

## INSTALLATION AND OPERATION INSTRUCTION

### Griswold Controls PIM™-A Mini - 15-25mm

The **Griswold Controls Controls PIM™-A Mini** insert is available with three different Griswold Controls valve housings, either:

- Griswold Controls A (1/2", 3/4")
- Griswold Controls AB (1/2", 3/4")

Install the selected valve housing as called for in the design drawings.

INSTALL THE VALVE WITH THE FLOW DIRECTIONAL ARROW POINTING IN THE CORRECT DIRECTION.

The **Griswold Controls Controls A** valve (Model no. A15.X, A20.X and A25.I.K) is available with fixed female-by-female connections, i.e. figure 1.

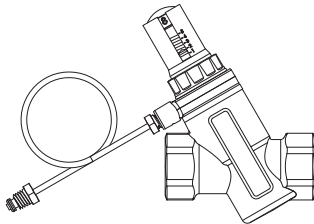


Figure 1

The thread standard for the A model is either ISO 228, which is a straight metric thread (compatible with BS-2779) or NPT threading standard, depending on the product number ordered (except for DN25 which currently is only ISO).

For all threaded connections please clear threads on both valve and piping of debris. Sealant such as pipe dope or teflon is recommended.

The **Griswold Controls Controls AB** valve (Model no. AB15.X, AB20.X, and AB25.X) is similarly available with female-by-female threaded connections, i.e. figure 2.

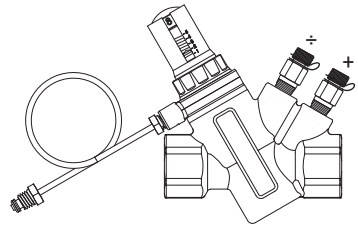


Figure 2

The thread standard for the AB model is equal to the standard available for the A model. For all threaded connections please clear threads on both valve and piping of debris. Sealant such as pipe dope or teflon is recommended.

**Pressure/temperature fittings** (p/t plugs) are available upon request for the AB valve. Before finger mounting the p/t plugs in the body tappings, please seal the threads of the p/t plugs (DO NOT OVER TIGHTEN).

Alternatively to p/t plugs, the valve body can be ordered with plugs for the body tappings. Each plug is sealed by a gasket.

Two types of end connections are available for use with the union nut:

**Threaded (male or female):**

The thread standard is ISO 228 which is a straight metric thread (compatible with BS-2779) or NPT threading standard, depending on the end connections ordered. The threads on both the connection and piping should be cleaned carefully. As these models are union end connected, the union nuts and the end connections should be removed for installation.

O-rings are supplied with the valve body and used to seal the connections. It is recommended to grease the O-rings with silicone grease before installation.

**IMPORTANT:** Never use mineral oil or petrol based grease or oil on the o-rings. Please make sure the o-rings are in place in the o-ring grooves in the inlet and outlet of the valve body when installing the housing.

For all threaded connections please clear threads on both valve and piping of debris. Sealant such as pipe dope or teflon tape is recommended.

**Pressure/temperature fittings (p/t plugs)** are available upon request for the ABV valve. Before finger mounting the p/t plugs in the body tappings, please seal the threads of the p/t plugs (DO NOT OVER TIGHTEN)

Alternatively to p/t plugs, the valve body can be ordered with plugs for the body tappings. Each plug is sealed by a gasket.

**Inserting the insert**

Prior to installing the Griswold Controls Controls PIM™-A Mini insert (supplied from factory in setting 1.0 due to calibration), the system should be properly flushed. A blank valve cover is available to be installed during flushing.

It is recommended that the o-rings located around the PIM™-A Mini insert and at the headnut is lubricated with silicone grease, before the insert is installed into the valve body.

If it is not possible to rotate the PIM™-A Mini insert because of the connection to the capillary tube, it is possible to turn the "connection-ring" independently of the insert.

**IMPORTANT:** never use mineral oil or petrol based grease or oil in the system.

**Setting the valve**

The selected DP is adjusted on the valve (turned from 1.0 and up). To adjust the setting of the valve a specially designed key is used (ACC0001) (figure 4). The key is used to adjust the scale on the top of the insert; the large white numbers are numbered 1.0-5.0 and the red are numbered 1 through 9.



