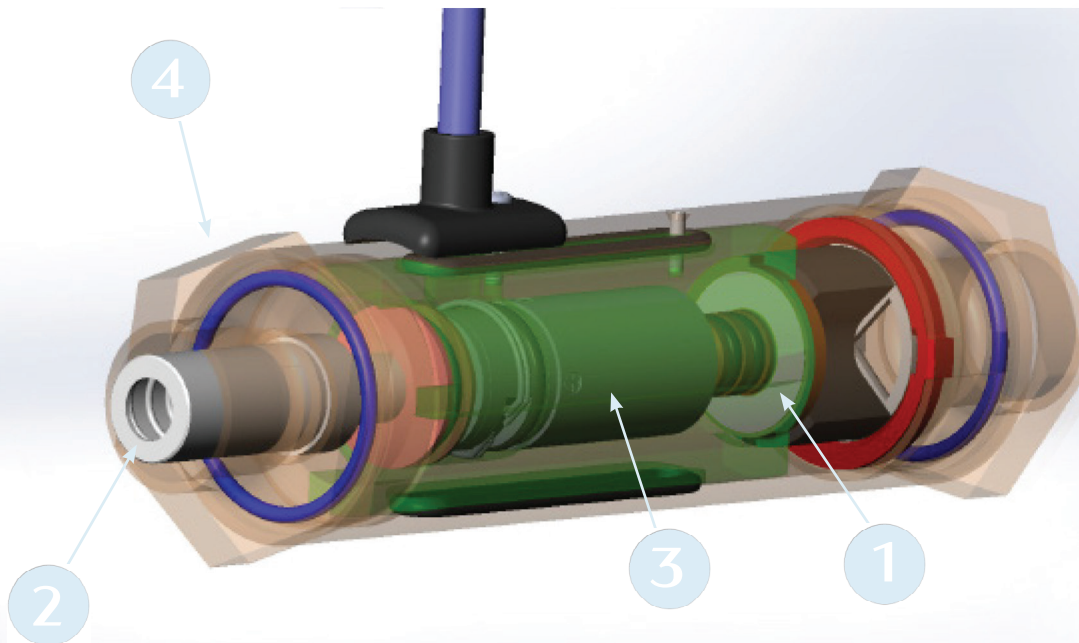


STREAMLINE

Smallest Actuated Valve in the HVAC Industry





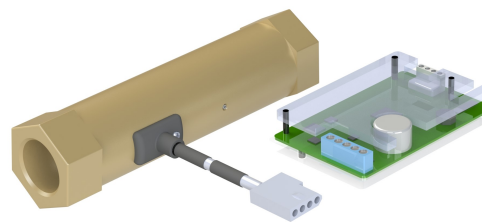
Streamline Actuated Valve Features

Griswold Controls Streamline Valves are the most compact actuated valve on the market with the actuator motor built directly into the valve housing. The **Streamline Control** valve incorporates the original automatic flow limiting cartridge to maintain constant flow even when system pressures change. The **Streamline Zone** valve is for actuated control only. The ceramic disc in the **Streamline Control** and **Streamline Zone** valves provides bubble tight close off against highrise-level system pressures, the highest close off pressure in the industry!

1 Ceramic Disc



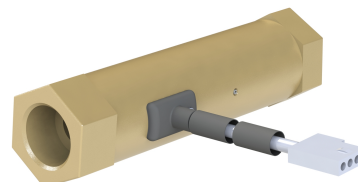
3 Actuator and Remote Electronic Control



2 Flow Limiting Cartridge



4 Housing



Streamline Actuated Valve Benefits

1 Ceramic Disc

- Equal percentage flow openings provide smooth flow control as valve opens
- Smaller than balls so the valve footprint is smaller and therefore shorter
- Will not react to chemical treatment in water
- Greater flow through opening than a comparable ball which means less pressure loss
- Very low torque compared to balls so very small actuator is required
- An alternative to traditional actuated ball or paddle valves
- Highest close off pressure in the industry (250 PSI) with ANSI Class IV Leak By
- Over 100,000 cycles in iron-oxide contaminated water over 900 ppm

2 Flow Limiting Cartridge

- Laser ported for 100% consistency and smooth flow control as pressures change
- Stainless steel design resists corrosion
- Guarantees flow to be +/-5% even as system pressure change

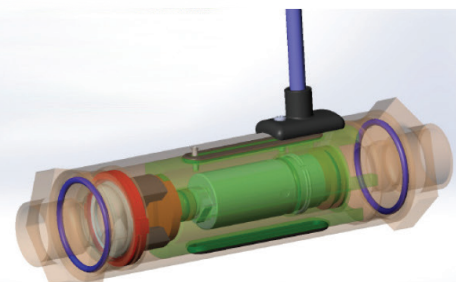
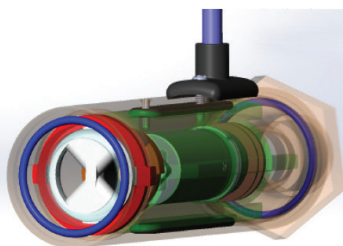
*The Flow Limiting cartridge is only included with the Streamline Control valve. Excludes the Streamline Zone valve.

