

Product Information

Calibration Cylinders Series 501



- ++++ Grundfos 501 clear PVC Calibration cylinders + + + + +
- ++++ Large range of sizes + + + + Solid Grey uPVC ends + + + +
- ++++ Full scale calibration in easy to read increments + + + + +
- ++++ Easy to install BSP threaded socket connections + + + + +

Calibration Cylinders

Grundfos calibration cylinders are designed to make calibration of chemical metering pumps simple.

When installed in the flooded suction line of a metering pump, calibrating the pump can be completed on-line with minimal effort. This is the most accurate method of calibration as a working system is the only true way to gauge the output of a pump.

Grundfos calibration cylinders are manufactured from schedule 40 clear uPVC water pipe and are calibrated using the mean average internal dimensions of the pipe standards tolerance guide. The cylinders are scaled with zero at the top so that the volume used is shown at the completion of a calibration run.

A calibration cylinder should be sized to allow the pump calibration trial to be carried out in one minute. Whilst Clear and Grey uPVC have very good chemical resistance to most chemicals, users should determine that the chemical resistance of these materials is suitable for their application before purchasing a cylinder.

Installation of calibration cylinders.

Install the calibration cylinder on the suction line of a dosing pump. The suction line should be flooded from the bulk storage tank so that it fills the cylinder from the tank contents. For installations where the pump is mounted higher than the chemical storage, the calibration cylinder can either be manually filled or by the dosing pump through back flow plumbing.

The calibration cylinder must be installed with an isolating ball valve at the bottom connection and the suction line (from the tank to the pump) must also have an isolation valve fitted at the tank outlet.

The top connection must have a vent line installed, which should run back to the top of the storage tank or at least be higher than the bulk storage container. This

vent line should be large enough so as not to cause a vacuum in the calibration cylinder during calibration.

To fill the calibration cylinder open the bottom ball valve and the tank isolation valve.

Start the metering pump and allow sufficient time for the pump head pressure to find its normal working pressure.

With the pump running, close the tank isolation valve and when the liquid level in the calibration cylinder hits the zero mark start to time the calibration. Stop the pump at one minute and determine the amount of chemical drawn from the calibration cylinder.

Use the formula $\frac{\text{Volume used (ml)} \times 60 \text{ min}}{1000} = \text{L/hr.}$

Alternatively time a set volume (e.g. 200ml) and use the formula, $\frac{\text{Vol (ml)}}{T, (\text{sec})} \times 3.6 = \text{L/hr.}$

Adjust the pump stroke length control or speed and repeat the calibration until the desired output is achieved.

When the correct calibration is completed you can either draw down the calibration cylinder until empty and close the bottom valve or use the cylinder and vent line as a guide to the bulk storage tank level.

Alternatively you can install another ball valve on the top connection of the cylinder. This remains open during calibration. When the calibration is complete pump down the cylinder until it is half empty then close the top valve and leave the bottom valve open. The calibration cylinder then becomes a very effective suction pulsation damper and also a gas bubble collection chamber for gaseous liquids like Sodium Hypochlorite.

Code	Size (ml)	Dimension L x Dia.	Connection Thread
97633345	50	310 x 21.4	1/2" BSP
97633341	100	600 x 21.4	1/2" BSP
97633342	200	1140 x 21.4	1/2" BSP
95711648	500	290 x 60.3	1/2" BSP
95714471	1000	540 x 60.3	1/2" BSP
95714472	2000	530 x 88.7	3/4" BSP
95714473	5000	1150 x 88.7	3/4" BSP
95711148	10,000	630 x 168	1 1/4" BSP
95713327	20,000	1200 x 168	1 1/4" BSP

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