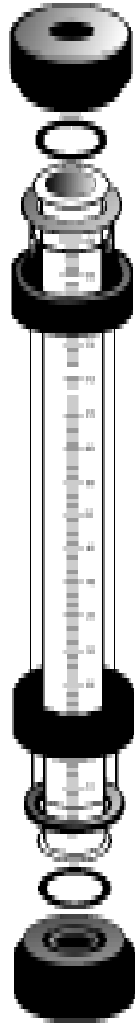


Operating Instructions

ProMinent® Glass Calibration Columns

ProMinent®



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Read the operating instructions before installation and use. The warranty does not cover damages due to faulty operation. Keep for reference and replacement information.

BA GCC 01 2/99 NA Order no. 7750067

Operating Instruction for ProMinent® Glass Calibration Columns

General Safety Considerations

SAFETY INSTRUCTIONS

- Wear protective clothing and glasses when working with or near chemicals.
- Refer to the MSDS for all chemicals being used.
- Use only ProMinent® parts, use of other parts may result in damage to equipment or injury.
- Secure all chemicals and equipment making them inaccessible to children and pets.
- Dispose of all chemicals and waste according to all local, state and federal regulations.
- Do not exceed the maximum operating pressure.

Safety Operating Procedures

UNPACKING

CHECK ALL EQUIPMENT FOR DAMAGE AND FOR COMPLETENESS AGAINST THE ORDER. REPORT INCORRECT ORDERS OR DAMAGE TO THE SELLER IMMEDIATELY.

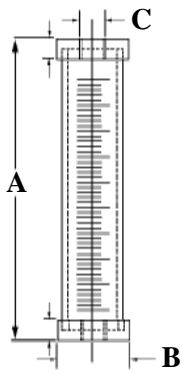
INTRODUCTION

Borosilicate Glass Calibration Columns

The ProMinent® borosilicate glass calibration columns are designed to enhance the performance of chemical feed systems by providing a verification of the flow rate of the chemical feed pump. The calibration columns are constructed of borosilicate glass and offer a choice of PVC, PTFE, PVDF or 316 SS end caps, making these columns suitable for most chemicals. The calibration columns are marked in both gallons and milliliters.

SIZES AND PART NUMBERS

Cylinder size	Fitting size	Model No.	Part No.
100 mL	1/2" PVC	CCG0100P	7302508
100 mL	1/2" PVDF	CCG0100V	7302509
100 mL	1/2" SS	CCG0100M	7302510
200 mL	1/2" PVC	CCG0200P	7302511
200 mL	1/2" PVDF	CCG0200V	7302512
200 mL	1/2" SS	CCG0200M	7302513
500 mL	3/4" PVC	CCG0500P	7302514
500 mL	3/4" PVDF	CCG0500V	7302515
500 mL	3/4" SS	CCG0500M	7302516
1000 mL	3/4" PVC	CCG1000P	7302517
1000 mL	3/4" PVDF	CCG1000V	7302518
1000 mL	3/4" SS	CCG1000M	7302519
2000 mL	1" PVC	CCG2000P	7302520
2000 mL	1" PVDF	CCG2000V	7302521
2000 mL	1" SS	CCG2000M	7302522
4000 mL	1" PVC	CCG4000P	7302523
4000 mL	1" PVDF	CCG4000V	7302524
4000 mL	1" SS	CCG4000M	7302525

