

# Griswold Controls Air Handling: “Precisely!”

Griswold Controls’ new 2” automatic Flow Cartridge is the perfect solution for Air Handling Systems. This **100% Stainless Steel Cartridge** is a new development in flow control that makes possible the higher flowrates demanded by today’s Air Handling Systems. The larger piping required for cooling means larger valves. Griswold has designed three different solutions featuring the 2” cartridge: the versatile threaded/sweat IR-IS set, the IB-IY set and the flanged Uni-Flange Valve for Air Handling Units with flow needs up to 170 GPM in the typical 2-32 PSID range. And because the components are from Griswold, they have the know-how of 40 years in the industry built into every design.

Just like its smaller predecessors, the Griswold 2” cartridge gives you absolute control of the fluid flow in any system. The cartridge has only a single moving part, yet responds instantly to even subtle changes in Air Handling System conditions. Within a fraction of a second, it compensates for surges in system pressure. Flow is limited within a broad pressure range at the same rate you have engineered into the system -- no more, no less.

Precisely!

## **PRESSURE RESPONSE**

Whether you are balancing multiple flows, limiting the flow through a system or ensuring a safe minimum flow, you can specify exactly the rate you want within a broad pressure differential range and know that the specified flow rate will be maintained to a  $\pm 5\%$  tolerance.

## **CONSISTENCY**

The new Griswold 2” cartridges feature engineered parabolic openings that are cut to exact specifications by a computer guided laser beam. The openings are precisely recreated every time. This means you don’t have to worry about performance variation with a Griswold Cartridge.

And you never will.

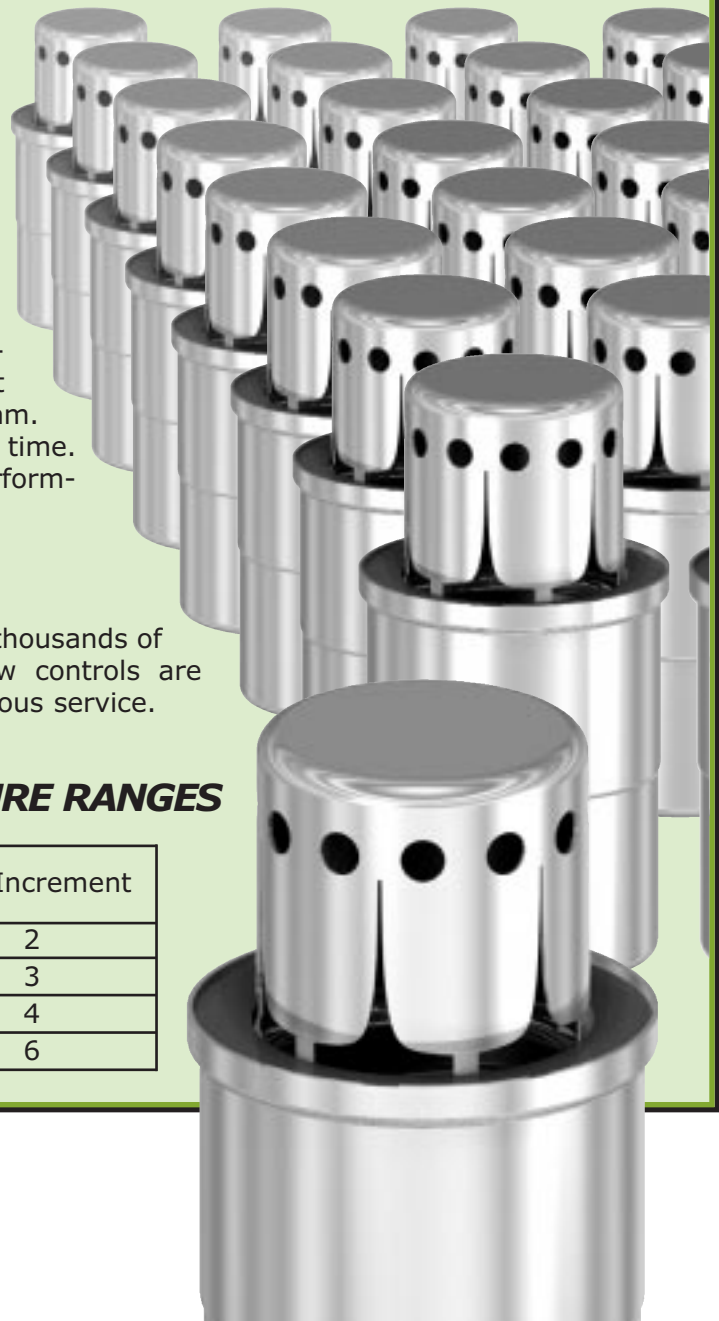
The cartridge is guaranteed for five years. In thousands of installations around the world, Griswold flow controls are functioning flawlessly after decades of continuous service.

