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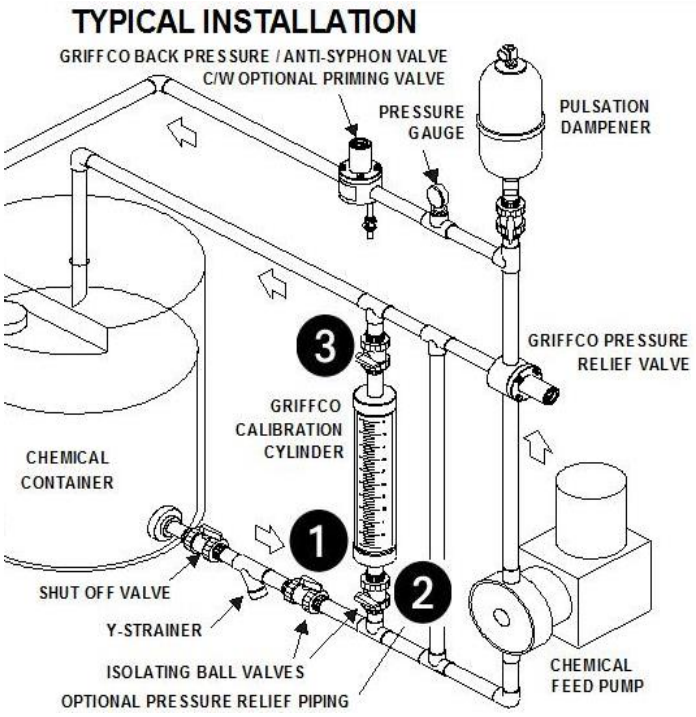
GLASS CALIBRATION CYLINDERS
Installation & Operation Manual

Installation Instructions:

Install the calibration cylinder in the suction line to the chemical metering pump. Ensure that the cylinder is vertical. Two (2) isolating ball valves must be installed in the suction line as per the drawing below.The top of the cylinder should be vented back to the top of the chemical container or to drain. A 12" length of flexable hose should be installed on the top of the cylinder if it is to be hard piped into the system.

⚠ Caution! Max. cylinder pressure is 5 psi.



Operating Instructions:

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

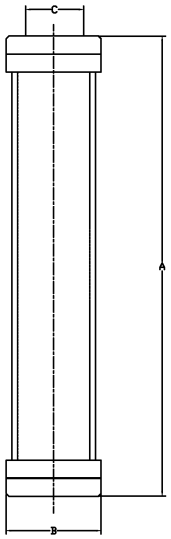
Method 1 – Volumetric. Any drawdown time may be used: (Using the mL Scale)

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.

DIMENSIONS:



Capacity (mL)	Size (USgph)	Scale (mL)	A (in)	B (in)	C (in)
30	.95	1	14	1.4	1/4
100	3.2	2	15	2.5	1/2
200	6.4	2	21	2.5	1/2
500	16	5	15	3.5	3/4
1,000	32	5	27	3.5	3/4
2,000	63	10	27*	5.0	1
3,000	95	10	21	7.5	1 1/2
4,000	127	10	39*	5.0	1
5,000	160	10	29	7.5	1 1/2
7,000	225	10	39	7.5	1 1/2
10,000	320	20	27	9.15	2
20,000	640	20	39	9.15	2

* 2,000mL w/ PTFE End Cap ONLY, Dim A = 26 in
* 4,000mL w/ PTFE End Cap ONLY, Dim A = 38 in

Codes for Ordering Glass Calibration Cylinders:

CCG □□□□□ □

1 **2**

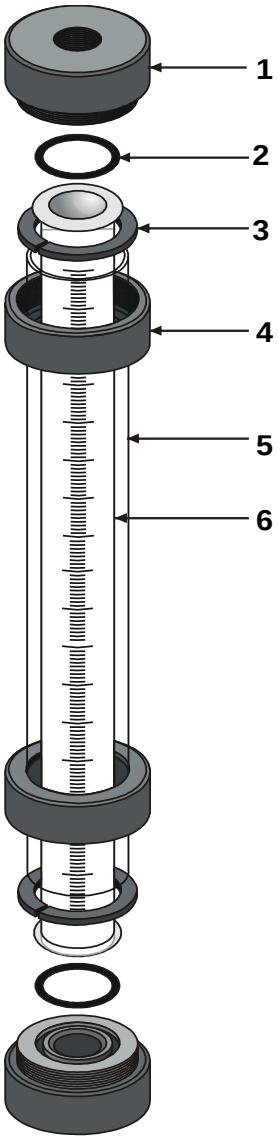
1 = Size

0030 - 30 mL
0100 - 100 mL
0200 - 200 mL
0500 - 500 mL
1000 - 1000 mL
2000 - 2000 mL
4000 - 4000 mL
10000 - 10000mL
20000 - 20000 mL

2 = End Cap Material

P - PVC
CP - CPVC
PP - Polypro
T - PTFE
K - PVDF
M - 316 SS
A - Alloy 20

Component Drawing:



Ref #	Part # - Size - Mtrl	Description
1	PC-001-_____ - ___	End Cap
2	PC-002-_____	O-Ring[2]
3	PC-003-_____	Split Ring
4	PC-004-_____	Nut
5	PC-005-_____	Shield[1]
6	PC-006-_____	Glass Tube

[1]Shield not available on 10 & 20,000 mL sizes.

[2]Viton O-Ring is standard, other by request.

When ordering parts please specify size and material code

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