Figure 4

**Measurement**

Please measure the differential pressure as shown in figure 5 while turning the adjustments on top of the valve (figure 4). **Wait until the valve stabilize itself.**

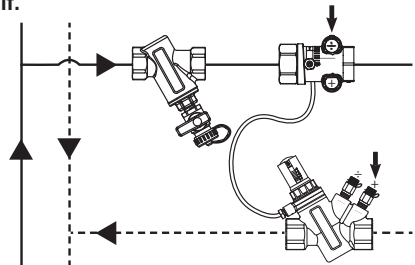


Figure 5

**Capillary tube**

Please do not damage the capillary tube by forcing the tube to compress or 90° bends with small radius.

		Flow (GPM)													
		Griswold Controls PIM™-A Mini													
Dpc [PSI]	1	1,2	1,4	1,6	1,8	2	2,2	2,4	2,6	2,8	3	3,5	4	4,5	5
0.44	1.452	1.892	2.288	2.728	3.124	3.564	4.048	4.532	5.06	5.588	6.116				
0.58	1.144	1.628	2.068	2.464	2.904	3.344	3.828	4.312	4.84	5.368	5.896				
0.73	0.836	1.364	1.804	2.244	2.684	3.124	3.608	4.092	4.62	5.148	5.676				
0.87	0.528	1.056	1.54	2.024	2.464	2.904	3.388	3.872	4.4	4.928	5.456	6.776			
1.02	0.22	0.792	1.32	1.76	2.244	2.684	3.168	3.652	4.18	4.708	5.236	6.556			
1.16	0.066	0.528	1.056	1.54	2.024	2.464	2.948	3.432	3.96	4.488	5.016	6.336			
1.31		0.264	0.836	1.32	1.804	2.244	2.728	3.256	3.74	4.268	4.796	6.116			
1.45		0.066	0.572	1.056	1.54	2.024	2.508	3.036	3.52	4.048	4.576	5.896			
1.60			0.308	0.836	1.32	1.804	2.288	2.816	3.3	3.828	4.356	5.676			
1.74			0.066	0.616	1.1	1.584	2.068	2.596	3.08	3.608	4.136	5.456	6.688		
1.89				0.396	0.88	1.364	1.848	2.376	2.86	3.388	3.916	5.236	6.468		
2.03				0.132	0.66	1.144	1.628	2.156	2.64	3.168	3.696	5.016	6.248		
2.18				0.066	0.44	0.924	1.408	1.936	2.42	2.948	3.476	4.796	6.028		
2.32					0.22	0.704	1.232	1.716	2.2	2.728	3.256	4.576	5.808		
2.47					0.066	0.484	1.012	1.496	1.98	2.508	3.036	4.356	5.588	6.776	
2.61						0.264	0.792	1.276	1.804	2.288	2.816	4.136	5.368	6.556	
2.76						0.066	0.572	1.056	1.584	2.068	2.596	3.916	5.148	6.336	
2.9							0.352	0.836	1.364	1.848	2.376	3.696	4.928	6.116	
3.05							0.132	0.616	1.144	1.628	2.156	3.432	4.708	5.896	
3.19							0.066	0.396	0.924	1.408	1.936	3.212	4.488	5.676	
3.34								0.176	0.704	1.188	1.716	2.992	4.268	5.456	6.82
3.48								0.066	0.484	0.968	1.496	2.772	4.048	5.236	6.6
3.63									0.264	0.748	1.276	2.552	3.828	5.016	6.38
3.77									0.066	0.528	1.056	2.332	3.608	4.84	6.16
3.92										0.308	0.836	2.112	3.388	4.62	5.94
4.06										0.088	0.616	1.892	3.168	4.4	5.72
4.21										0.066	0.396	1.672	2.948	4.18	5.5
4.35											0.176	1.452	2.728	3.96	5.28
4.50											0.066	1.232	2.508	3.74	5.06
4.64												1.012	2.288	3.52	4.84
4.79												0.792	2.068	3.3	4.62
4.93												0.572	1.848	3.08	4.4
5.08												0.352	1.628	2.86	4.18
5.22												0.132	1.408	2.64	3.96
5.37												0.066	1.188	2.42	3.74
5.51													0.968	2.2	3.52
5.66													0.748	1.98	3.3
5.8													0.528	1.76	3.08
5.95													0.308	1.54	2.86
6.09													0.066	1.32	2.64
6.24														1.1	2.42
6.38														0.88	2.2
6.53														0.66	1.98
6.67														0.484	1.76
6.82														0.264	1.54
6.96														0.066	1.32
7.11															1.1
7.25															0.88
7.40															0.66
7.54															0.44
7.69															0.22
7.83															0.066

