

Thermostatic

Rada Solutions for Central Recirculation System Control feature four individual **Thermostatic Mixing Valve** assemblies and two **Flexi-Flo™ Packages** designed for use in pumped recirculating hot water systems.

The complete range has been designed to offer accurate temperature control in applications where there are diverse flow requirements up to 288 gpm (1,090 lpm).*

All valves and valve packages designed for recirculation system control are identified with the suffix R.

Sizing

To size a mixing valve or Flexi-Flo™ package, simply match the required flow rate on the charts below with the pressure drop that the existing system can accommodate or the new system design specifies. Armstrong refers to the Modified Hunter Curve, where applicable, when determining system flow requirements.

NOTE: Maximum flow rates determined at 9 ft/sec (2.7 m/sec) pipeline velocity.

* Consult factory for customized Flexi-Flo packages for flow requirements in excess of 288 gpm (1,090 lpm).

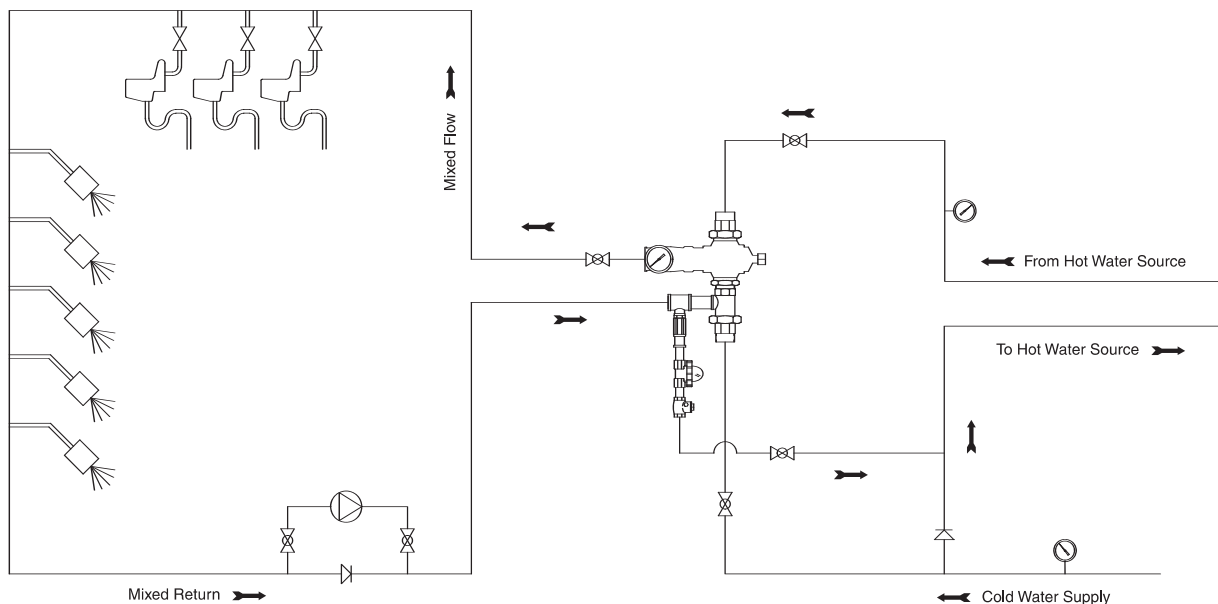
Rada Thermostatic Mixing Valves (gpm)

Model	Pressure Drop (psi)				Min. System Draw-off	Max. Flow	C _v
	5	10	15	20			
320R	8	11	13	15	0	16	3.4
425R	15	22	27	31	0	26	6.9
40R	36	51	62	72	0	58	16.0
50R	49	70	85	98	0	98	22.0

Flexi-Flo Packages (gpm)

Model	Pressure Drop (psi)				Min. System Draw-off	Max. Flow	C _v
	5	10	15	20			
50R-50R	97	137	168	193	0	193	42.4
50R-50R-50R	144	204	250	288	0	288	63.6

Data on Rada Solutions for Central Recirculation System Control can be found on pages 18 through 23. Certified drawings, specifications, installation and maintenance guides, and plumbing schematics are available upon request by calling Hot Water Group at (269) 279-3602.



All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.



