

ADVANTAGES OF FLUOROPOLYMER COIL OVER QUARTZ GLASS TUBE IN UV DISINFECTION OF WATER

- Quartz glass tubes are expensive, fragile and difficult to clean.
- Coil design is more mechanically efficient than tube design whether it be quartz glass or a Fluoropolymer. Coil exposes greater volume of water to UV light in a smaller more compact package. The coil creates added turbulence in the water which is a decided plus.
- The coil design by the compact nature of the package is best suited to small scale units. Larger coil designs can be created but our experience base rests in small scale units.
- Markel has perfected winding of coils with lower ratio of coil ID to tube OD. The closer the coil to the UV light source, the greater the efficiency.
- Based on our experience to date, the use of fittings rather than forming pigtails for connection to the water source is the way to go. Forming pigtails is labor intensive and adds potential failure points.
- Coils of FEP comprise most of our experience. Coils of EFEP offer greater UV transparency and smoother surface finish. MFA is a contender but is more expensive than FEP and EFEP. All coils should be used in conjunction with conventional filters to remove sediments, minerals and odors.
- It has been proven that low dose UV inactivates organisms. Low dose means UV transparency is important.
- UV light at wave length of 254 nano meters does not degrade FEP!