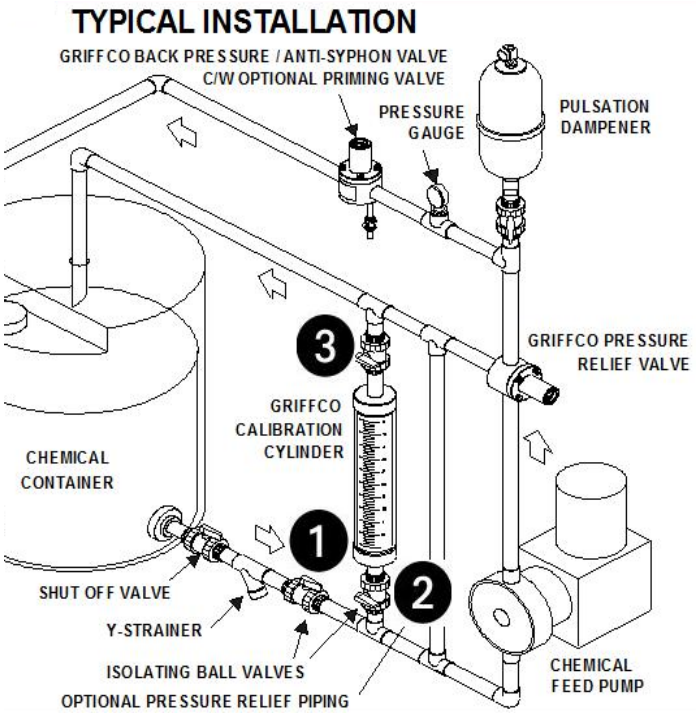
Griffco Valve Inc.
6010 N. Bailey Ave, Ste 1B
Amherst, NY 14226 USA
Phone: 1 800-474-3326
Fax: 1 716-835-0893

PVC CALIBRATION CYLINDERS
Installation & Operation Manual

Installation Instructions:

Install the calibration cylinder in the suction line before the chemical metering pump. Ensure that the cylinder is vertical and level. For Sealed and EZ-Clean configurations, two (2) isolating valves are typically installed as per the drawing below. The top of the cylinder should be vented back to the top of the chemical container or to drain. The cylinder must never be pressurized above 15 psi.

⚠ **Caution! Max. cylinder pressure is 15 psi.**



Operating Instructions:

There are two (2) methods for using the calibration cylinder, measuring volume or flow rate.

Method 1 – Volumetric. Any drawdown time may be used: (Using the mL Scale)

1. Open isolating valves 1 and 2 to fill the cylinder to the top mark on the scale (0 mL). Valve 3 is open for venting.
2. Close isolating valve 1 from the tank on the suction line. Leave isolating valves 2 and 3 on the calibration cylinder open. Note the top needs to be open to vent.
3. Turn on the chemical feed pump for a measured drawdown time (seconds). Turn off the pump or close valve 2 (first) and open valve 1 from the tank. The volume displaced from the cylinder can be read on the left side of the cylinder scale in mL. If not starting at zero, subtract the starting reading from the final reading.
4. To convert the mL reading into LPH or GPH use one of the following two formulas:
   LPH = 3.6 x [mL] ÷ Time (sec)
   GPH = 0.951 x [mL] ÷ Time (sec)
5. If the reading is not the desired flow rate, adjust the pump speed or stroke setting and repeat steps 1-4 until the correct flow rate is achieved.
6. Close valves 2 and 3 for normal system operation and drain, or empty column.

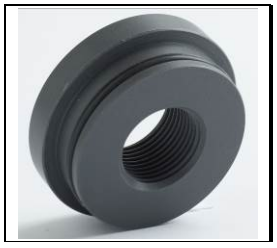
Method 2 - Flow Rate, capacity based on 30 sec drawdown time: (Using the USGPH scale)

1. Open isolating valves 1 and 2 to fill the cylinder to the top mark on the scale (0 USGPH). Valve 3 is open for venting.
2. Close isolating valve 1 from the tank on the suction line. Leave isolating valves 2 and 3 on the calibration cylinder open. Note the top needs to be open to vent.
3. Turn on the chemical feed pump for 30 seconds. Turn off the pump or close valve 2 (first) and open valve 1 from the tank. The USGPH reading is on the right side of the cylinder label. If not starting at zero, subtract the starting reading from the final reading.
4. If the reading is not the desired rate of flow adjust the pump volume and repeat the process until the correct rate of flow is achieved.
5. Close valves 2 and 3 for normal system operation and drain, or empty column.

