

Self-Actuated **Temperature Regulators** **RT-210 - RT-214 Series** *For Liquid Temperature Control*

OUTSTANDING FEATURES

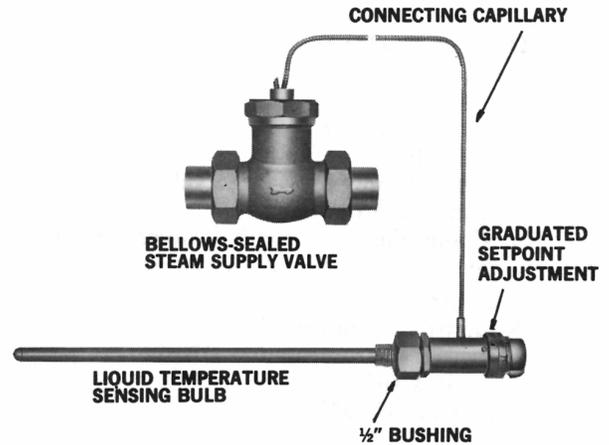
1. Accurate Control - Modulating
2. Self-powered.
3. Small over-all dimensions - Compact.
4. Convenient graduated-dial setpoint adjustment.
5. Remote setpoint adjustment available on RT-213 series.
6. Setpoint adjustment may be locked.
7. Single-seated valves.
8. Packless construction - no packing - no leaking.
9. Easy to install.
10. No maintenance required.

GENERAL DESCRIPTION

These Robertshaw Temperature Regulators meet the demand for a sensitive, compact instrument for temperature control of steam-heated liquids using low pressure steam. They differ principally in pressure limits and capacity. Nos. RT-212, RT-213 and RT-214 are designed for steam pressures up to 75 lbs.; No. RT-210 is limited to 15 lbs.

Applications where these regulators are particularly well suited include: ham cookers, soup kettles, dish washers, hot tables, etc. in the food industry; small hot water storage tanks for many purposes; glue kettles, vats and other such uses in the industrial plant where accurate temperature control is essential.

Regulators RT-210, RT-212 and RT-214 have setpoint adjustment mounted directly onto the sensing bulb as shown in the photograph on this page. Model RT-213 has a remote-mounted setpoint adjustment. See Figure 2, Page 3.



Sizes 1/2" – 1 1/2". Suitable for controlling temperatures of steam heated liquids.

DESCRIPTION OF CATALOGED REGULATORS

REGULATOR NO.		RT-210 (Direct Adjustment)	RT-212 (Direct Adjustment) RT-213 (Remote Adjustment)	RT-214 (Direct Adjustment)	
Valve	Steam Pressure Limit, Lbs. Gage	15	75	75	
	Sizes	1/2" thru 1 1/4"	1/2", 3/4", 1"	1 1/4", 1 1/2"	
	Type	Single Seat	Single Seat	Single Seat, Balanced	
	Ends	Screwed Unions,			
	Trim	Disc	Composition		
		Seat	Bronze	Stainless Steel	Stainless Steel
Body Material		Bronze			

SPECIFICATIONS

Bulb	Bulb Material	1/2" size, stainless steel; other parts, copper.
	Fittings, Material	Brass
Connecting Tubing	Length	10 feet (other lengths on order)
	Material	Copper with brass spiral armor.
Temperature Range	Any specified 60° adjustable range between limits of 35° F. minimum and 170° F. maximum (slightly higher under special conditions).	
Packless Feature	All designs are packless. A monel Robertshaw bellows eliminates packing.	
Temperature Adjustment	Type	Calibrated dial type, mounted on bulb. Locking arrangement provided. Knob and dial, nickel plated.
	Standard Mounting	Mounted on bulb.
	Optional Mounting	On RT-213, 1/2" and 3/4", remote mounted setpoint adjustment is featured. See Figure 2.

HOW TO ORDER

Specify:

1. Quantity
2. Model Number
3. Valve Size
4. Steam supply pressure to valve
5. Temperature range
6. Connecting tube length, if other than 10 ft.
7. Shipping and billing instructions.

NOTE: Loss of thermostatic charge (due to damage to or breakage of tubing, or any leakage in the thermal system) will result in the valve remaining in the open position.

DIMENSIONS, SHIPPING WEIGHTS

Valve Size, Inches		1/2	3/4	1	1 1/4	1 1/2	
Shipping Wt., Lbs.		14	14	15	17	20	
Regulator No.	RT-210	A	2-7/8	2-7/8	2-7/8	2-7/8	
		E	6-3/16	6-7/16	6-1/8	6-1/4	7-1/16
		G	1/2	1/2	1/2	1/2	1/2
		H	14	14	14	14	14
		T	1/2	1/2	1/2	1/2	1/2
	RT-212 RT-213	A	4	4	4	-	-
		E	6	6-9/16	6	-	-
		G	1/2	1/2	1/2	-	-
		H	14	14	14	-	-
		T	1/2	1/2	1/2	-	-
	RT-214	A	-	-	-	3-3/4	3-3/4
		E	-	-	-	6-7/16	6-15/16
		G	-	-	-	1/2	1/2
		H	-	-	-	14	14
		T	-	-	-	1/2	1/2

CAPACITIES (Steam, pounds per hour)

RT-210 Series

Valve Size, In.	Cv (Approx.)	STEAM SUPPLY, PSIG			
		2	6	10	15
1/2	6.0	100	150	190	240
3/4	6.0	145	225	290	370
1	6.0	160	250	320	410
1 1/4	18.0	275	435	550	690
1 1/2	18.0	305	485	610	770

NOTE: Temperature change at the sensing bulb required for full valve travel varies from 4 - 7 degrees F. depending on valve size. Modulating control of 0.5 to 1 deg. is possible.