Armstrong® Rada® Solutions for Central Recirculation System Control

Thermostatic

Rada 320R

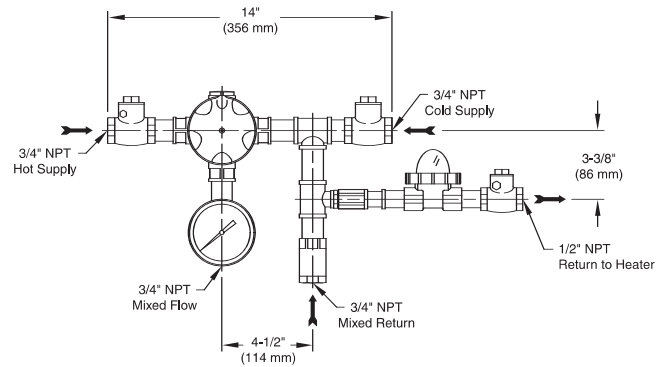
Rada Thermostatic Mixing Valve is designed specifically to be installed as the primary control valve within a pumped recirculation system. Capable of maintaining safe, accurate water temperatures during both peak and zero-demand “idling” periods. With a Rada 320R installed as the primary temperature controller within a pumped recirculation system, there will be a **zero** minimum blended water flow rate/draw-off requirement. The Rada 320R features a unique integral thermostatic return limiter that maintains recirculating water temperatures within the circuit. Thermostatic return limiters eliminate the requirement for a fitted aquastat and reduce cycling wear and tear on the circulating pump.

Rada 320R Offers:

Safety. Dual thermostats provide redundancy in case of individual thermostat failure. Integral check valves prevent cross connection. Maximum temperature limiting and single temperature locking feature. Instant automatic shutdown prior to a 5°F (2°C) temperature rise/fall in the event of an inlet supply failure and an integral thermostatic return limiter to prevent “temperature creep” during zero-demand periods.

Economy. New technology and state-of-the-art materials reduce cost. Single “no spare parts” replaceable cartridge design reduces field maintenance and parts stocking requirements.

Comfort. Maintains a steady outlet temperature by constant internal monitoring and adjustment of recirculating hot water temperature.



Technical Specifications

- 3/4" (20 mm) NPT inlets and 3/4" (20 mm) NPT outlets
- Chrome-plated DZR brass/polymer construction
- Operating pressures
 - Maximum: 150 psi (10 bar)
 - Minimum: 10 psi (.7 bar)
- ASSE 1017 and CSA B125 certified
- Flow coefficient (C_v) 3.4
- Integral thermometer
- Integral check valves and strainers
- Integral sight flow indicator
- Maximum flow rate at 9 ft/sec (2.7 m/sec): 16 gpm (61 lpm)
- Integral thermostatic return limiter
- Dual thermostatic elements
- Shipping weight 25 lbs (11 kg)

For a fully detailed certified drawing, refer to CDLW #1050.

Rada Thermostatic Mixing Valves (gpm)

Model	Pressure Drop (psi)				Min. System Draw-off	Max. Flow	C _v
	5	10	15	20			
320R	8	11	13	15	0	16	3.4
425R	15	22	27	31	0	26	6.9
40R	36	51	62	72	0	58	16.0
50R	49	70	85	98	0	98	22.0

NOTE: Maximum flow rates determined at 9 ft/sec pipeline velocity.

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

Thermostatic

Rada 425R

Rada Thermostatic Mixing Valve is designed specifically to be installed as the primary control valve within a pumped recirculation system. Capable of maintaining safe, accurate water temperatures during both peak and zero-demand “idling” periods. With a Rada 425R installed as the primary temperature controller within a pumped recirculation system, there will be a **zero** minimum blended water flow rate/draw-off requirement. The Rada 425R features a unique integral thermostatic return limiter that maintains recirculating water temperatures within the circuit. Thermostatic return limiters eliminate the requirement for a fitted aquastat and reduce cycling wear and tear on the circulating pump.

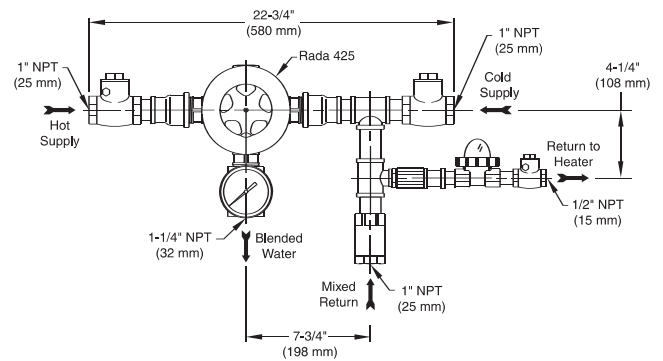


Rada 425R Offers:

Safety. Dual thermostats provide redundancy in case of individual thermostat failure. Maximum temperature limiting and single temperature locking feature. Instant automatic shutdown prior to a 5°F (2°C) temperature rise/fall in the event of an inlet supply failure and an integral thermostatic return limiter to prevent “temperature creep” during zero-demand periods.

