TOP FEED MANIFOLD SYSTEM OPERATION

The Top Feed Manifold (TFM) system is comprised of a set of manifolds located at the highest point in the drip zone and provided with air release valves to prevent drain down of upper laterals in the zone to lower laterals in the zone, thus preventing saturation of the lower laterals after the pump shuts off. The system provides for the fastest possible pressurization of the zone and the most efficient method of providing drain down control.

Top feed supply manifolds can be used with supply lines fed by zone valves located with the filtration equipment or zone valves located at the same location as the (TFM). The emitters are normally open and when at low pressure they will drain effluent out of the pipe. The effluent will also flow downhill within a lateral when the lateral is made up of several runs located on contour but each being down slope from the previous run. The (TFM) system is designed to make effluent go.

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**TOP FEED MANIFOLDS SPECIFICATION**

The Top Feed Manifold (TFM) system shall include a top feed supply manifold consisting of an air release valve and the number of ½” lateral supply connections equal to the number of laterals in the zone, plus a top feed return manifold consisting of an air release valve, a check valve and the number of ½” lateral return connections equal to the number of laterals in the zone. The manifolds shall be installed on sites with drip field slopes greater than 10%. Manifolds shall be made with pressure rated schedule 40 PVC and shall be sized while considering the pump sizing for the flushing velocity and head loss for the zone.

**GENERAL DRIP SYSTEM OPERATION**

The PERC-RITE® system control panel is equipped with three or four float switches and controls the timed doses to be discharged. The water level must be high enough to overcome the "Redundant Off" (Bottom) float in order for the pump to run. When the water level rises high enough to overcome the "Dose Enable" (second) float and the timer is in a dose enable mode the cycle will initiate. The pump will activate and automatically back flush the disc filters then dose the lead zone. The pump will continue to run for the length of time as set on the pump run timer to provide a complete dose. The system will remain off until the preprogrammed off timer enters a new cycle enable mode, at which time the control will activate another cycle and dose the new lead zone (as long as the "Dose Enable" float is still up). This process will continue until the water level drops below the "Dose Enable" float and the pump run timer has timed out. If the water level rises enough to overcome the "peak enable" (third) float and the peak enable selector switch is on, the system will be cycled at the peak rate. In the event the water level continues to rise enough to overcome the "High Level" (fourth) float, the audiovisual alarm will be activated until silenced by pressing the Test-Normal-Silence switch to the silence position. Each zone will automatically receive a field flush each 25 cycles to clean the drip tubing.