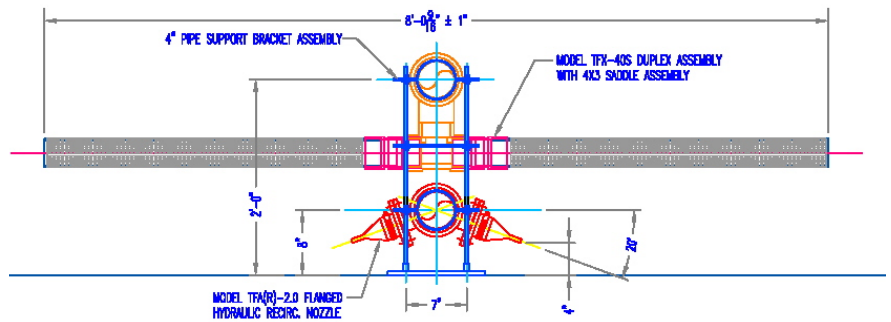


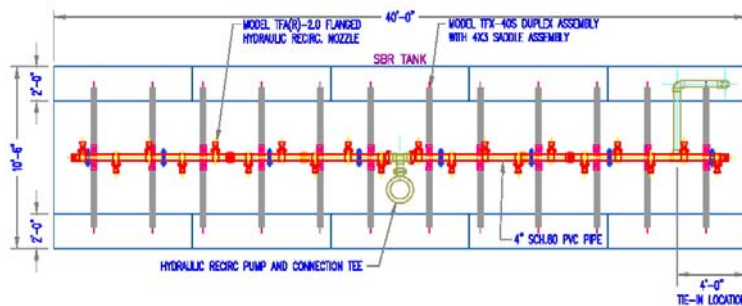
SBR AERATION & MIXING SYSTEMS

“Fine Bubble Aeration System Combined with a Hydrodynamic Mixing System for Aerobic Treatment and Anoxic Mixing”

Sequencing Batch Reactor treatment processes require periods of high efficiency oxygen transfer along with periods of complete mixing within anoxic conditions. Tideflex’s tandem system provides high rate oxygen transfer through fine bubble elastomeric tube style diffusers and high rate mixing through a multi-port hydraulic recirculation and mixing manifold. The fine bubble manifold is connected to a blower unit located outside the tank, operational cycles are controlled by the SBR manufacturer’s control panel. The hydraulic recirculation manifold is connected to either a submersible pump or external dry pit pump, the pump cycles are also controlled by the control panel.



Re-suspension of settled solids after decanting periods is critical to the performance and efficiency of the SBR process. The Tideflex hydraulic



mixing nozzles are oriented toward the bottom of the tank and produce a duplex roll pattern, this provides immediate re-suspension of the settled biomass. During the aerobic cycle the hydraulic mixing system can be operated continuously or periodically to maintain solids suspension; the fine bubbles discharged from the tube diffusers are retained longer within these mixing loops increasing their transfer efficiency and increasing the treatment process performance.

Unique Performance Features

- Non-Clog System
- Enhanced Oxygen Transfer
- High Rate Mixing
- Optimized Tandem Configuration



Tideflex Technologies / Red Valve Company holds the patent for elastomer duckbill diffusers and their incorporation into a multiport diffuser piping system. Any suppliers of systems incorporating duckbill diffusers would need authorization from Tideflex Technologies / Red Valve Company. Soliciting of systems incorporating Tideflex diffusers by others without the consent of Tideflex Technologies constitutes intent to violate the patent protection of this product and is subject to the penalties defined within the Patent Protection Laws of the United States.

US Patent No. 6,016,839 / 6,193,220 / 6,372,140 / 6,702,263
 Canada Patent No. 2,366,252 / 2,385,902; United Kingdom Patent No. 2,326,603