

IMPORTANT NOTE!

Please refer to F-709 for all general installation and maintenance instructions.

O-RING REPLACEMENT ON UNION O-RING

Assembly must be made with care to protect the O-ring from damage during installation:

- Cleanliness is important for proper seal action and long O-ring life.
- Using silicon oil or grease lubricant at assembly helps protect the O-ring from damage by abrasion, pinching, or cutting. Do not use aerosol products or petroleum based lubricants.
- The O-ring should be placed in the union groove. O-rings should not be twisted or rolled over sharp corners.
- Pipe dope or sealant should never be used on o-rings or in the o-ring groove.

INSTALLATION GUIDELINES

Threaded Valves

Standard threaded flow control valves are tapped with NPT. Seal valves with pipe sealant. Please be advised that using tape on a threaded connection can lead to over tightening and cracks in FNPT components. Torque should not exceed 75 foot/pounds.

Use two wrenches. Secure one wrench on the hex pads nearest the joint being tightened while using the second wrench to screw in the threaded end, thereby preventing the retainer-to-body seal from being broken. When all the pipe connections have been made, proceed with electrical connections if applicable.

ProPress Valves with Smart Connect™ Feature

Please refer to instructions supplied by www.viega.com for installation of all ProPress parts.

Sweat Valves

Griswold products with sweat connections are designed to be soft soldered. When soldering valves with union tailpieces remove the union nut and slide over the pipe. Then sweat the tailpiece to the pipe. Next, install the valve body and tighten the union nut(s). This will prevent damage to the O-rings.

Manual Balance Valves QuickDisc™

1. Valve(s) are ordered by line size. Flow rates are set by adjusting the ball valve, disc or butterfly valve until the differential pressure reading across the valve corresponds to the required flow (GPM). Use the flow table to set position. (Form F-5547)
2. Once the Valve(s) has been installed and the system has been filled and purged, each valve loop must be set to the correct flow setting. Multiple passes are generally required to get the system in balance as the adjustment of each new valve affects the pressure drop (and flow) through the previously adjusted valves.
3. A meter kit can be purchased to take the differential pressure readings. The kit consists of either a 0-100" or 0-300" water column test gauge with the appropriate control valves, hoses and fittings.
4. When all valves in the system have been correctly adjusted, the locking Memory Stop should be set to prevent changes in flow rate. On the QuickDisc, rotate the lever handle down so that the lever handle touches the housing. (It may already be rotated down.) Using your hand rotate the memory stop ring so that the chamfered edge stops rotating at the lever. Don't tighten ring with a tool as it may damage ring. The ring should be snug. Now the lever can be rotated in between closed and set position.
5. The memory stop will allow the valve to be used for isolation and then be reopened to the preset flow position.

Manual Balance Valve Meter Kit

The meter kit is a portable device designed for field measuring or monitoring of differential pressure across a flow element, such as a venturi, for balancing heating and cooling systems.

The 6” test gauge is mounted in a lightweight, extremely rugged plastic case with the appropriate control valves, fittings and 10’ hoses. The 6” test gauge is scaled for 0-100” or 0-300” H₂O.

Connect and use the meter kit with the QuickDisc manual balance valves as follows:

1. Open the balance control valve at the bottom of the meter kit face.
2. Connect the high pressure hose to the upstream port on the QuickDisc. Connect the low pressure hose to the other port. The gauge should show a pressure reading.
3. Open and close the Bleed valves to release any air trapped in the hoses and gauge assembly.
4. Close the balance control valve on meter kit face. The meter is ready to take differential pressure readings.

Setting the QuickDisc

1. Select the correct pressure drop for the desired flow rate for the valve using the flow table. With the system pressure on, and the valve handle in full open position, take a reading of the flow across the venturi (valve).
2. If a reading of zero is present, there may be other valves in the system loop that are closed and will need to be opened to allow flow in this portion of the system. If a reading other than zero is present, use the valve handle to adjust the flow to the correct pressure reading for the unit. Closing the handle will decrease to flow.
3. Repeat this adjustment for all valves in the system, taking three passes to insure accuracy.
4. Use the adjustable Memory Stop to set the opening limit of the valve to the corrected setting. The Memory stop will allow the valve to be used (closed) as an isolation valve and then reopened to the pre-set flow rate without the need for reconnection of the meter kit.

