

## APPLICATION NOTE - USE OF SEQUENCE VALVE 1018 TO PRIORITY FILL FROM CASCADE BANKS

Use of the 1018 sequence valves as shown permits priority filling of tanks from cascade storage banks without the need for an operator to open and shut valves. Filling of a tank connected to the fill station starts from the low pressure bank. As pressure in the tank being filled approaches pressure in the low bank the lower 1018 valve opens permitting filling from the medium bank. As pressure approaches that in the medium bank the upper 1018 valve opens permitting filling from the high pressure bank. Any number of banks can be used. The number of 1018 valves required is one less than the number of banks. The diagram also shows use of back pressure regulators to priority fill storage banks from a compressor if used.

NOTES: - 1. The 796 orifice must be located upstream of the sensing lines going to the open ports on the 1018 sequence valves and preferably upstream of the 415 regulator. This insures the sensing line sees pressure of the tank being filled. Tank valves and whip shut off valves should be open wide during the fill. 2. The 211 back pressure regulators are set at desired maximum fill pressure of the storage banks or slightly less. 3. The components shown are for compressor systems up to 15 SCFM or so. Larger valves and regulators such as to 635 instead of the 211 and the 1085 instead of the 1018 may be required for larger systems. Consult Aqua Environment for further recommendations. 4. Sensing lines going to the open and close ports of the 1018 valves handle negligible flow so can be small. 1/8" OD tube is OK. 5. Gauges and gauge connections are not shown.

