

TMV MODEL 320

THERMOSTATIC MIXING VALVE FOR GROUPS OF FIXTURES

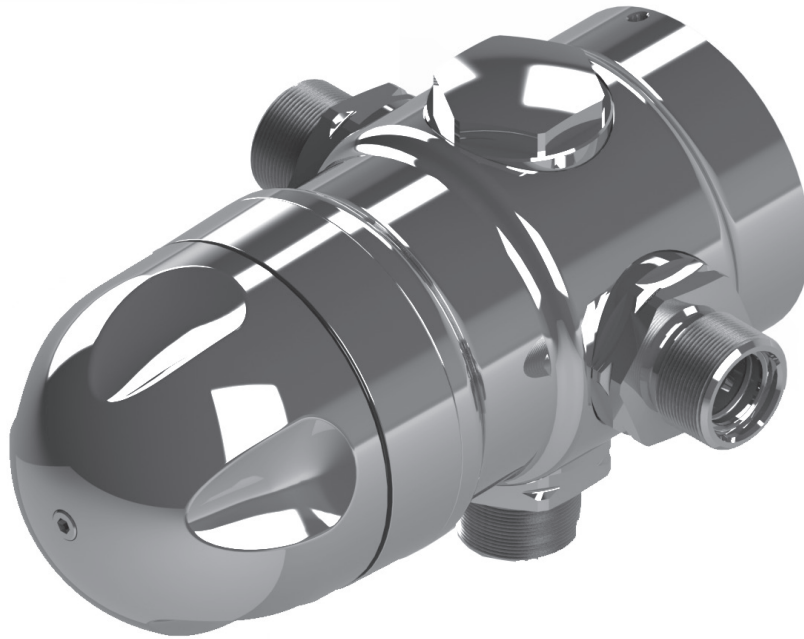
Armstrong’s thermostatic mixing valves are designed specifically for use in non-return “dead leg” applications.

The range of products provides accurate water temperature control for individual point of use and groups of fixtures in applications with diverse flow requirements.

TMV320 is supplied as standard with integral check valves and strainers.

Optional Models:

- TMV320D is supplied pre-piped with inlet check valves, unions, isolation valves, an outlet thermometer and a stop valve.
- TMV320R for recirculating systems is supplied with a recirculation return inlet, sight flow indicator, a thermostatic return limiter to maintain circuit temperature during no-demand periods, and an outlet thermometer.



Thermostatic Mixing Valve Model 320

TMV Model 320 Performance Chart: Pressure Drop (in PSIG) to Flow Rate (in GPM)												
Model 320	Pressure Drop (PSIG)										Minimum Flow Rate	C _v
	5	10	15	20	25	30	35	40	45	50		
GPM	8	11	13	15	17	19	20	22	23	24	1.0 GPM	3.4

TMV Model 320 Performance Chart: Pressure Drop (in BARG) to Flow Rate (in LPM)												
Model 320	Pressure Drop (BARG)										Minimum Flow Rate	K _v
	0.3	0.7	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.4		
LPM	30.3	41.6	49.2	56.8	64.4	71.9	75.7	83.3	87.1	90.8	3.8 LPM	2.93

Designs, materials, weights, and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for the most up-to-date information.



TMV MODEL 320

TECHNICAL SPECIFICATIONS

General		
Materials	Chrome-plated brass / polymer	
Safety	Thermal shutdown upon inlet supply failure	
Shipping Weight	10 lbs (4.5 kg)	
Connections		
Inlet and Outlet Connections	3/4" NPT Connections	
Pressures		
Inlet Supply Pressures	Maximum Inlet Supply Pressure: 150 psig (10 barg)	Minimum Inlet Supply Pressure: 10 psig (0.7 barg)
Temperatures		
Hot Water Supply Temperature	Maximum Inlet Hot Water Temperature: 185°F (85°C)	
Cold Water Supply Temperature	Minimum Inlet Cold Water Temperature: 33°F (1°C)	Minimum Inlet Cold Water Range: 33°F - 77°F (1°C - 25°C)
Optimum Inlet/Outlet Differential	21°F (12°C)	
Optimum Thermostatic Control Range	86°F -122°F (30°C - 50°C)	
Flow Rate		
Maximum Flow Rate at 45 psi	23 GPM (87 LPM)	
Maximum Flow Rate at 9' / second	16 GPM (61 LPM)	
Minimum Flow Rate	1 GPM (3.8 LPM)	
Configurable Specifications		
Outlet Temperature Control	+ / - 2°F (1°C) outlet temperature control	
Temperature Limits	Adjustable maximum temperature limit stop	
Temperature Lock	Adjustable single-locking temperature option	
Standards and Approvals		
Lead Free	Compliant	
ASSE 1017	Certified	
CSA B125	Certified	

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TMV MODEL 320

WRITTEN SPECIFICATIONS

Category: Water Temperature Control - Groups of Fixtures

Type: Thermostatic Mixing Valve

Model: Model 320

Part 1 - GENERAL

1.1 Overview

- A. The Thermostatic Mixing Valve (TMV) shall be of chrome-plated DZR brass/polymer construction. TMV shall have NPT inlets and outlet with integral inlet spring-loaded check valves and strainers, and an optional top or bottom mixed water outlet. TMV shall be equipped with a maximum temperature limiting and single-temperature locking feature. TMV shall have dual thermostats for increased accuracy and to provide redundancy in case of individual thermostat failure.

