



## Installation

- Provide adequate support. Use rubber inserts to grip the shield without excessive clamping force.
- Do NOT use as a pressure vessel.
- The union nuts have been loosened to reduce stress during transportation. Hand tighten before putting into service to avoid leaks.
- Ensure that top and bottom unions are tightened evenly so that the same numbers of free threads are at the top and bottom unions. Do NOT tighten one union and then the other.

## Operation

- Ensure that the pump is primed and there are no air entrapments in the pump suction side.
- Fill the calibration column to the top mark by either:
  - Isolating the line between tank and column and manually filling the calibration column from the top.
  - Opening the line (Open Valve B) between the tank and the calibration column and allowing the tank to fill the calibration column. Take care that the calibration column cannot overflow.
- Isolate the line between the tank and calibration column (Close Valve B).
- Open the line (Open valve A) between calibration column and the pump.
- Start a pump and a stopwatch simultaneously.
- After 1 minute stop the pump, and from the calibration column read the mL's pumped out over the minute. This is the pump rate expressed in mL/min.
- Divide by 1000 to convert this to L/min and then multiply by 60 to convert to L/H.

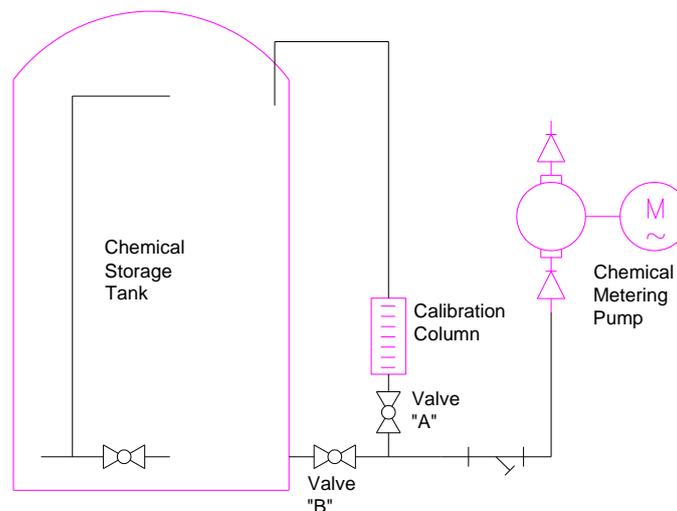


Figure 1: Typical Layout