

CHANNEL MIXING & REMOVABLE ASSEMBLIES

“All 304/316 Stainless Steel Construction with Victaulic Brand Rigid Couplings and Isolation Valves”

Inner connecting channels within wastewater treatment facilities are designed to route the wastewater flow from one process equipment zone to the next. These wastewater streams can contain organic materials, biosolids, and inorganic materials (silica, grit, and settleable solids). The hydraulic flowrate through these channels is typically low in linear velocity resulting in the settling and accumulation of solids within these areas.



Wastewater within extended length channels can lose any residual dissolved oxygen concentration which can result in a significant oxygen uptake when the flow stream enters a biological treatment vessel disrupting the equilibrium of the treatment process. Low oxygen levels and the accumulation of organics can result in anaerobic decay producing undesirable by-products such as hydrogen sulfide and methane gases which produce offensive odors and adversely effect aerobic processes throughout the treatment train.

Implementing coarse bubble aeration within these zones will eliminate the potential of solids accumulation as well as provide sufficient dissolved oxygen to maintain an aerobic environment. Typically, these channels are not designed with the capability to easily dewater and maintain because they service numerous process treatment areas, therefore it is important to consider aeration

and mixing systems that account for these aspects.



The Tideflex Channel Mixing Assemblies are designed to be top lifted from the channel for inspection and lowered back into place without the requirement for dewatering the channel. The Tideflex check valve diffusers provide backflow prevention of the process fluid and solids, as well as, are oriented to discharge against the channel floor to maintain suspension of the heaviest type of solids. The assemblies are constructed of modular components providing flexibility for installation into all channel configurations, and contain Victaulic Brand rigid couplings and isolation valves – recognized to be the best in the industry.

Process Applications

- Inner-Connecting Channels
- Aerated Grit Tanks
- Sludge Holding Tanks
- Junction Boxes

Unique Performance Benefits

- Pre-Fabricated, All Modular Assemblies
- Lift-Out Removable Assemblies
- Maintenance Free System
- Eliminates Solids Accumulation
- Provides Aerobic Conditions



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