



CSDV CONDENSATE SENSING DRAIN VALVE

For freeze protection of condensate systems up to 300 psig (20.7 bar) (2068 kpa)





CSDV – Condensate Sensing Drain Valve

Applications

The Armstrong CSDV is an automatic valve with a thermostatic wax filled capsule. The valve is designed for winterizing of steam tracing, instrument tracing, and condensate return line protection, or other processes requiring protection under 150°F (65°C).

Operation

The CSDV responds only to condensate temperature. After condensate cools to near set-point, the CSDV modulates flow to maintain a constant condensate discharge temperature. The CSDV is wide open at startup for rapid venting and initial heat up. CSDV valves are also self draining after shut-down to eliminate freeze damage. Typical set-points (°F) are 105, 125, 180, 210, and 240.

Advantages

Since the CSDV discharges below steam temperature, the valve maintains a water seal which prevents live steam loss. However such operation may induce condensate corrosion in the process line, therefore, use should be limited to applications such as tracing lines which discharge to drain. The unique ram-type plug and seat provide reliable tight shut-off for longer periods than any other type available. A sized orifice and control port act together as a labyrinth restrictor to keep live steam loss to a minimum on failure. CSDV valves are 100% factory tested.

Design Features

- All stainless steel body, fittings, spring, and plug
- Corrosion resistant for long life
- Narrow temperature band
- Compact, low mass, fast response
- Eliminates live steam loss
- Ram-type plug for reliable tight shut-off
- Downstream actuator for greater sensitivity
- Sensitive to temperature only
- Orifice design limits live steam loss on failure
- Easy installation in any orientation with pipe wrench
- Operating temperatures not affected by pressure
- Wide choice of set-points



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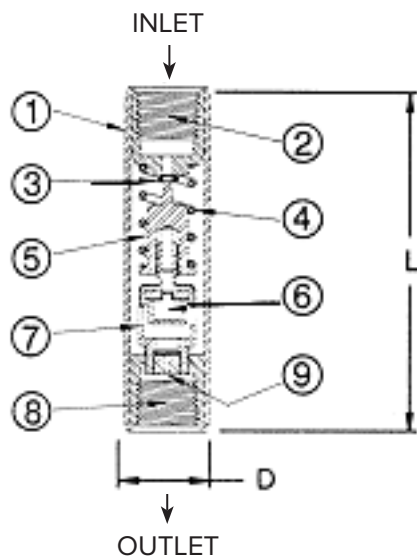
List of Materials		
Item	Name of Part	Material
1	Tubular body	304 Stainless Steel
2	Inlet fitting	303 Stainless Steel
3	Seat seal	PTFE
4	Operating spring	Stainless Steel
5	Ram-type plug	303 Stainless Steel
6	Thermal actuator	FM. Brass *
7	Actuator carrier	FM. Brass *
8	Outlet fitting	303 Stainless Steel
9	Sized orifice **	FM. Brass

* All Stainless Steel models available

** Standard in CSDV valves set over 210°F

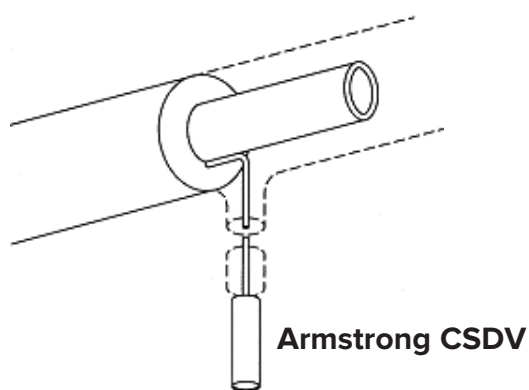
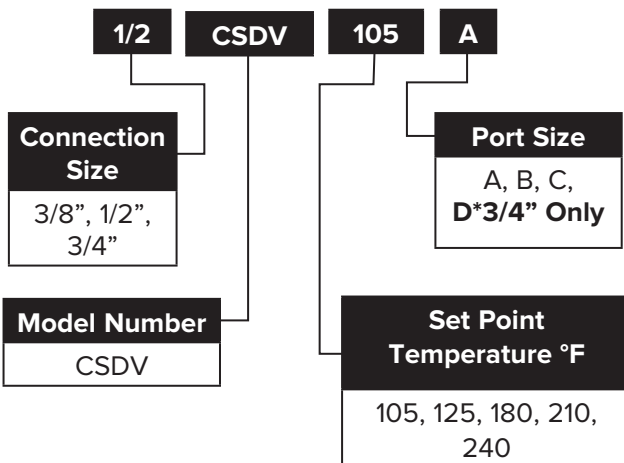
Specifications	
Maximum Operating Pressure	300 psi, 20.7 bar
Maximum Operating Temperature	Saturated Steam Temperature
Standard Set-point Opening Temperature °F	105, 125, 180, 210, 240 (*Range from 40° - 240°)
Flow Coefficient C _v , at Set-Point 3/8" and 1/2" NPT or BSPT (See Capacity Chart 624)	Port Sizes: A - 0.2 (Standard) B - 0.8 (Optional) C - 1.3 (Optional)
3/4" NPT or BSPT	D - 2.0 (Standard)

*Other set-points available with longer lead times and minimum quantities required.



Dimensions and Weights			
Size Tube OD (in)	D in (mm)	L in (mm)	Weight lb (kg)
3/8 or 1/2	1-1/8 (28)	4-1/2 (114)	3/4 (0.31)
3/4	1-3/8 (34)	5-1/2 (140)	1-1/4 (0.54)

How to Order



Steam tracing discharging to drain



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