



The UltraTab is designed for turbulent flow applications where a high degree of mixing is required in a compact space.

Superior Performance

In turbulent flow mixing/blending applications, the UltraTab provides a combination of compact installation space, complete blending in short distances downstream of the mixer, and low pressure drop through the element.

Independent studies from the British Hydraulic Research Group (BHR) shows the UltraTab produces a Coefficient of Variation (CoV), which is a measure of mixing degree, lower than 0.05 at a distance of 3D downstream from the mixer. The UltraTab provides the lowest pressure drop per degree of mixing of all models tested by BHR.

Efficiency

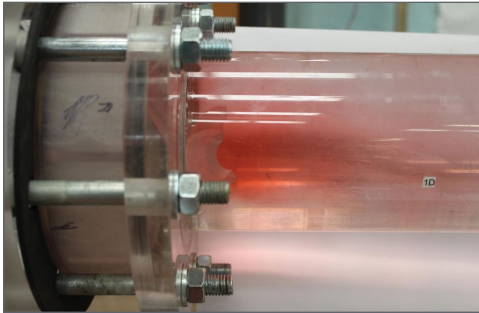
- Integral wall injector upstream of the mixing element forces the additive through the high energy dissipation region created by the mixing element which provides superior mixing efficiency
- Low pressure drop through the UltraTab element enhances energy efficiency of the process and saves pump energy
- Compact design and short mixing length saves pipe lengths and optimizes plant layout

Application Versatility

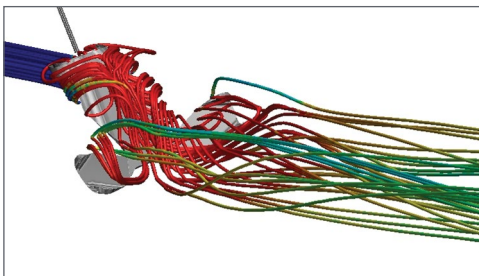
- Additive ratios from 1:3 to greater than 1:10,000
- Turbulent eddies from the single element produce intense and rapid mixing of the bulk flow
- Integral wall injector provides simple and effective means for additive injection compared to centerline injectors which can impede the main flow, increase pressure drop, and increase in fouling
- Multi-point injectors are optional for mixing several additives to the main flow
- Increased mixing performance in comparable space as “wafer” type designs with substantially lower pressure drop
- Correlations supported by third party verification and optimized by internal Application Engineers for your process

Typical Applications

- **Water Treatment Applications**
 - pH Adjustment
 - Chemical Injecting
 - Acid Dilution
 - Mixing Flocculation Agents
 - Coagulation Processes
 - Sodium Hypochlorite
 - Chlorination Dechlorination
- **Desalination Applications**
 - Brine Mixing and Dilution
 - Chemical Injection
 - Anti-Scalant Blending
 - Flocculation and Coagulation Dosing
 - pH Adjustment



Turbulent flow through the UltraTab provides energy efficient mixing in short distances



Chemicals are injected up stream of the UltraTab to guarantee flow through the highest energy dissipation zones as seen in red

Turbulent Blending

Turbulent blending is the mechanism for mixing in many applications such as water treatment and desalination plants. Oftentimes, there are installation space restrictions, pressure drop limitations, and pipe run limitations inherent in the application. The UltraTab mixer optimizes all three of these over competitive designs.

Additives are injected upstream of the element and are charged into the high energy dissipation zone of the mixing. The single tab element provides extremely low pressure drop as compared to other designs, and the mixing is completed to a maximum 0.05 CoV level in less than three pipe diameters downstream of the element. The CFD picture shows the turbulence created by the element and the photo shows the rapid mixing of the additive into the main flow.

Product Specifications

Sizes Available

- Sizes range from 2" to 60"+ (50 to 1500mm+)
- NPT or flanged injectors

Material Selection

- Carbon steel
- Stainless steel
- Coated carbon/316 stainless steel
- FRP

Configuration Options

- Multi-injection ports
- Spool piece with flanged or weld prep ends
- Element extension for lower CoV requirements