

THERMIXER[®]

Thermostatic Mixing Valve



Symmons[®]

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FLOW RATE - gpm (L/min)								
Valve Model	Size	Min Flow Rate	PRESSURE DIFFERENTIAL - psi (kPA)					
			5 psi (34 kPA)	10 psi (69 kPA)	20 psi (138 kPA)	25 psi (172 kPA)	30 psi (207 kPA)	45 psi (310 kPA)
5-110	3/8" compression (10mm)	0.5 gpm (1.9 L/min)	1 gpm (3.8 L/min)	2 gpm (7.6 L/min)	3 gpm (11.4 L/min)	4 gpm (15.1 L/min)	4 gpm (15.1 L/min)	5 gpm (18.9 L/min)
5-120	1/2" (13mm)	0.5 gpm (1.9 L/min)	4 gpm (15.1 L/min)	6 gpm (22.7 L/min)	10 gpm (37.9 L/min)	11 gpm (41.6 L/min)	12 gpm (45.4 L/min)	15 gpm (56.8 L/min)
5-130	3/4" (19mm)	2 gpm (7.6 L/min)	8 gpm (30.3 L/min)	9 gpm (34.1 L/min)	13 gpm (49.2 L/min)	16 gpm (60.6 L/min)	17 gpm (64.4 L/min)	19 gpm (71.9 L/min)
5-140	1" (25mm)	3 gpm (11.4 L/min)	12 gpm (45.4 L/min)	12 gpm (45.4 L/min)	17 gpm (64.4 L/min)	20 gpm (75.7 L/min)	22 gpm (83.3 L/min)	26 gpm (98.4 L/min)

Applications:

Thermixer should be used wherever there is a need for positive and accurate control of warm or hot water temperatures:

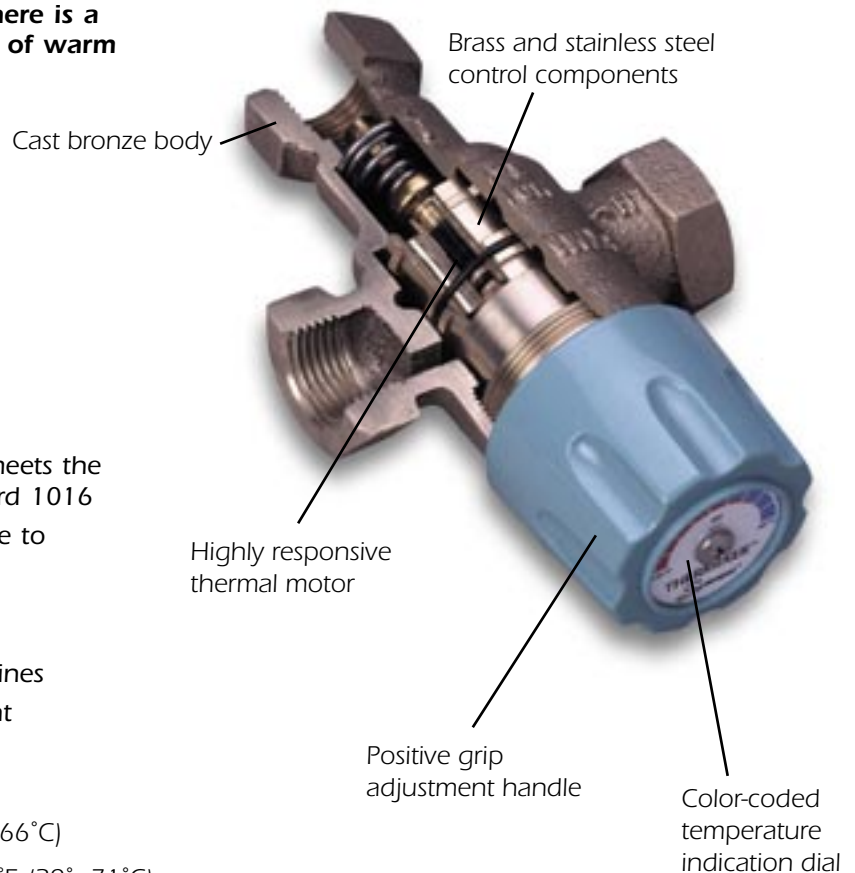
- Hand washing applications
- Domestic hot water systems
- Photo process applications
- Hydrotherapy baths
- Industrial processing
- Radiant heat applications
- **Not to be used for emergency eyewash or shower applications.**

Design Features:

- Certified to ASSE Standard 1017 and meets the anti-scald requirements of ASSE Standard 1016
- Fails safely on cold or hot supply failure to greatly reduce flow
- Works with large pressure imbalance
- Replaceable elements can be serviced without removal of valve from supply lines
- Lockable temperature setting to prevent unauthorized adjustment.

