

# Submittal

# RA-2000 Thermostatic Radiator Valves

(Tested and conform to ASHRAE Standard 102-1983)



Job: \_\_\_\_\_ Danfoss Representative: \_\_\_\_\_

Engineer: \_\_\_\_\_ Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor: \_\_\_\_\_ Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Instructions: Fill in quantities in white spaces below.

OPERATOR ↓ VALVE	#1	#2 Tamper Proof	#3	#4 Tamper Proof	#5	#6
Max. 15 psig steam 250 Deg. F HW / 2 pipe LPS 	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"
Max. 15 psig steam 250 Deg. F HW / 2 pipe LPS 	Built-in Operators cannot be used with angle valves.		Built-in Operators cannot be used with angle valves.		1/2" 3/4" 1" 1/4"	1/2" 3/4" 1" 1-1/4"
Max. 15 psig steam 250 Deg. F HW / 2 pipe LPS 	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"	1/2" 3/4" 1" 1-1/4"
Max. 250 Deg. F HW 	1/2" 3/4"	1/2" 3/4"	1/2" 3/4"	1/2" 3/4"	1/2" 3/4"	1/2" 3/4"
Max. 15 psig steam, 1-pipe LPS 						
<b>SPECIFY OPTIONS HERE</b>						

**#1 & #2 Operators with built-in sensor**  
Used when room air can continuously pass over the operator. Operators with built-in sensor should always be installed horizontally. Chosen for its economy and ease of installation.

**#3 & #4 Operators with remote sensor**  
Used when curtains of heavy furniture cover the operator. The remote sensor must be mounted on the wall, away from curtains and approx. 5 ft. above the floor, or on the floor beneath fin type radiation, if free of surface piping.

**#5 Operators with remote setting & separate remote sensor**  
Suited for convectors & baseboard units. The actuator is mounted to the valve while the setting unit is cabinet mounted and the sensor is placed where it will react to circulating room air.

**#6 Operators with combined wall mount setting and sensor unit**  
Used when the valve is inaccessible to the user. The wall mount unit may be mounted approx. 3 to 5 ft. above the floor.

The actuator is mounted to the valve.

**Operators with tamper-proof protection**  
Tamper-proof protection accessories are available upon request for most operator styles which can include tamper-proof covers, screws, cover plates, etc. Consult Danfoss literature for detailed information.

**NOTE:** If additional technical information is required for the proper selection of thermostatic radiator valves, contact Danfoss or our representative in your area.

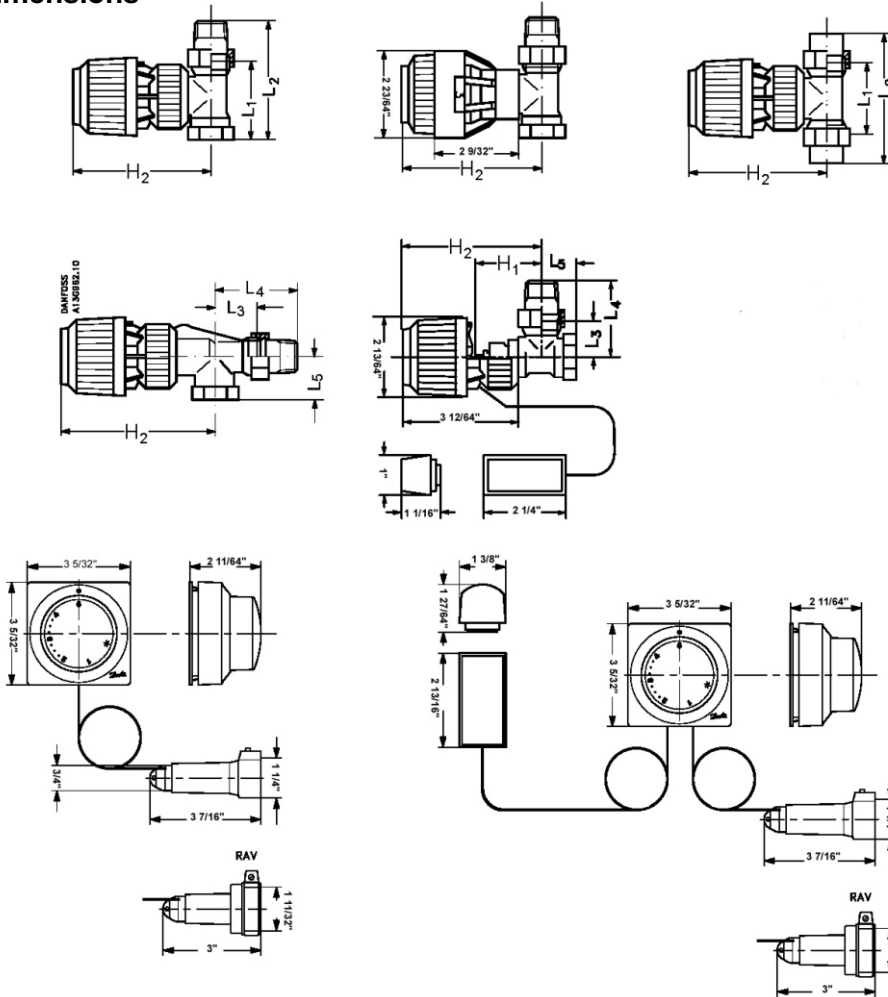
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## Dimensions



## Typical RA 2000 Specifications

The thermostatic radiator valve shall be selected to maintain room temperature within +/- 1 Deg. F. The operator shall be of the bellows design with either a liquid or vapor charge. The operator shall be capable of temperature adjustment between 45 Deg. and 86 Deg. F.

