

TMV MODEL 425

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.

TMV425 is supplied as standard with integral check valves and strainers.

Optional Models:

- TMV425D is supplied pre-piped with inlet check valves, unions, isolation valves, an outlet thermometer, and a stop valve.
- TMV425R 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 425

TMV Model 425 Performance Chart: Pressure Drop (in PSIG) to Flow Rate (in GPM)												
Model 425	Pressure Drop (PSIG)										Minimum Flow Rate	C _v
	5	10	15	20	25	30	35	40	45	50		
GPM	15	22	27	31	35	38	41	44	46	49	2.0 GPM	6.9

TMV Model 425 Performance Chart: Pressure Drop (in BARG) to Flow Rate (in LPM)												
Model 425	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	56.8	83.3	102.2	117.3	132.5	143.8	155.2	166.6	174.1	185.5	7.6 LPM	5.95

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 425

TECHNICAL SPECIFICATIONS

General		
Materials	Chrome-plated DZR brass / polymer	
Safety	Thermal shutdown upon inlet supply failure	
Shipping Weight	18 lbs (8.1 kg)	
Connections		
Inlet and Outlet Connections	1-1/4" NPT Connections *(TMV425D and TMV425R models are equipped with 1" inlet and outlet 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)	
Optimum Inlet/Outlet Differential	59°F (15°C)	
Optimum Thermostatic Control Range	86°F - 122°F (30°C -50°C)	
Flow Rate		
Maximum Flow Rate at 45 psi	46 GPM (174 LPM)	
Maximum Flow Rate at 9' / second	26 GPM (98 LPM)	
Minimum Flow Rate	2 GPM (7.6 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	

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 425

WRITTEN SPECIFICATIONS

Category: Water Temperature Controls - Groups of Fixtures

Type: Thermostatic

Model: Model 425

Part 1 - GENERAL

1.1 Overview

- A. The Thermostatic Mixing Valve (TMV) shall be of chrome-plated DZR brass / polymer lead-free construction. TMV shall have NPT inlets and outlets 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

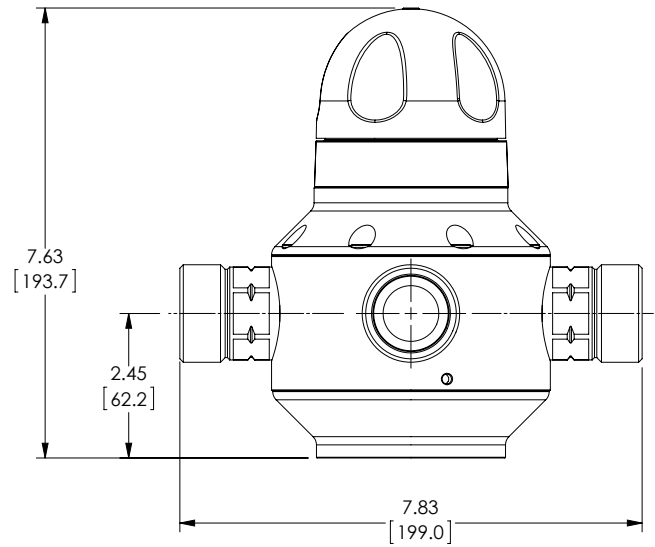
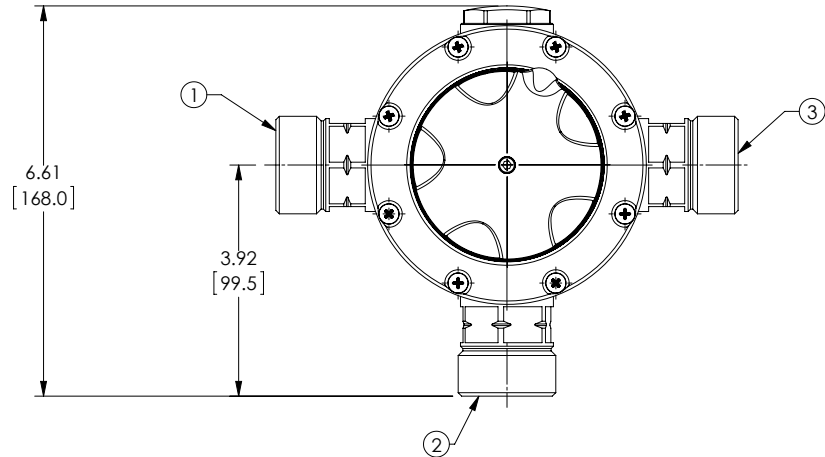
- A. Materials of construction and items included shall be:
 1. DZR brass/stainless steel/polymer
 2. 1-1/4" NTP inlets and outlet (TMV425D and TMV425R are supplied with 1" NPT inlets and outlet)
 3. Integral inlet check valves and strainers
 4. Temperature control trim set
 5. Tamper-proof locking shroud
- B. Optional TMV425 models:
 1. TMV425D shall have 1" inlets and outlet connections and shall be supplied pre-piped with inlet check valves, unions, isolation valves, an outlet thermometer and stop valve.
 2. TMV425R shall have 1" inlets and outlet connections and 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 so 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) at flow rates between 2 GPM - 48 GPM (7.6 LPM - 182 LPM). TMV shall be capable of delivering a mixed water temperature that is within 5°F 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 2 GPM - 48 GPM (7.6 LPM - 182 LPM)
 2. Delivers mixed water temperature 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

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





NOTE :

- 1. REFERENCE ARMSTRONG DRAWING D73767
- 2. ALL DIMENSIONS FOR REFERENCE ONLY

PROJECT NAME:		
TAG:		
ITEM	DESCRIPTION	CONNECTION
1	HOT WATER INLET	1-1/4" NPT
2	MIXED WATER OUTLET	1-1/4" NPT
3	COLD WATER INLET	1-1/4" NPT

DO NOT SCALE DRAWING TOLERANCES UNLESS OTHERWISE SPECIFIED	
DIMENSIONING ENGLISH (mm)	
FRACTIONAL ± 1/64	
ANGULAR: ± 2	
DECIMAL	IN. MM
.XXXX ± .0005	----- .010
.XXX ± .005	----- .10
.XX ± .015	----- .10
.X	----- .3

Armstrong

NAME	DATE
Kyle Bradford	11/10/2015
RELEASED	

ARMSTRONG INTERNATIONAL Copyright © 2010 ARMSTRONG INTERNATIONAL, INC.	
425 M-NPT	
MATERIAL	PURCHASED ASSEMBLIES
CN49339	REV B DWG. SALES