RT-214

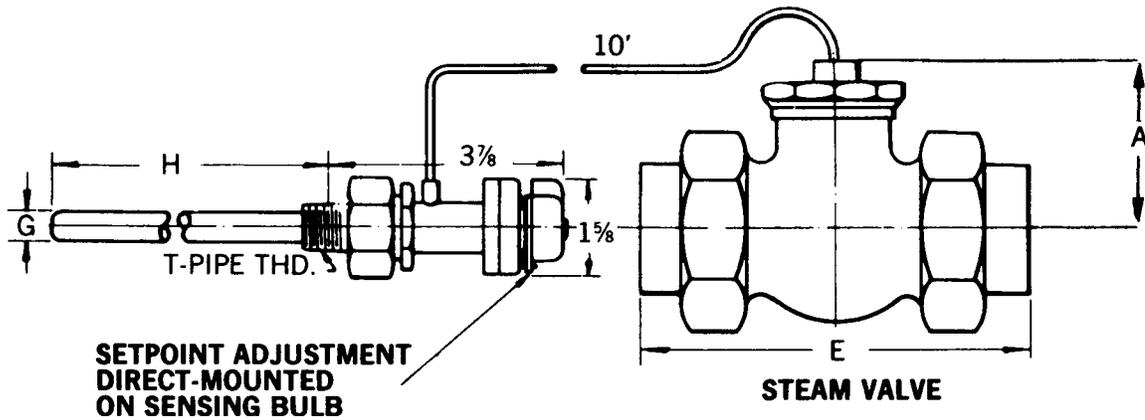
Valve Size, In.	Cv (Approx.)	STEAM SUPPLY, PSIG			
		5	10	25	75
1 1/4	12.0	270	500	940	2000
1 1/2	13.0	280	510	960	2100

NOTE: Temperature change at the sensing bulb required for full valve travel is 11 deg. Modulating control of 1.0 deg. is possible.

RT-212, RT-213 Series

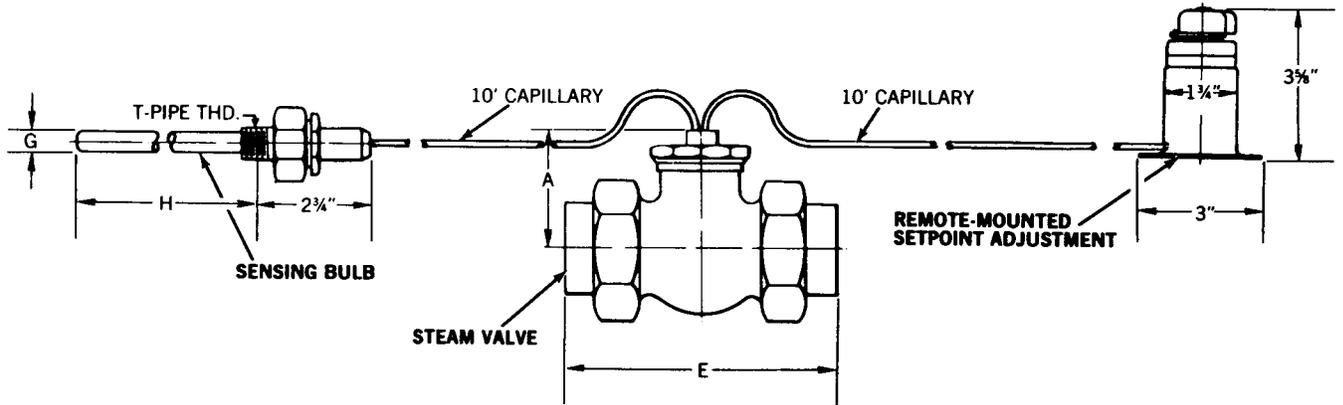
Valve Size, In.	Cv (Approx.)	STEAM SUPPLY, PSIG			
		5	10	25	75
1/2", 3/4", 1"	2.1	135	195	320	495

NOTE: Temperature change at the sensing bulb required for full valve travel is 7 deg. in all sizes. Modulating control of 0.5 - 1 deg. is possible.



RT-210, RT-212, RT-214 SERIES

Figure 1



RT-213 SERIES

Figure 2

Subject: Maximum Control Temperatures
Deg. F. - Hot Chamber Regulators

Tabulated below are the maximum control temperatures for which the various hot chamber regulators can be supplied. This is the "top end" of the adjustable range available, and varies with the available minimum steam pressure (at the corresponding saturated temperature) which will be supplied to the regulator. At pressures below 10#, the cataloged limit (170° F.) will hold. Bear in mind that the steam pressure at the boiler, or at the pressure reducing valve, may not be available at the valve under heavy load conditions.

This will extend the range of use of valves of the hot chamber series.

Minimum Steam Supply Pressure - (PSIG)

INSTRUMENT NO.	SIZE	10	15	20	25	30	40	50	60	70
RT210	1/2"-1"	195°F.	205°F.	210°F.	215°F.	-	-	-	-	-
RT210	1 1/4" & 1 1/2"	170°F.	170°F.	210°F.	215°F.	-	-	-	-	-
RT212	1/2"-1"	185°F.	220°F.	225°F.	230°F.	238°F.	245°F.	250°F.	250°F.	250°F.
RT214	1 1/4" & 1 1/2"	185°F.	185°F.	210°F.						

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