1.2 Materials of Construction

- A. Materials of construction and items included shall be:
 1. Chrome-plated DZR brass/polymer
 2. 3/4" NPT inlets and outlet
 3. Optional top or bottom mixed water outlet
 4. Integral inlet check valves and strainers
 5. Dual thermostats
- B. Optional TMV320 models:
 1. TMV320D shall be supplied pre-piped with inlet check valves, unions, isolation valves, an outlet thermometer and stop valve.
 2. TMV320R shall be supplied for recirculating systems with a recirculation return inlet, sight flow indicator, a thermostatic return limiter to maintain circuit temperature during no-demand periods, and an outlet thermometer.

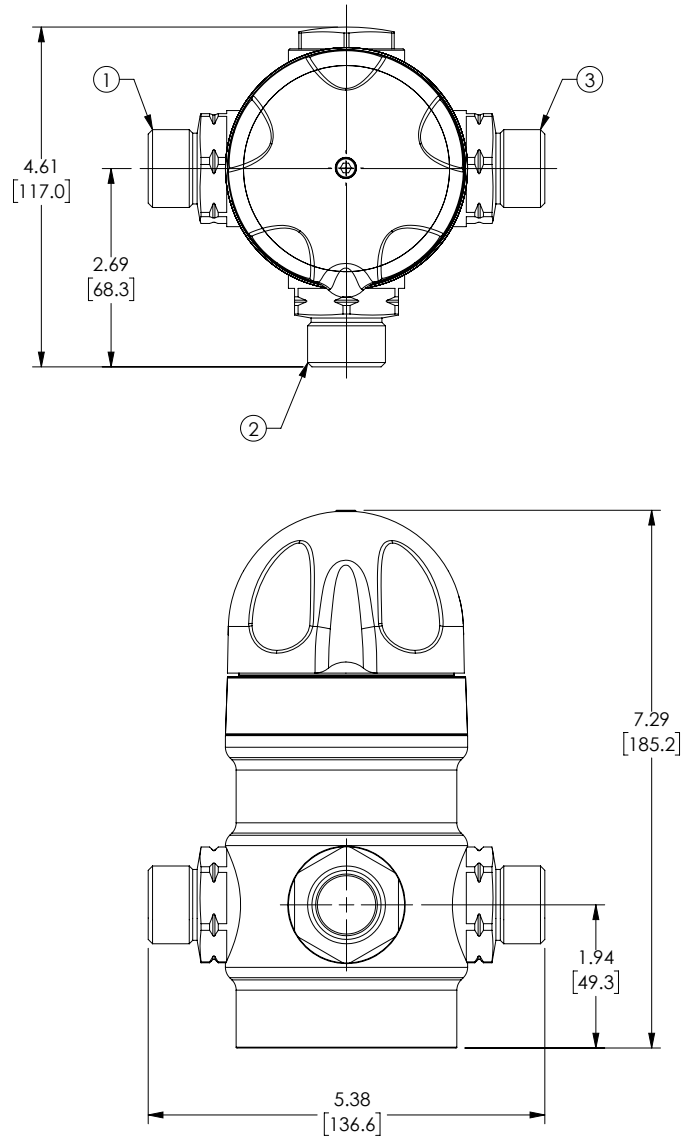
1.3 Performance

- A. TMV shall be so designed that all of the internal operating components are enclosed in a one-piece "sealed for life" replaceable cartridge for ease of service. TMV shall be capable of controlling mixed water temperatures within + / - 2°F (1°C) between 1 GPM - 24 GPM (3.8 LPM - 90.8 LPM) . TMV shall be capable of delivering a mixed water temperature that is within + / - 5°F (2°C) of either inlet supply temperature. TMV shall be compliant with ASSE Standard 1017 and CSA B125 and shall be so certified and identified.
- B. The Thermostatic Mixing Valve shall include all of the following capabilities:
 1. Maintains mixed water temperature within + / - 2°F (1°C) at flow rates between 1 GPM - 24 GPM (3.8 LPM - 90.8 LPM)
 2. Delivers mixed water temperatures within 5°F (2°C) of either inlet supply temperature
 3. Operational pressure of 10 - 150 psig (0.7 - 10 barg)
 4. Thermal shutdown mode upon inlet supply failure

APPROVAL

BY: _____ DATE: _____

- APPROVED, PROCEED WITH FABRICATION
- APPROVED AS NOTED, PROCEED WITH FABRICATION IN ACCORDANCE WITH COMMENTS
- DISAPPROVED, DO NOT FABRICATE




NOTE:
1. ARMSTRONG PART NUMBER: D81520

PROJECT NAME:

TAG:

ITEM	DESCRIPTION	CONNECTION
1	HOT WATER INLET MALE NPT	3/4" NPT
2	MIXED WATER OUTLET MALE NPT	3/4" NPT
3	COLD WATER INLET MALE NPT	3/4" NPT

DO NOT SCALE DRAWING TOLERANCES UNLESS OTHERWISE SPECIFIED	
DIMENSIONING ENGLISH (mm)	
FRACTIONAL	± 1/64
ANGULAR:	± 2
DECIMAL	.XXXX ± .0005 .XXX ± .005 .XX ± .015 .X ± .3
	IN. MM ----- .10 ----- .10 ----- .3

 Armstrong ®	
NAME	DATE
Lucas Wilkins	04/07/2016
DRAWN	
RELEASED	

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320 M NPT WITH PLUG	
MATERIAL	PURCHASED ASSEMBLIES
CN51174	REVA DWG. SALES