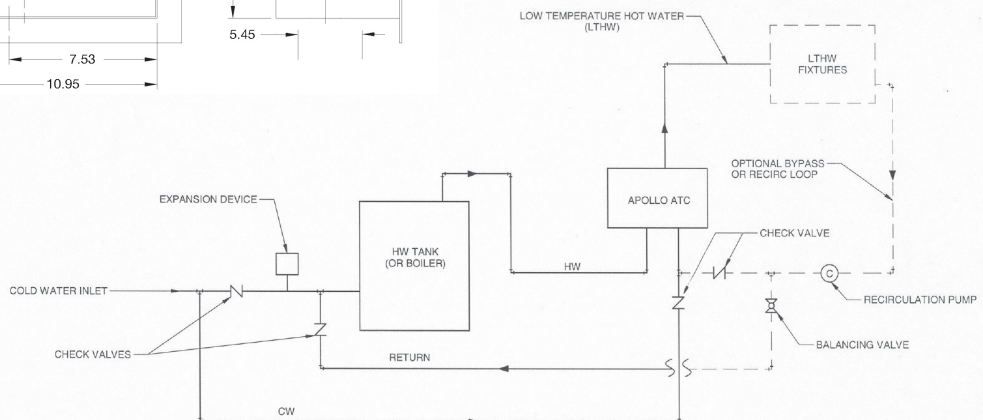


Figure 2: Typical Installation with Optional Recirculation Loop



MIXING VALVES

emergency eye/face wash

MVE (34ELF) SERIES

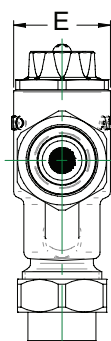
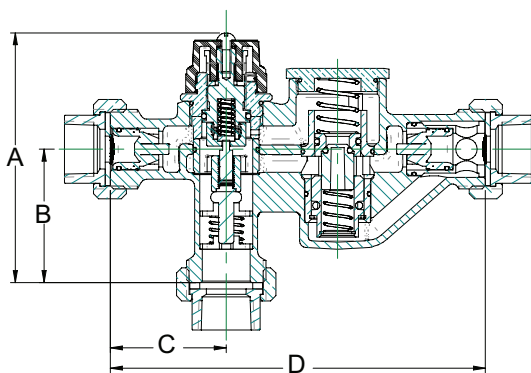


MVE 34E EMERGENCY MIXING VALVE

Designed to control the cold and hot water temperature to deliver tepid water at a predetermined temperature to emergency eyewash/facewash fixtures. The device provides a precise temperature and flow control in the event of cold water, hot water and thermostatic element failures.

FEATURES

- Hot & cold water supply failure protection patented design
- Tepid water temperature limit control and adjustment
- Tepid water temperature adjustment handle with locking mechanism for tamper-resistant protection
- Integral inlet check valves and strainers
- Superior thermostatic element technology for optimum reliability and dependability
- Thermostatic element failure and over travel protection
- High efficiency and positive shut-off check valves
- In-line accessibility and serviceability of failure protection module and mixing valve internal components
- ASSE 1071 approved
- Meets ANSI/ISEA Z358.1-2009
- Meets requirements of the EPA Safe Drinking Water Act
- Corrosion resistant components
- Model 34E with standard bronze construction is still available



LF Model Number	LF Series Number	Connection	Dimensions (in.)				
			A	B	C	D	E
MVE-12LF	34ELF103T	1/2" NPT	4.72	2.52	2.19	7.09	1.87
MVES-12LF	34ELF103S	1/2" Solder	4.72	2.52	2.19	7.09	1.87
MVE-34LF	34ELF104T	3/4" NPT	4.72	2.52	2.19	7.09	1.87
MVES-34LF	34ELF104S	3/4" Solder	4.72	2.52	2.19	7.09	1.87

TYPICAL INSTALLATIONS