## **AVAILABLE FLOWS AND PRESSURE RANGES**

Nominal Range	GPM		Flow Increment
	Min	Max	
1-14	12	38	2
2-32	18	57	3
4-57	24	76	4
8-128	36	114	6



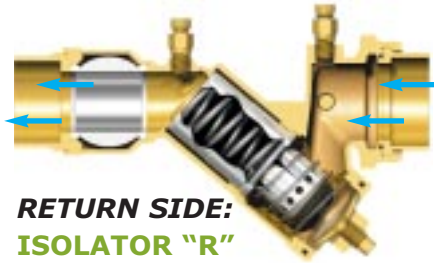
**GRISWOLD  
CONTROLS**



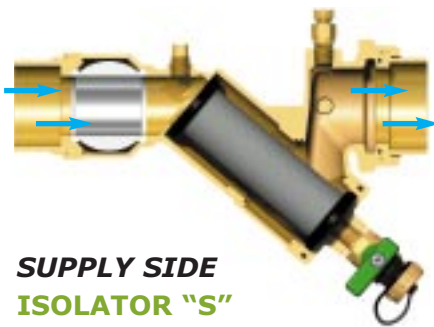
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## IR-IS

The IR-IS is a matched set composed of the Isolator "R" and the Isolator "S" Valves. The IR controls the flow on the return side, while the IS functions as a Y-strainer on the supply side. Because both valves feature integrated ball valves, complete isolation of the coil for removal or inspection is accomplished with a turn of two handles.



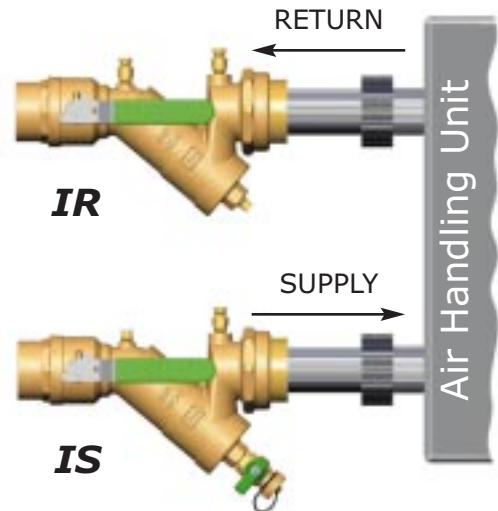
**RETURN SIDE:  
ISOLATOR "R"**



**SUPPLY SIDE  
ISOLATOR "S"**

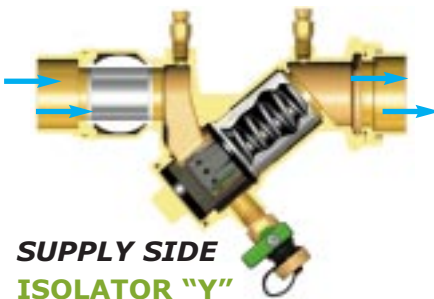
- Precision Stainless Steel Flow Control Cartridge  $\pm 5\%$  Accuracy (IR Valve)
- Brass Body for HVAC Strength & Pressure/Temp Rating
- Y-Pattern Housing Design Allows Inspection or Removal of Cartridge/Strainer Without Breaking Piping Connections
- Integrated High Quality Full-Port Chrome Ball Valve for Isolation
- One Union End with Interchangeable Tailpieces for Inlet /Outlet of Valve Body
- Threaded or Sweat Connections; 1-1/2, 2" Sizes Available
- Large 20 Mesh Stainless Steel Strainer (Cv = 35) (IS Valve)