**Assembly drawing Griswold Controls Controls PIM™-A Mini**

- A: Valve housing (here Griswold Controls Controls ABV1, incl. o-rings for end connections)
- B: Griswold Controls PIM™-A Mini insert
- C: Capillary tube for QuickSet partner valve
- D: Union M8 to 1/4" adaptor (ISO 7/1)
- E: Union end connections
- F1: P/t plug (2 pcs.)
- F2: Plug and gasket (2 of each)
- G: Adjustment keys.

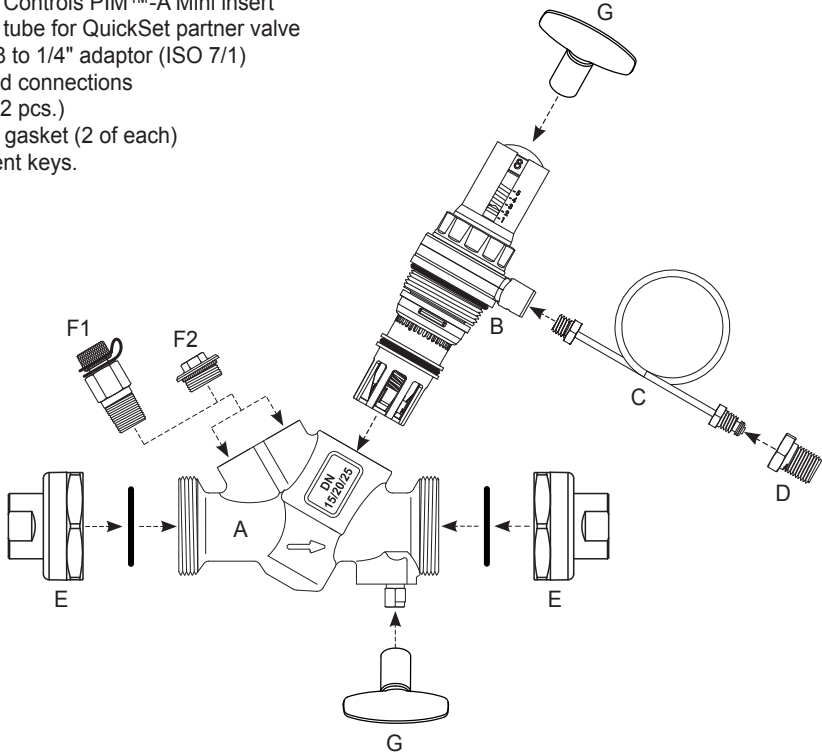


Figure 6

**General**

It is highly recommended to flush the entire pipeline. Following this recommendation before installing the insert, would give the valves longer life time and better flow regulation due to the clean water quality. Suitable flushing caps are available.

If it is not possible to flush the system unless the Griswold Controls PIM™-A Mini is installed, please make sure to adjust the setting to 5.0. Water must always be suitable treated, clean and free of debris and oil. It is recommended that a strainer be installed prior to the valve body to prevent damage or blockage due to debris. Ensure that the valve is not in the fully closed position when filling the system with water.

**Warranty obligation**

Failure to abide by all recommendation as per this installation and operation instruction will void warranty.

**For latest updates please see:  
[griswoldcontrols.com](http://griswoldcontrols.com)**