Economy. New technology and state-of-the-art materials reduce cost. Accurate across a wide diversity of flow rates, Rada 425R allows single valve installation where previously “high-low” multiple valve assemblies were required.

Comfort. Maintains a steady outlet temperature by constant internal monitoring and adjustment of recirculating hot water temperature.



Technical Specifications

- 1" NPT (25 mm) inlets and 1" (25 mm) outlet(s)
- Chrome-plated DZR brass/polymer construction
- Operating pressures
 - Maximum: 150 psi (10 bar)
 - Minimum: 10 psi (.7 bar)
- Flow coefficient (C_v) 6.9
- ASSE 1017 and CSA B125 certified
- Maximum flow rate at 9 ft/sec (2.7 m/sec): 26 gpm (98 lpm)
- Integral inlet check valves and strainers
- Integral thermometer
- Integral sight flow indicator
- Integral thermostatic return limiter
- Dual thermostatic elements
- Shipping weight 29 lbs (13 kg)

For a fully detailed certified drawing, refer to CDLW #1066.

Rada Thermostatic Mixing Valves (gpm)

Model	Pressure Drop (psi)				Min. System Draw-off	Max. Flow	C _v
	5	10	15	20			
320R	8	11	13	15	0	16	3.4
425R	15	22	27	31	0	26	6.9
40R	36	51	62	72	0	58	16.0
50R	49	70	85	98	0	98	22.0

NOTE: Maximum flow rates determined at 9 ft/sec pipeline velocity.

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

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Rada 40R

Rada Thermostatic Mixing Valve is designed specifically to be installed as the primary control valve within a pumped recirculation system. Capable of maintaining safe, accurate water temperatures during both peak and zero-demand “idling” periods. With a Rada 40R installed as the primary temperature controller within a pumped recirculation system, there will be a **zero** minimum blended water flow rate/draw-off requirement. The Rada 40R features a unique integral thermostatic return limiter that maintains recirculating water temperatures within the circuit. Thermostatic return limiters eliminate the requirement for a fitted aquastat and reduce cycling wear and tear on the circulating pump.

Rada 40R Offers:

Safety. Dual thermostats provide redundancy in case of individual thermostat failure. Integral inlet check valves prevent cross connection. A maximum temperature locking feature with key and an integral thermostatic return limiter prevent “temperature creep” during zero-demand periods.

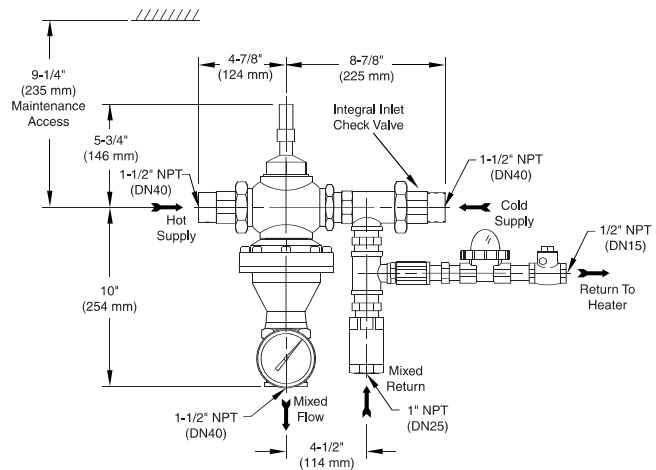
Economy. Design and functional simplicity along with easy-access internal components reduce maintenance time. PTFE coated internal parts resist mineral deposition for prolonged service life. Accurate across a wide diversity of flow rates, Rada 40R allows single valve installation where previously “high-low” multiple valve assemblies were required.

Comfort. Maintains a steady outlet temperature by constant internal monitoring and adjustment of recirculating hot water temperature.