### RECOMMENDED APPLICATION



The Isolator "Y" is a supply-side automatic flow control valve with integrated isolation ball valve and Y-strainer. The Isolator "B" is a union ball valve. Together, they constitute a complete package, providing isolation to the coil for easy maintenance, a reliable automatic flow control, and a Y-strainer. This multi-function package means cost savings to you in both material and labor.

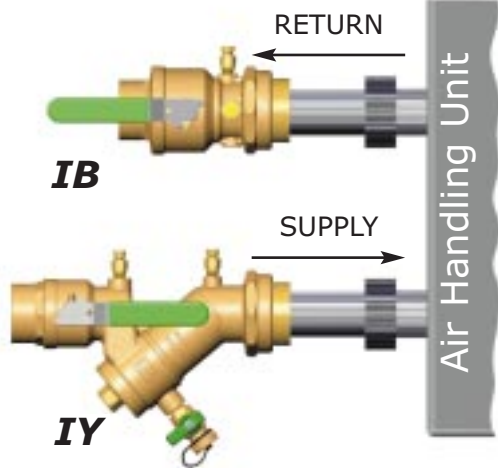
## IB-IY



**SUPPLY SIDE  
ISOLATOR "Y"**

- Precision Stainless Steel Flow Control Cartridge  $\pm 5\%$  Accuracy (Isolator "Y")
- Brass Body for HVAC Strength & Pressure/Temp Rating
- Y-Pattern Housing Design Allows Inspection or Removal of Cartridge/Strainer Without Breaking Piping Connections
- Integrated High Quality Full-Port Chrome Ball Valve for Isolation
- One Union End with Interchangeable Tailpieces for Inlet of Valve Body
- Threaded or Sweat Connections; 1-1/2, 2" Sizes Available
- Large 20 Mesh Stainless Steel Strainer (Cv = 40) (Isolator "Y")

### RECOMMENDED APPLICATION



### AVAILABLE FLOWS AND PRESSURE RANGES

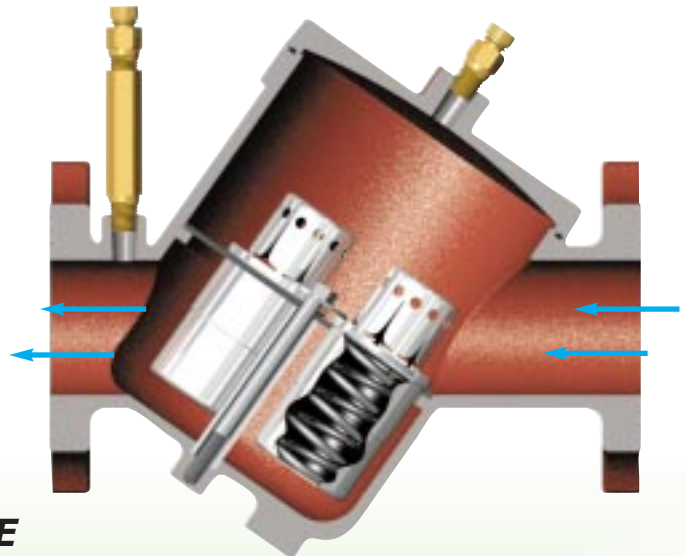
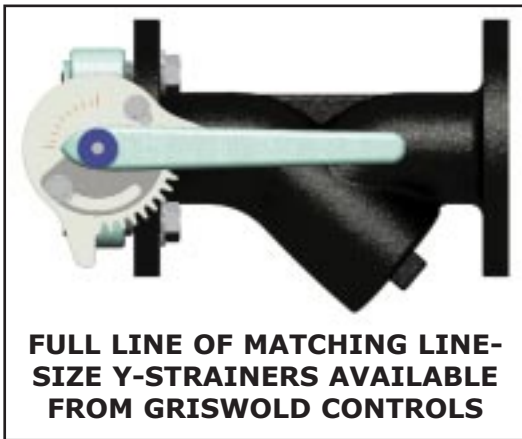
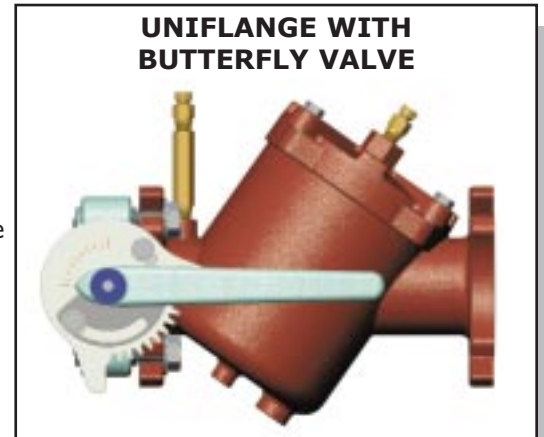
PSID Range (nom)	1-14	2-32	4-57	8-128
Maximum Flow (GPM)	38	57	76	114

