Recirculating Lab Faucet System Design Notes

Duraline™ & Series LG "Gooseneck" Recirculating Lab Faucets

Typical Installation & Scope of a Marquest Recirculating Lab Faucet

The Marquest Scientific Recirculating Lab Faucet is designed primarily for use with a recirculating system which incorporates a non-pressurized storage tank or reservoir. The non-pressurized tank provides the pressure drop for the recirculating flow to continue and return via the recirculating tube. Since the water is returned to the tank, it is not actually consumed.

The objective is to provide a constant flow of DI Water when the point-of-use dispense is not being utilized. This will prevent stagnation of the water and subsequent development of bacterial growth. Continuous flow is one method of combating bacterial growth in UPW systems.

Ideally, the flow rate of the recirculating flow stream is 4.5 feet per second or greater. Maintaining this flow rate will prevent bacteria and other biomass from adhering to internal surfaces. Lower flow rates are still beneficial over a stagnate system.

When piping the recirculating lab faucet in series, a common return line may be used to accept each individual recirculating tube. A small pressure drop downstream of each faucet may be necessary to assure a positive flow through the recirculating system and provide adequate pressure for the main water dispensing.

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