Technical Specifications

- 1-1/2" NPT (40 mm) inlets and 1-1/2" (40 mm) NPT outlet
- DZR brass/stainless steel construction
- Operating pressures
 - Maximum: 150 psi (10 bar)
 - Minimum: 10 psi (.7 bar)
- Maximum pressure drop 20 psi (1.4 bar)
- Maximum flow rate at 9 ft/sec (2.7 m/sec): 58 gpm (219 lpm)
- ASSE 1017 and CSA B125 certified
- Flow coefficient (C_v) 16
- Integral inlet check valves
- Integral thermometer
- Integral sight flow indicator
- Integral thermostatic return limiter
- Dual thermostatic elements
- Shipping weight 45 lbs (20 kg)

For a fully detailed certified drawing, refer to CDLW #1041.



Rada Thermostatic Mixing Valves (gpm)

Model	Pressure Drop (psi)				Min. System Draw-off	Max. Flow	C _v
	5	10	15	20			
320R	8	11	13	15	0	16	3.4
425R	15	22	27	31	0	26	6.9
40R	36	51	62	72	0	58	16.0
50R	49	70	85	98	0	98	22.0

NOTE: Maximum flow rates determined at 9 ft/sec pipeline velocity.

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

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Rada 50R

Rada Thermostatic Mixing Valve is designed specifically to be installed as the primary control valve within a pumped recirculation system. Capable of maintaining safe, accurate water temperatures during both peak and zero-demand “idling” periods. With a Rada 50R installed as the primary temperature controller within a pumped recirculation system, there will be a **zero** minimum blended water flow rate/draw-off requirement. The Rada 50R features a unique integral thermostatic return limiter that maintains recirculating water temperatures within the circuit. Thermostatic return limiters eliminate the requirement for a fitted aquastat and reduce cycling wear and tear on the circulating pump.

Rada 50R Offers:

Safety. Dual thermostats provide redundancy in case of individual thermostat failure. Integral inlet check valves prevent cross connection. A maximum temperature locking feature with key and an integral thermostatic return limiter prevent “temperature creep” during zero-demand periods.

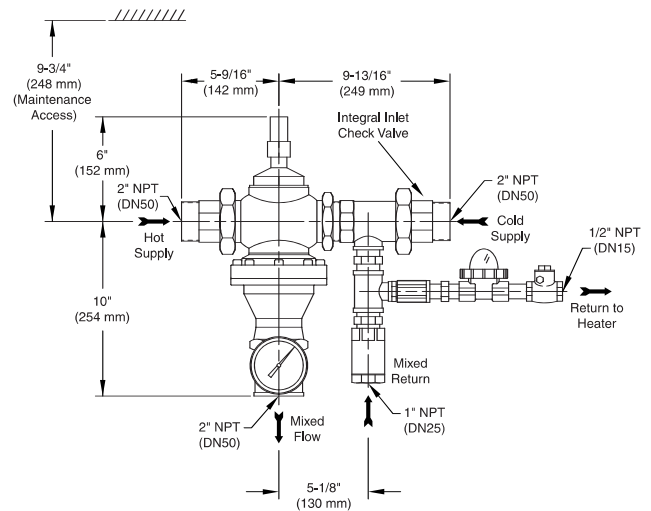
Economy. Design and functional simplicity along with easy-access internal components reduce maintenance time. PTFE coated internal parts resist mineral deposition for prolonged service life. Accurate across a wide diversity of flow rates, Rada 50R allows single valve installation where previously “high-low” multiple valve assemblies were required.

Comfort. Maintains a steady outlet temperature by constant internal monitoring and adjustment of recirculating hot water temperature.

Technical Specifications

- 2" NPT (50 mm) inlets and 2" (50 mm) NPT outlets
- DZR brass/stainless steel construction
- Operating pressures
 - Maximum: 150 psi (10 bar)
 - Minimum: 10 psi (.7 bar)
- Maximum pressure drop 20 psi (1.4 bar)
- Maximum flow rate at 9 ft/sec (2.7 m/sec): 98 gpm (371 lpm)
- ASSE 1017 and CSA B125 certified
- Flow coefficient (C_v) 22
- Integral inlet check valves
- Integral thermometer
- Integral sight flow indicator
- Integral thermostatic return limiter
- Dual thermostatic elements
- Shipping weight 45 lbs (20 kg)

For a fully detailed certified drawing, refer to CDLW #1043.



Rada Thermostatic Mixing Valves (gpm)

Model	Pressure Drop (psi)				Min. System Draw-off	Max. Flow	C_v
	5	10	15	20			
320R	8	11	13	15	0	16	3.4
425R	15	22	27	31	0	26	6.9
40R	36	51	62	72	0	58	16.0
50R	49	70	85	98	0	98	22.0

NOTE: Maximum flow rates determined at 9 ft/sec pipeline velocity.

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.