# UNI-FLANGE

Like all Griswold flow control valves, the Uni-Flange features easily accessible flow cartridges, which means maintenance or inspection of the valve can be completed without having to break any piping connections. The valve houses up to three 2" stainless steel flow cartridges, allowing for a total maximum flow rate of 171 gpm at 2-32 PSID, encompassing nominal ASHRAE recommended flow rates.

## VERSATILITY

- Precision 100% Stainless Steel Flow Control Cartridge  $\pm 5\%$  Accuracy
- Ductile Iron Body for HVAC Strength & Pressure/Temp Rating
- Y-Pattern Housing Design Allows Inspection or Removal of Cartridge Without Breaking Piping Connections
- Lug Pattern Flanged Butterfly Valve or Flanged Ball Valve Available for Isolation
- Flanged Ends for Mounting to 2", 2-1/2", 3" ANSI 150 lb. Flanged Piping System<sup>1</sup>
- Supplied with Two Pressure/Temperature Test Valves
- Line Transition Possible Through Uni-Flange Body



## AIR HANDLING PRODUCT GUIDE

LINE SIZE	ASHRAE FLOW RECOMMENDATION (GPM) @ 4 FT/100 FT HEAD LOSS	VELOCITY (FEET PER SECOND)	TONS <sup>2</sup> COOLING @ (2.5 GPM/TON)	MBH <sup>2</sup> HEATING @ (20 MBH/GPM)
1-1/2"	27	4.0	10	540
2"	40	3.8	16	800
<b>IR-IS / IB-IY FLOW</b>	<b>@ 57</b>	<b>5.5 (2" LINE)</b>	<b>23</b>	<b>1114</b>
2"	40	3.8	16	800
2-1/2"	75	5.0	30	1500
<b>UNI-FLANGE FLOW</b>	<b>@ 171</b>	<b>7.5 (3" LINE)</b>	<b>90</b>	<b>3400</b>

