

Statiflo has an extensive range of motionless mixing products and solutions:

Statiflo is the leading specialist in motionless mixing and laminar flow heat exchange technology. The techniques were developed in the early 1970s. Since then we have continuously developed and improved the technology, delivering its benefits to virtually every industry worldwide.

Statiflo is the only international mixer specialist able to offer true global expertise. We have over 1500 customers in more than 90 countries, including high profile names in all process industries – endorsing our primary position in the field.

The principle of inline motionless mixing is simple material – liquids, gases or even solids, passing through custom engineered mixing elements are efficiently processed to achieve precise, predetermined requirements. There are no moving parts, no tanks and virtually no maintenance. Statiflo Motionless Mixers save space and energy.

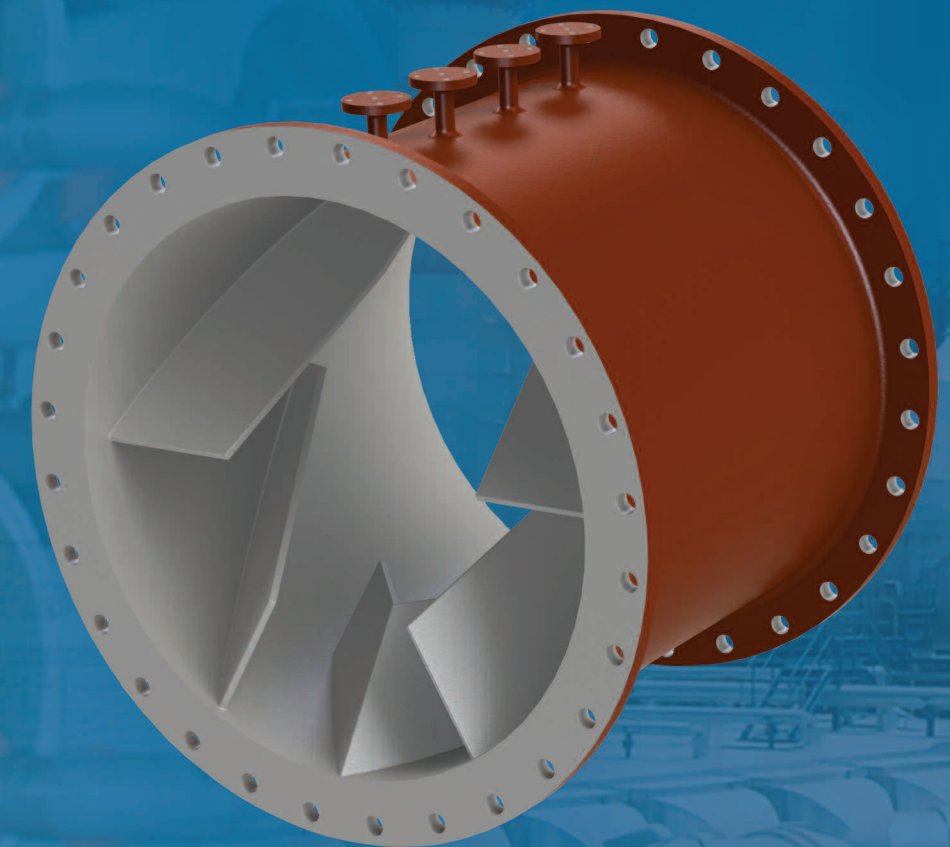
In addition to the DesalMixer, our range includes:-

- STT, STS, STL & STM element motionless mixers for liquids, gases and solids in pipes
- STMC open channel mixers
- NR & NRC non-ragging mixers for pipes and open channels
- GDS gas dispersion systems
- STX laminar flow heat exchangers
- STMD enclosed duct mixers
- In-bend mixers
- Spray mixers
- Gas Tee mixers

With low capital cost and extremely low running cost, you'll find that Statiflo Motionless Mixers offer fast payback. You really can't afford to mix using any other technology.

The Statiflo DesalMixer

for pre-treatment and post-treatment dosing applications in desalination processes



The Statiflo DesalMixer

Designed specifically to meet the special requirements of the global desalination industry

In 30 years Statiflo has evolved into a world leading supplier of static or motionless mixers with the widest range of original and innovative designs for all process industries. The very latest techniques for design and modelling have been used to develop the Statiflo DesalMixer (DSM) for turbulent flow dosing and blending applications in the pre-treatment and post-treatment stages of desalination processes.

The Statiflo DSM provides the highest mixture quality with minimum dosing of additive(s), eliminating overdosing to enhance downstream separation efficiencies and membrane lifespan. The requirement for dosing lances with small additive release holes, or internal baffles, has been eliminated.

The Statiflo DSM has been independently tested for pressure drop and mixture quality (variation coefficient, CoV) by BHR Group, world leaders in fluid engineering, research & consultancy. Mixers have been tested at industry realistic fluid velocities and additive ratios and demonstrated to achieve better than industry standard mixture quality.

Applications

Pre-treatment applications for minimising biofouling, scaling and membrane plugging:-

- | | |
|----------------|--------------|
| inlet blending | pH control |
| disinfection | anti-scalant |
| coagulation | flocculation |

Post-treatment applications

- | | |
|------------------|------------------|
| general blending | remineralisation |
|------------------|------------------|

(Contact Statiflo for information on pipe and open channel mixers for protecting the coastal environment by diluting concentrated brine before sea outfall).

