

Buffer Preparation (Liquid – Liquid Mixing)

The Challenge

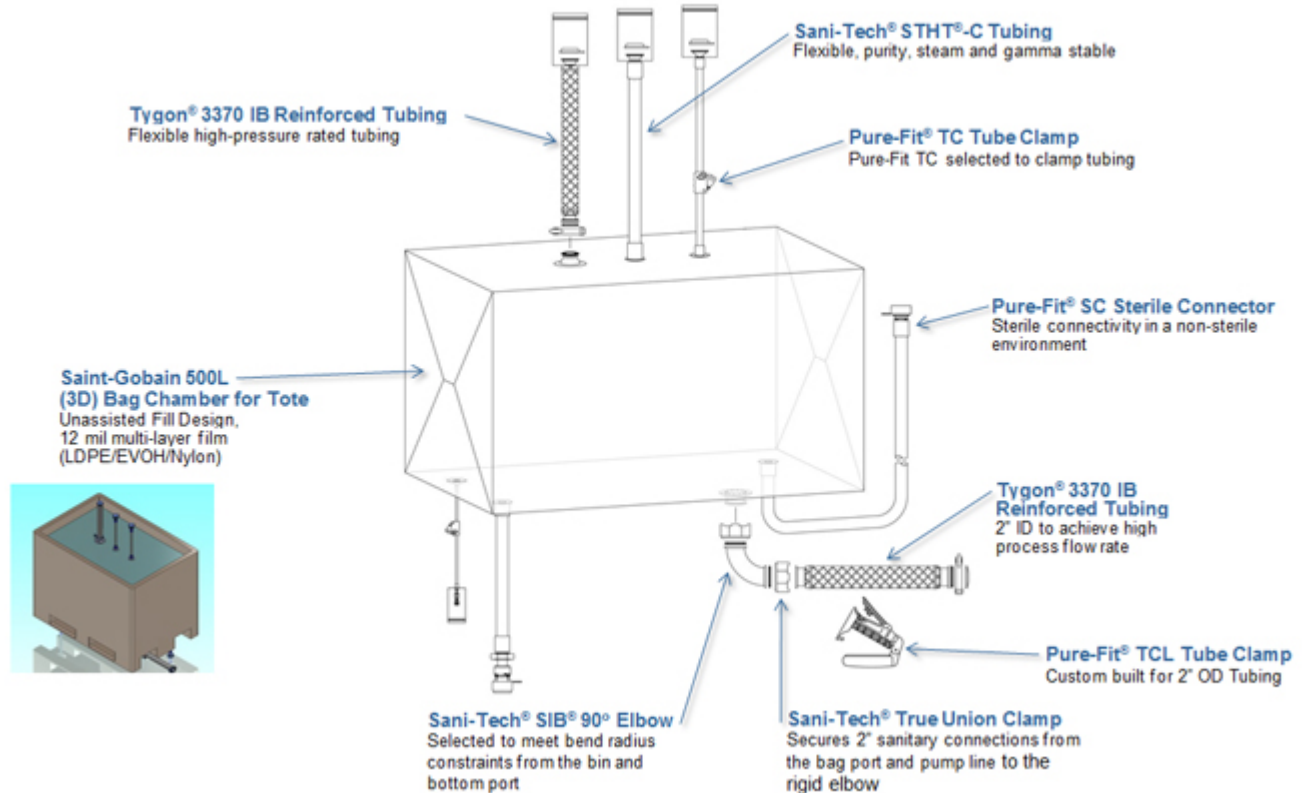
A vaccine developer was looking for a cost effective single-use solution for optimizing a buffer preparation process via liquid-liquid mixing used in their downstream process. Their process involved a buffer dilution step and fluid delivery. The customer's initial concern in implementing a single-use mixing system was that poor liquid-liquid mixing performance may result when compared to their existing multi-use stainless steel system.

The Saint-Gobain Collaborative Design Services' Solution

Saint-Gobain Design Services developed a 500 L Unassisted Fill (UAF) Bag Chamber and recirculation system that diluted the buffer to the desired concentration in less than 3 minutes via liquid-liquid mixing. The 2"ID x 2 1/2"OD bottom outlet drain port achieved a flow rate of up to 150 LPM to meet the developer's desired process flow requirements. Customer used this single-use system for continuous buffer preparation of up to (3) batches. A third party test facility was used to validate the functional performance of this system prior to installation at the vaccine developer's site.

Customer Experience

The vaccine developer experienced a 60% time reduction in buffer preparation resulting in improved process efficiencies and reduced manufacturing costs.



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