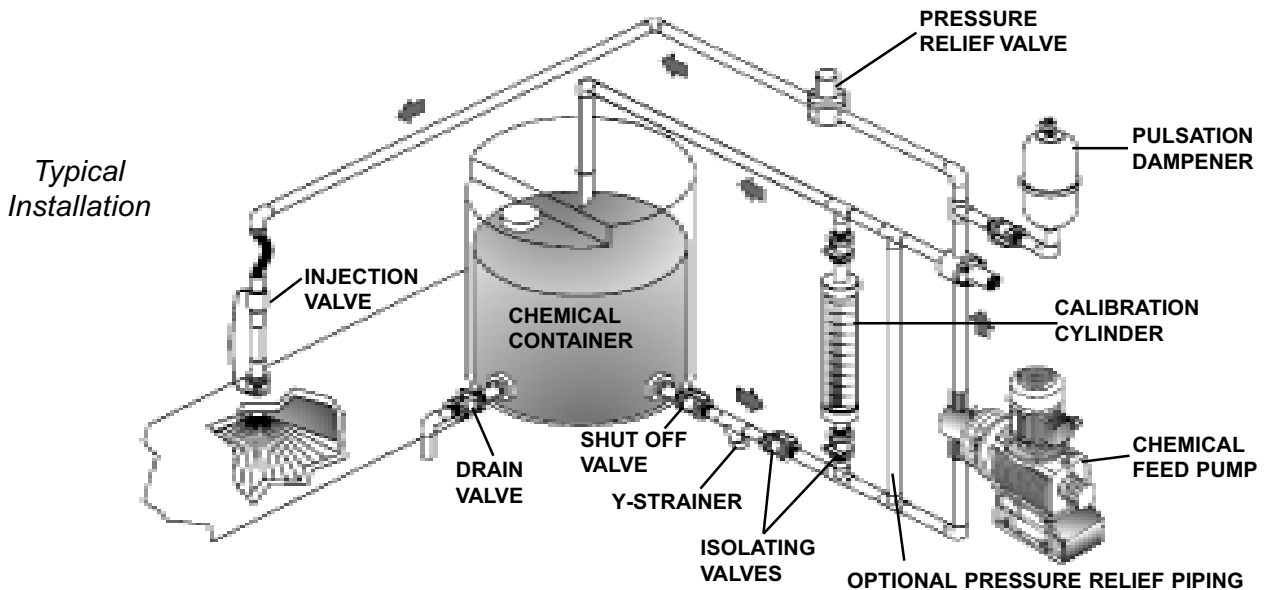


DIMENSIONS

Capacity mL	Size US gph	Scale mL	A in. (cm)	B in. (cm)	C in. (cm)
100	3.2	2	15 (38.1)	2.5 (6.35)	0.5 (1.27)
200	6.4	2	21 (53.3)	2.5 (6.35)	0.5 (1.27)
500	16	5	15 (38.1)	3.5 (8.89)	0.75 (1.90)
1000	32	5	27 (68.6)	3.5 (8.89)	0.75 (1.90)
2000	63	10	27 (68.6)	5.0 (12.7)	1 (2.54)
4000	127	10	39 (99.1)	5.0 (12.7)	1 (2.54)

INSTALLATION

The calibration cylinder is installed on the suction line leading to the chemical metering pump. Isolating valves must be installed in the suction line as shown in the drawing below. The top of the calibration column should be vented back to the chemical tank or to a drain.



Pump Calibration

DESCRIPTION OF CONTROLS AND OPERATION

Note: The maximum pressure that can be exerted on the calibration column is 15 psig (1bar).

- Open the valve from the chemical tank to the calibration column.
- Fill the column to the top mark.
- Close the valve from the chemical tank to the pump.
- Turn on the chemical feed pump.
- Pump chemical from the calibration column for 30 seconds or the amount of time desired.
- Turn off the chemical feed pump.
- The reading on the left of the column is in gph (if the pump ran for 30 seconds).

- Alternatively, observe the volume withdrawn in mL from the mL scale
- Convert to liters per hour or gallons per hour with the following formulas.

$$\text{LPH} = (\text{volume} \div \text{draw time}) \times 3.6$$

$$\text{gph} = (\text{volume} \div \text{draw time}) \times 0.952$$

HELPFUL TIPS

1L = 0.264 gallon

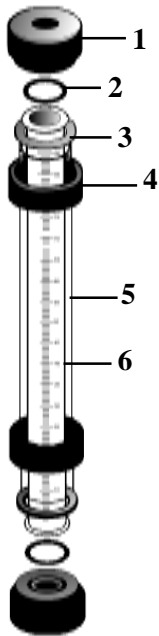
1000 mL = 1 L

1 bar = 14.5 psig

MAINTENANCE

Keep calibration column clean.

Routinely look for leaks or cracks in the column.



SPARE PARTS

Call your distributor for part numbers.

Position Number	Description
1	End Cap
2	O-ring
3	Split Ring
4	Nut
5	Shield
6	Glass Tube

REPAIR SERVICE

Repairs must be done by ProMinent® Fluid Controls. Call your distributor or ProMinent® at (412) 787-2484 for a return goods authorization. **DO NOT** return any goods without authorization. All returned items must be free of hazardous chemicals and clean when returned.

TROUBLESHOOTING

Check for clogs in line if calibration column will not fill.