Features & Benefits

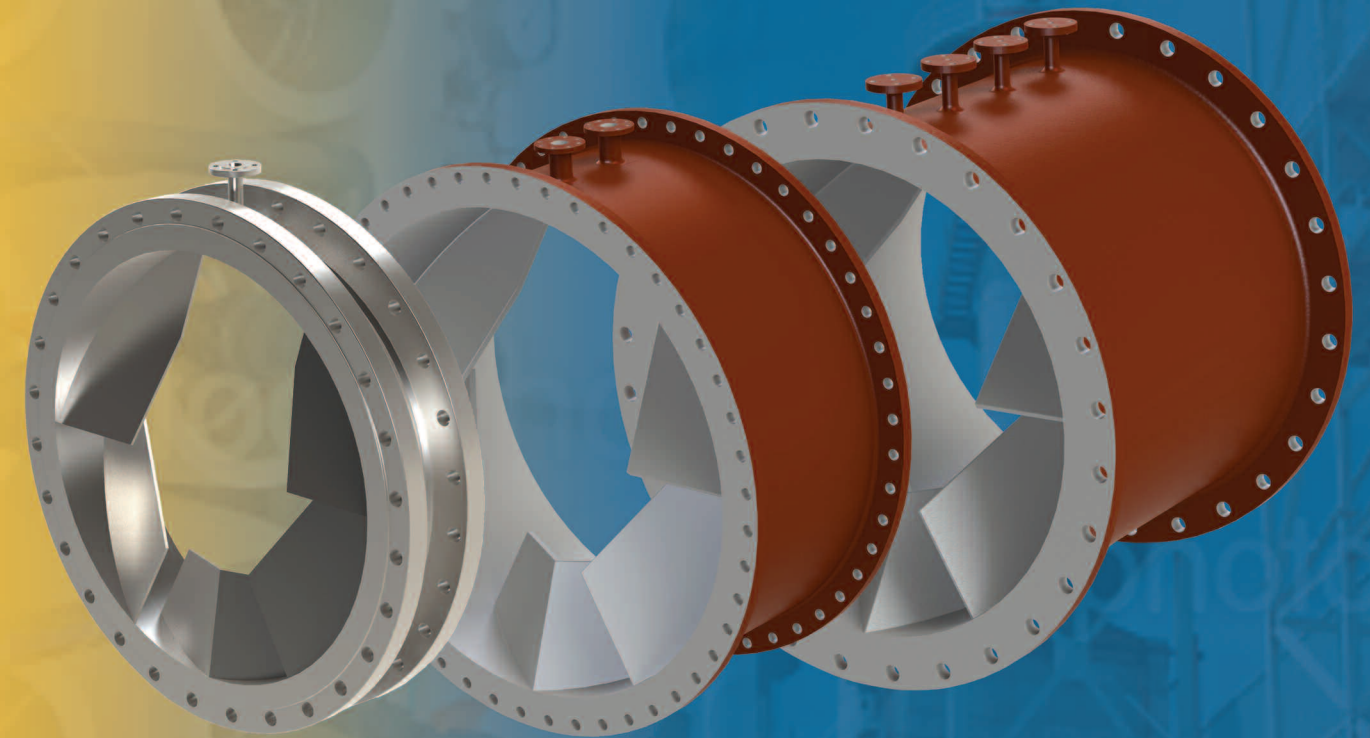
- 3 versions, ultra short length (0.25D), standard length (0.5D) and extended length (1.0D) – allowing ‘tuned’ mixer selection for both rapid (highest headloss) and slow mixing (lowest headloss) duties (e.g. coagulation and disinfection)
- High mixture quality is achievable up to as close as 3 diameters downstream, independent of ratio of mainstream to additive stream flowrates
- Single and multiple injection options. The internal con figuration diverts and swirls the mainstream into the additive release zone for efficient mixing without the need for internal spargers or baffles. Undiluted additive is released at the pipe wall at the top of the mixer.
- Low pressure drops – up to 70% less than other ‘short’ mixer designs
- Custom engineered versions for insertion in customer’s piping.
- Available in all industry standard materials of construction
- Simple, robust configuration requiring virtually no maintenance
- Available in all standard and custom diameters from 300mm to several metres
- No internal lances
- No small additive release holes to eliminate the possibility of blocking/plugging
- No need for standby injectors
- Short length – low installed cost



with kind permission of Tom Pankratz



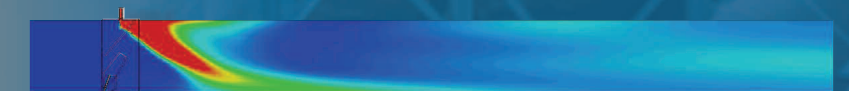
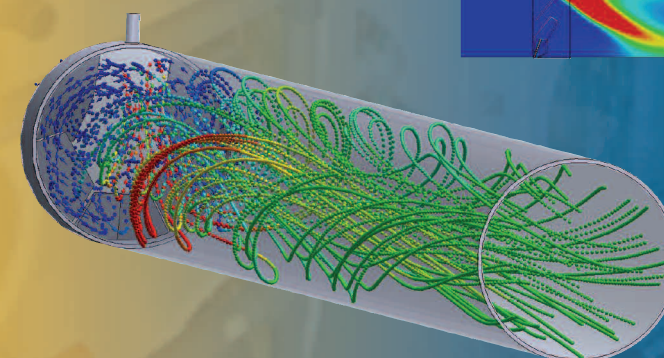
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Ultra short length DSM 0.25D

Standard length DSM 0.50D

Extended length DSM 1.0D



CFD study of mixing of 1000:1 additive