Locking or limiting of the temperature shall be accomplished by the use of limiting pins or rings. The valve shall be of nickel plated brass construction with a fully replaceable packing gland. The gland shall be replaceable while the system is in full operation due to a valve back seat gasket.

The packing gland shall be capable of replacement simply by using only a crescent wrench.

The valve disc shall be constructed of EPDM, capable of withstanding 250 Deg. F temperatures.

The operator shall connect to the valve using a snap-on fast mounting system and secured by an Allen screw.

The thermostatic radiator valve shall be Danfoss or an approved equal.

Valve Type	Connection Type	L1	L2	L3	L4	L5	H1	H2
Straight	1/2" NPT	2 <sup>5</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>4</sub> "				1 <sup>5</sup> / <sub>64</sub> "	3 <sup>3</sup> / <sub>4</sub> "
	3/4" NPT	2 <sup>29</sup> / <sub>32</sub> "	4 <sup>3</sup> / <sub>16</sub> "				2 <sup>1</sup> / <sub>16</sub> "	3 <sup>15</sup> / <sub>16</sub> "
	1" NPT	3 <sup>17</sup> / <sub>32</sub> "	4 <sup>31</sup> / <sub>32</sub> "				2 <sup>1</sup> / <sub>16</sub> "	3 <sup>15</sup> / <sub>16</sub> "
	1 1/4" NPT	4 <sup>1</sup> / <sub>4</sub> "	5 <sup>29</sup> / <sub>32</sub> "				2 <sup>9</sup> / <sub>64</sub> "	4 <sup>1</sup> / <sub>64</sub> "
Angle	1/2" NPT			1 <sup>3</sup> / <sub>16</sub> "	2 <sup>9</sup> / <sub>32</sub> "	1 <sup>1</sup> / <sub>64</sub> "	1 <sup>5</sup> / <sub>64</sub> "	3 <sup>3</sup> / <sub>4</sub> "
	3/4" NPT			1 <sup>11</sup> / <sub>32</sub> "	2 <sup>5</sup> / <sub>8</sub> "	1 <sup>9</sup> / <sub>64</sub> "	2 <sup>1</sup> / <sub>16</sub> "	3 <sup>15</sup> / <sub>16</sub> "
	1" NPT			1 <sup>9</sup> / <sub>16</sub> "	3"	1 <sup>11</sup> / <sub>32</sub> "	2 <sup>1</sup> / <sub>16</sub> "	3 <sup>15</sup> / <sub>16</sub> "
	1 1/4" NPT			1 <sup>3</sup> / <sub>4</sub> "	3 <sup>3</sup> / <sub>8</sub> "	1 <sup>9</sup> / <sub>16</sub> "	2 <sup>1</sup> / <sub>16</sub> "	3 <sup>15</sup> / <sub>16</sub> "
Side Mount Angle	1/2" NPT			1 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>64</sub> "	2 <sup>3</sup> / <sub>8</sub> "	4 <sup>1</sup> / <sub>4</sub> "
	3/4" NPT			1 <sup>11</sup> / <sub>32</sub> "	2 <sup>5</sup> / <sub>8</sub> "	1 <sup>9</sup> / <sub>64</sub> "	2 <sup>7</sup> / <sub>16</sub> "	4 <sup>5</sup> / <sub>16</sub> "
	1" NPT			1 <sup>9</sup> / <sub>16</sub> "	3"	1 <sup>11</sup> / <sub>32</sub> "	2 <sup>3</sup> / <sub>8</sub> "	4 <sup>1</sup> / <sub>4</sub> "
	1 1/4" NPT			1 <sup>3</sup> / <sub>4</sub> "	3 <sup>3</sup> / <sub>8</sub> "	1 <sup>9</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>8</sub> "	4 <sup>1</sup> / <sub>4</sub> "
Double Solder Union	1/2"	2 <sup>5</sup> / <sub>8</sub> "	3 <sup>15</sup> / <sub>16</sub> "				1 <sup>5</sup> / <sub>64</sub> "	3 <sup>3</sup> / <sub>4</sub> "
	3/4"	2 <sup>15</sup> / <sub>16</sub> "	4 <sup>5</sup> / <sub>8</sub> "				2 <sup>1</sup> / <sub>16</sub> "	3 <sup>15</sup> / <sub>16</sub> "

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