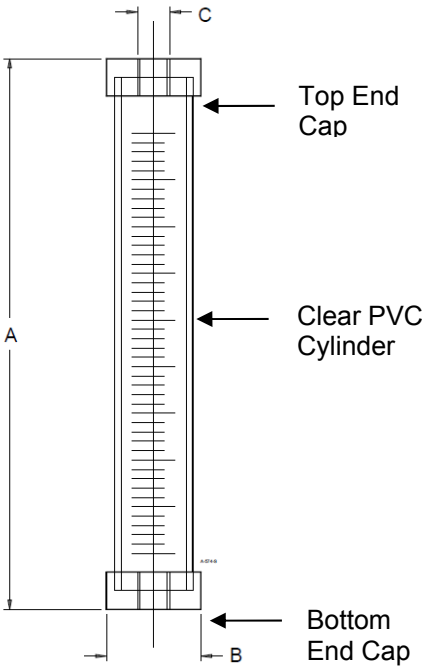
Description of models:

Sealed:
Top is glued to cylinder and contains a vent or overflow connection. (FNPT). Used in applications where there is a positive suction head and a permanent installation is desired.

Loose Cap: (Avail. up to 20,000 mL)
Top is loose and does not have a connection in the top. Dust cover only. Used in applications where there is no positive suction head and the cylinder must be filled from the top.



EZ-Clean: (Avail. 100 – 7000 mL only)
Top is sealed with an O-ring and has a vent connection, but removable for easy cleaning. Used in applications where frequent cleaning is required such as polymer, alum, ferric chloride or chlorine.



Capacity (mL) ◊	Max Flow ▲ (USgph)	(lph)	Scale (mL)	Scale ▲ (gph)	A (in)	B (in)	C (in)
100	3.17	12	1	.1	11	1.5	1/2
200	6.34	24	1	.1	19	1.5	1/2
300	9.51	36	5	.2	13	2.2	1/2
500	15.85	60	5	.2	13	2.5	3/4
1,000	31.70	120	5	.2	22	2.5	3/4
2,000	63.40	240	10	1	20	3.7	1
3,000	95.10	360	10	1	17	4.9	1 1/2
4,000	126.8	480	10	1	37	3.7	1
5,000	158.5	600	10	1	28	4.9	1 1/2
7,000	221.9	840	10	1	38	4.9	1 1/2
10,000	317.0	1200	100	5	25	6.95	2
15,000	475.5	1800	100	5	36	6.95	2
20,000	634.0	2400	100	5	47	6.95	2
30,000	952.0	3600	200	10	65*	9.5*	4
40,000	1,268.0	4800	200	10	77.5*	9.5*	4

▲ Max Flow and gph scale are based on 30 second drawdown
◊ For 60 sec draw down, double capacity in mL or flow size

* Reference only

Codes for Ordering PVC Calibration Cylinders:

CC ☐☐☐☐ ☐ ☐ ☐
1 **2** **3** **4**

1 = Size

0100 – 100 mL
0200 – 200 mL
0300 – 300 mL
0500 – 500 mL
1000 – 1000 mL
2000 – 2000 mL
3000 – 3000 mL
4000 – 4000 mL
5000 – 5000 mL
7000 – 7000 mL
10000 – 10000 mL
15000 – 15000 mL
20000 – 20000 mL
30000 – 30000 mL
40000 – 40000 mL

2 = Top End Cap Style
(Top Cap Only)

Blank – Sealed
L – Loose (up to 20000mL)
EZ – EZ Clean (up to 7000mL)

3 = Connections

Blank – Threaded
S – Socket
F – Flanged
U – Union

4 = Oring Material
(Union & EZ end cap orings)

Blank – FKM (Viton®)
E - EPDM

(PTFE Encapsulated or FFKM are available upon request)

Website: www.griffcovalve.com email: sales@griffcovalve.com