

## Description of Skid Components

1. Pulsation Dampeners—Helps to smooth out the pulsing of chemical in the discharge piping caused by positive displacement diaphragm pumps. This device should be charged with air to the same amount as the Back Pressure/Anti-siphon Valve.
2. Pulsation Dampener Isolation Valve. This valve is normally open and is used for maintenance of the pulsation dampener (1).
3. Pressure Relief Valves—Valve opens to suction piping when pressure exceeds a preset level. This pressure can be adjusted by closing the discharge Valve (14) and adjusting the valve as described in the Pressure Relief Manual. The pressure setting should be higher than the Back Pressure/Antisiphon Valve (12).
4. Pressure Relief Isolation valve is used for maintenance of the pressure relief valve. Other pumps in the skid can remain in service while this valve is serviced. **THIS VALVE SHOULD ALWAYS BE OPEN WHEN PUMP IS RUNNING.**
5. Metering Pump—Pumps chemicals into the process. There are several styles of pumps used in our skids. They include electronic solenoid diaphragm pumps, mechanically attached diaphragm pumps, hydraulic diaphragm pumps and peristaltic pumps.
6. Calibration Valve is used to fill the calibration column and feed the pump for capacity testing. To use, open valve until calibration column is full. Close the suction valve (7) when calibration column is full. Perform drawdown test as described in the calibration column manual. Return valves for normal operation.
7. Suction Valve is used for isolating the pump from the chemical supply line and during a drawdown test. This valve is normally open.
8. Pressure Relief line returns fluid to the supply line during over pressure (3) or during manual priming (9).
9. Priming/Manual Pressure Relief valve is used to aid in priming the pump and relieving pressure in the piping for maintenance of the system. This valve is normally closed.
10. Calibration Column is used to perform draw down test to verify the pumps capacity. It should be kept empty when not in use. Refer to the calibration column manual for its proper use.
11. Gauge Isolation valve is used for maintenance of the gauge and gauge guard. This valve is normally open.
12. Back pressure/anti-siphon valve—Valve keeps a constant pressure on discharge of pump and stops any siphoning of product into the process. Pressure should be set higher than the maximum discharge line pressure to prevent siphoning.
13. Pressure gauge and diaphragm seal is used to see the pressure while pumping, setting the pressure in the Pressure Relief Valve (3) and setting pressure the Back Pressure/Anti-siphon valve (12).
14. Discharge Valve is used to isolate the pump and piping when performing maintenance on the skid and for setting the pressure Relief Valve (3). This valve is normally open.