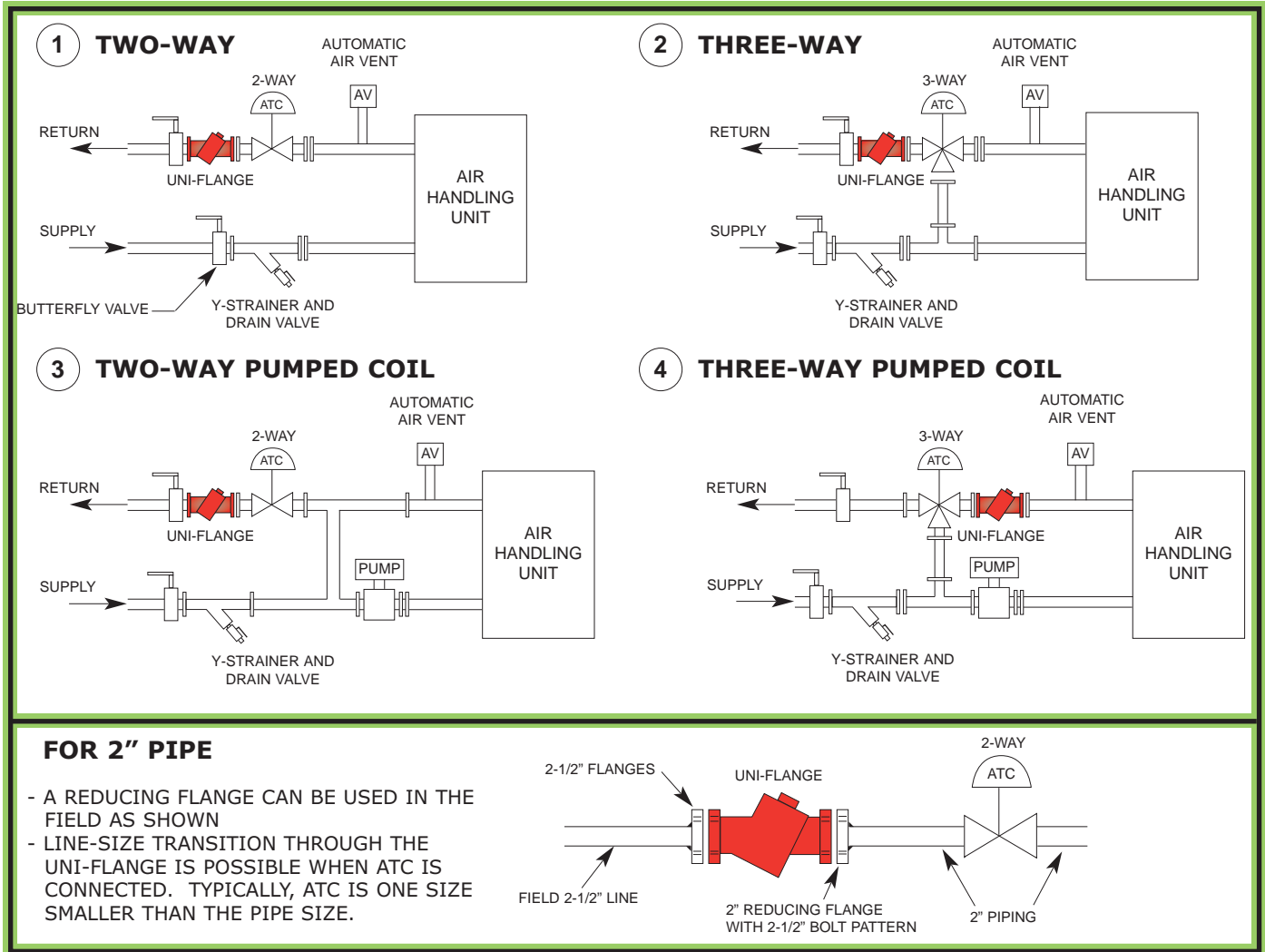
<sup>1</sup> 2" size will use a 2-1/2" reducing flange as shown in drawing next page.

<sup>2</sup> Approximate values based on typical air and water design temperatures and 4 row coils

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## CONFIGURATION OPTIONS

In the diagram below are four different configuration options utilizing the Uni-Flange valve



## COMPETITIVE ANALYSIS

PIPE SIZE		GRISWOLD		FDI	
		MAX FLOW (GPM)	RANGE (PSID)	FLOW (GPM)	RANGE (PSID)
1-1/2"	IR/IY	57	2-32	50	2-32
		76	4-57	70	5-60
2"		57	2-32	50	2-32
		76	4-57	70	5-60
2"	UNI-FLANGE	171	2-32	80	2-32
		228	4-57	120	5-60
2-1/2"		171	2-32	80	2-32
		228	4-57	120	5-60
3"	171	2-32	80	2-32	
	228	4-57	120	5-60	

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