3 Actuator and Remote Electronic Control

- Motor built into the valve so footprint is shorter
- Long life – tested to over 100,000 cycles
- Multi function actuator allows selection of modulating or on/off in the field which reduces inventory and simplifies order process
- Color Coded LED clearly indicates valve operation and simplifies troubleshooting
- Remote Electronic Control allows valve to be installed in tight spaces at ANY orientation

4 Housing

- Available in lead free brass for potable applications or standard brass for HVAC applications
- ½ or ¾" FNPT or Sweat ends
- Housing is water proof and can be installed in wet applications



Streamline Technical Specifications

Specifications

PSI/Temperature Rating:	400 PSI / 200° F	Body Material:	Forged Brass (Lead Free Brass Available)
Service:	Chilled water, hot water, or water up to 50% Glycol	End Connections:	Brass FNPT or SWT
Flow Element:	2-Way Ceramic Disc	Close Off ΔP:	250 PSI – ANSI Class 4
Cartridge:	AISI Type 304 Stainless Steel	Cv:	Electrically adjustable
	AISI Type 17-7 PH Stainless Steel Spring	Actuator Voltage:	22-35 Vac/Vdc
		Actuator Cycle Time:	52 to 90 sec. (Programmable)

Fail-safe Flowrate at Differential Pressure Chart

SIZE	STROKE	DIP SWITCH SETTINGS		FLOWRATE (GPM) @ DIFFERENTIAL PRESSURE (PSI)											
				2-Position HVAC Apps		HVAC Modulating Apps									
		DIP1	DIP2	0.5	Cv	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	7.0	10.0
1/2" Failsafe	30%	On	On	0.4	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.3	1.6
	50%	Off	On	1.0	1.4	1.7	2.0	2.2	2.4	2.6	2.8	3.0	3.1	3.7	4.4
	70%	On	Off	1.7	2.4	2.9	3.4	3.8	4.2	4.5	4.8	5.1	5.4	6.3	7.6
	100%	Off	Off	2.5	3.5	4.3	4.9	5.5	6.1	6.5	7.0	7.4	7.8	9.3	11.1
3/4" Failsafe	30%	On	On	0.4	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.3	1.6
	50%	Off	On	1.1	1.5	1.8	2.1	2.4	2.6	2.8	3.0	3.2	3.4	4.0	4.7
	70%	On	Off	1.8	2.5	3.1	3.5	4.0	4.3	4.7	5.0	5.3	5.6	6.6	7.9
	100%	Off	Off	3.5	5.0	6.1	7.1	7.9	8.7	9.4	10.0	10.6	11.2	13.2	15.8

Non-Fail-safe Flowrate at Differential Pressure Chart

SIZE	STROKE	DIP SWITCH SETTINGS			FLOWRATE (GPM) @ DIFFERENTIAL PRESSURE (PSI)											
					2-Position HVAC Apps		HVAC Modulating Apps									
		DIP1	DIP2	DIP3	0.5	Cv	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	7.0	10.0
1/2" Non-Failsafe	30%	On	On	On	0.4	1.0	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.3	1.6
	40%	Off	On	On	0.7	1.0	1.2	1.4	1.6	1.7	1.9	2.0	2.1	2.2	2.6	3.2
	50%	On	Off	On	1.0	1.4	1.7	2.0	2.2	2.4	2.6	2.8	3.0	3.1	3.7	4.4
	60%	Off	Off	On	1.1	1.6	2.0	2.3	2.5	2.8	3.0	3.2	3.4	3.6	4.2	5.1
	70%	On	On	Off	1.7	2.4	2.9	3.4	3.8	4.2	4.5	4.8	5.1	5.4	6.3	7.6
	80%	Off	On	Off	2.0	2.8	3.4	4.0	4.4	4.8	5.2	5.6	5.9	6.3	7.4	8.9
	90%	On	Off	Off	2.3	3.2	3.9	4.5	5.1	5.5	6.0	6.4	6.8	7.2	8.5	10.1
	100%	Off	Off	Off	2.5	3.5	4.3	4.9	5.5	6.1	6.5	7.0	7.4	7.8	9.3	11.1
3/4" Non-Failsafe	30%	On	On	On	0.4	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.3	1.6
	40%	Off	On	On	0.7	1.0	1.2	1.4	1.6	1.7	1.9	2.0	2.1	2.2	2.6	3.2
	50%	On	Off	On	1.0	1.4	1.7	2.0	2.2	2.4	2.6	2.8	3.0	3.1	3.7	4.4
	60%	Off	Off	On	1.1	1.6	2.0	2.3	2.5	2.8	3.0	3.2	3.4	3.6	4.2	5.1
	70%	On	On	Off	1.7	2.4	2.9	3.4	3.8	4.2	4.5	4.8	5.1	5.4	6.3	7.6
	80%	Off	On	Off	2.5	3.6	4.4	5.1	5.7	6.2	6.7	7.2	7.6	8.0	9.5	11.4
	90%	On	Off	Off	2.8	4.0	4.9	5.7	6.3	6.9	7.5	8.0	8.5	8.9	10.6	12.6
	100%	Off	Off	Off	3.5	5.0	6.1	7.1	7.9	8.7	9.4	10.0	10.6	11.2	13.2	15.8