SIGNAL (INCH WC)	FLOW RATE (GPM) AT PERCENT OPEN																	
	1/2" OUTLET									3/4" OUTLET								
	20%	30%	40%	50%	60%	70%	80%	90%	100%	20%	30%	40%	50%	60%	70%	80%	90%	100%
5	0.3	0.5	0.7	1.0	1.4	2.0	2.2	4.0	4.1	0.4	0.3	0.9	1.1	1.5	1.8	2.3	2.4	2.3
10	0.4	0.8	1.1	1.6	2.1	2.8	3.1	5.0	5.2	0.5	0.6	1.3	1.6	2.2	2.6	3.3	3.6	3.5
15	0.5	1.0	1.4	2.1	2.6	3.5	3.9	5.7	6.1	0.6	0.7	1.5	2.0	2.8	3.3	4.1	4.5	4.4
20	0.6	1.1	1.6	2.4	3.1	4.0	4.5	6.3	6.8	0.7	0.9	1.8	2.3	3.2	3.8	4.7	5.3	5.2
25	0.7	1.2	1.8	2.8	3.5	4.5	5.0	6.9	7.5	0.7	1.0	2.0	2.6	3.6	4.3	5.3	6.0	5.9
30	0.7	1.4	2.0	3.0	3.9	4.9	5.5	7.4	8.0	0.8	1.1	2.1	2.9	4.0	4.7	5.8	6.6	6.5
35	0.8	1.5	2.2	3.3	4.3	5.3	6.0	7.8	8.6	0.9	1.2	2.3	3.2	4.3	5.1	6.3	7.1	7.1
40	0.8	1.6	2.4	3.6	4.6	5.7	6.4	8.3	9.1	0.9	1.3	2.5	3.4	4.6	5.5	6.8	7.7	7.6
45	0.9	1.7	2.5	3.8	4.9	6.1	6.8	8.7	9.5	1.0	1.4	2.6	3.6	4.9	5.8	7.2	8.2	8.1
50	0.9	1.8	2.7	4.0	5.2	6.4	7.2	9.0	10.0	1.0	1.5	2.8	3.8	5.2	6.2	7.6	8.6	8.6
55	1.0	1.9	2.8	4.3	5.5	6.7	7.5	9.4	10.4	1.1	1.6	2.9	4.0	5.5	6.5	8.0	9.1	9.0
60	1.0	1.9	2.9	4.5	5.7	7.0	7.9	9.7	10.8	1.1	1.7	3.0	4.2	5.7	6.8	8.3	9.5	9.5
65	1.0	2.0	3.1	4.7	6.0	7.3	8.2	10.1	11.2	1.2	1.8	3.1	4.4	6.0	7.1	8.7	9.9	9.9
70	1.1	2.1	3.2	4.8	6.2	7.6	8.5	10.4	11.6	1.2	1.9	3.2	4.5	6.2	7.3	9.0	10.3	10.3
75	1.1	2.2	3.3	5.0	6.4	7.8	8.8	10.7	11.9	1.3	1.9	3.4	4.7	6.4	7.6	9.3	10.7	10.7
80	1.1	2.2	3.4	5.2	6.7	8.1	9.1	11.0	12.3	1.3	2.0	3.5	4.9	6.6	7.9	9.7	11.0	11.0
85	1.2	2.3	3.5	5.4	6.9	8.3	9.4	11.3	12.6	1.3	2.1	3.6	5.0	6.8	8.1	10.0	11.4	11.4
90	1.2	2.4	3.6	5.5	7.1	8.6	9.7	11.6	12.9	1.4	2.1	3.7	5.2	7.1	8.3	10.3	11.7	11.7
95	1.2	2.5	3.7	5.7	7.3	8.8	10.0	11.8	13.2	1.4	2.2	3.8	5.3	7.3	8.6	10.5	12.1	12.1
100	1.3	2.5	3.8	5.9	7.5	9.0	10.2	12.1	13.5	1.4	2.3	3.9	5.5	7.4	8.8	10.8	12.4	12.4
110	1.3	2.6	4.0	6.2	7.9	9.5	10.7	12.6	14.1	1.5	2.4	4.1	5.7	7.8	9.2	11.4	13.0	13.0
120	1.4	2.8	4.2	6.4	8.3	9.9	11.2	13.1	14.7	1.6	2.5	4.2	6.0	8.2	9.7	11.9	13.6	13.7
130	1.4	2.9	4.4	6.7	8.6	10.3	11.7	13.5	15.2	1.6	2.6	4.4	6.3	8.5	10.1	12.4	14.2	14.2
140	1.5	3.0	4.6	7.0	9.0	10.7	12.1	14.0	15.8	1.7	2.7	4.6	6.5	8.8	10.5	12.8	14.7	14.8
150	1.5	3.1	4.7	7.2	9.3	11.1	12.6	14.4	16.3	1.8	2.8	4.7	6.7	9.2	10.8	13.3	15.3	15.3
160	1.6	3.2	4.9	7.5	9.6	11.4	13.0	14.8	16.8	1.8	2.9	4.9	7.0	9.5	11.2	13.7	15.8	15.9
170	1.6	3.3	5.0	7.7	9.9	11.8	13.4	15.3	17.2	1.9	3.0	5.0	7.2	9.8	11.6	14.2	16.3	16.4
180	1.7	3.4	5.2	8.0	10.2	12.1	13.8	15.6	17.7	1.9	3.1	5.2	7.4	10.1	11.9	14.6	16.8	16.9
190	1.7	3.5	5.3	8.2	10.5	12.5	14.2	16.0	18.1	2.0	3.2	5.3	7.6	10.3	12.2	15.0	17.3	17.3
200	1.8	3.6	5.5	8.4	10.8	12.8	14.5	16.4	18.6	2.0	3.3	5.5	7.8	10.6	12.5	15.4	17.7	17.8
225	1.9	3.8	5.8	9.0	11.5	13.6	15.4	17.3	19.6	2.1	3.5	5.8	8.3	11.3	13.3	16.3	18.8	18.9
250	N/A	4.0	6.1	9.5	12.1	14.3	16.3	18.1	20.6	N/A	3.7	6.1	8.7	11.9	14.1	17.2	19.9	20.0
275	N/A	4.2	6.5	9.9	12.7	15.0	17.1	18.9	21.5	N/A	3.9	6.4	9.2	12.5	14.8	18.1	20.9	21.0
300	N/A	4.4	6.7	10.4	13.3	15.6	17.8	19.7	22.4	N/A	4.1	6.7	9.6	13.0	15.4	18.9	21.8	22.0