Performance Data:

- Control of temperature: +/- 3°F (1.66°C)
- Temperature range: 85°F–160°F (29°–71°C)
- Temperature differential: Discharge temperature adjustable to within 10°F (5.55°C) of inlet water temperatures
- Maximum working pressure: 125 psi (862 kPA)



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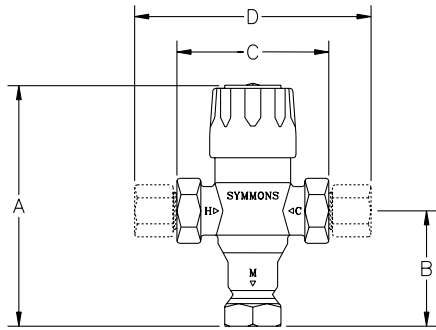
Specification (Valve Only):

5-_____: THERMIXER thermostatic mixing valve body construction shall be brass and bronze with brass and stainless steel flow control components. 360° handle adjustment for ease of temperature selection. Vandal resistant lockable handle feature to prevent unauthorized tampering. Inlets and outlet IPS unless indicated otherwise. Standard finish rough bronze, inlets and outlet IPS unless indicated otherwise.



Model Shown 5-120-NI

Modifications: Suffix **CK**: Separate checks* ▪ Suffix **CKX**: Separate check stops (5-120 only) ▪ Suffix **NI**: Rough chrome finish ▪ Suffix **SW**: Sweat connections (not available on 5-110) ▪ Suffix **W**: Wall mounting bracket



Model No.	Size	A	B	C	D ^{††}
5-110-CK [†]	3/8" compression (10mm)	5 1/2" (140mm)	2 7/8" (73mm)	3 5/16" (84mm)	5 5/16" (135mm)
5-120	1/2" (13mm)	5 1/2" (140mm)	2 1/2" (64mm)	3 5/16" (84mm)	5 1/4" (133mm)
5-130	3/4" (19mm)	5 1/2" (140mm)	2 1/2" (64mm)	3 5/16" (84mm)	5 3/4" (146mm)
5-140	1" (25mm)	5 1/2" (140mm)	2 1/2" (64mm)	3 5/16" (84mm)	6" (152mm)

[†]Model 5-110 is furnished with checks as standard ^{††}Dimension with checks

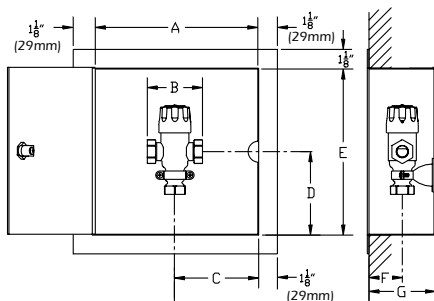
Specification (Valve in Cabinet):

5-_____**B**: THERMIXER thermostatic mixing valve body construction shall be brass and bronze with brass and stainless steel flow control components. 360° handle adjustment for ease of temperature selection. Vandal resistant lockable handle feature to prevent unauthorized tampering. Standard finish rough bronze, inlets and outlet IPS unless indicated otherwise. Cabinet to be 16 gauge (1.6mm) body, 12 gauge (2.7mm) hinged left hand door with cylinder lock and valve mounting bracket. Standard cabinet fully recessed steel with baked white enamel finish.



Model Shown 5-120B-T

Modifications: Suffix **CK**: Separate checks* ▪ Suffix **CKX**: Separate check stops (5-120 only) ▪ Suffix **NI**: Rough chrome finish Suffix **SW**: Sweat connections (not available on 5-110) ▪ Suffix **T**: Stainless steel cabinet ▪ Suffix **M**: Surface mounted cabinet



Model No.	Size	A	B	C	D	E	F	G
5-120	1/2" (13mm)	10" (254mm)	3 5/16" (84mm)	5" (127mm)	5" (127mm)	10" (254mm)	3 1/2" (89mm)	4" (102mm)
5-130	3/4" (19mm)	10" (254mm)	3 5/16" (84mm)	5" (127mm)	5" (127mm)	10" (254mm)	3 1/2" (89mm)	4" (102mm)
5-140	1" (25mm)	10" (254mm)	3 5/16" (84mm)	5" (127mm)	5" (127mm)	10" (254mm)	3 1/2" (89mm)	4" (102mm)

*Checks are recommended to prevent by-pass when a Thermixer is installed with a downstream shut-off device.

THERMIXER® Proper Piping

It is recommended that all THERMIXER installations be equipped with a thermometer and shut off valve on the tempered water line.

THERMIXER when installed at or near the hot water tank must be positioned below the tank, well below the high temperature water line, to create a heat trap. This procedure protects against hot water bypassing through the controller, should the checks become fouled with foreign matter and are prevented from fully seating (see diagram 1).

THERMIXER when installed with a tempered water recirculating system must have the return line connected as shown in the diagram. This

procedure allows the mixing valve to maintain the set temperature during periods of no draw by allowing the major volume of return water to supply the cold inlet of the mixing valve, and the minor volume of return water to be reheated and supply the hot inlet of the mixing valve (see diagram 2).

Under no circumstances should return water of two different temperatures be returned to a single source. For complete installation details see instructions supplied with each THERMIXER valve.

Diagram 1: Point of use multiple fixture application

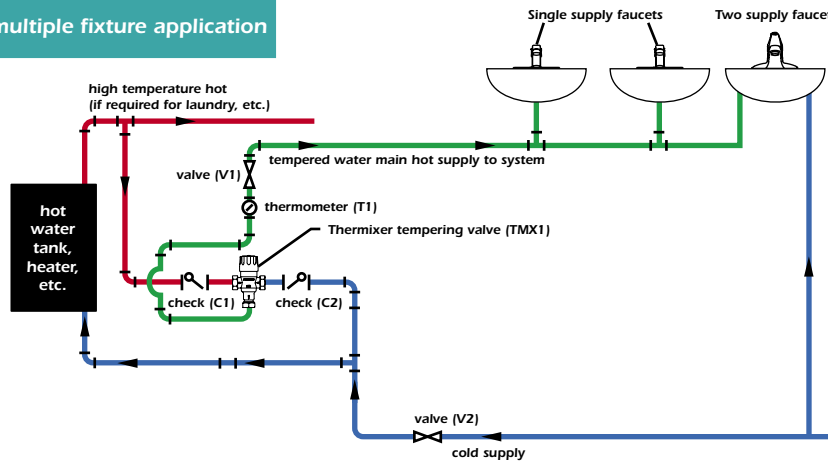
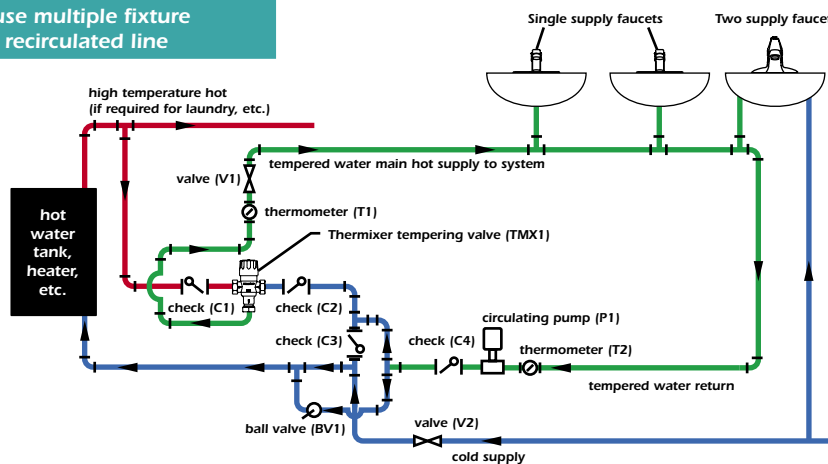


Diagram 2: Point of use multiple fixture application with a recirculated line



SYMMONS INDUSTRIES, INC., 31 Brooks Drive, Braintree, Massachusetts 02184-3804

Tel: 1-800-SYMMONS, (781) 848-2250 Fax: 1-800-961-9621, (781) 843-3849

Website: www.symmons.com

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