

Kestrel Static Mixers

Motionless Pipeline Mixers for Liquid Pipeline Applications



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Easy installation, accurate process results, maintenance free.

Static mixers, also called motionless or inline mixers, are a unique type of mixer that operates without a motor or driving part. They are used to blend two or more liquids into a homogeneous mixture or to inject a metered liquid into a continuous process stream.

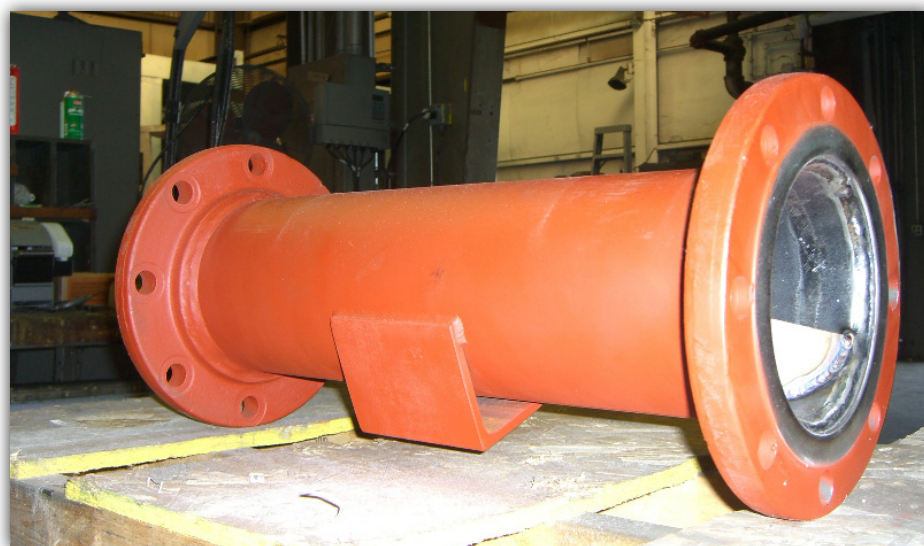
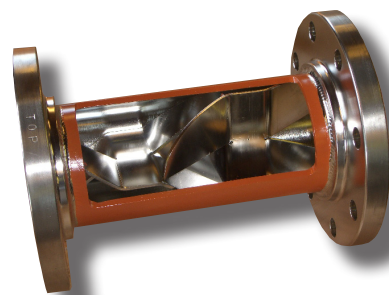
Kestrel static mixers provide easy installation, reliable process results, economy and virtually no maintenance for a wide range of industries and applications. Available in a variety of sizes, construction materials, and end flange options they can be customized to suit your processing applications.

Every Kestrel Static Mixer provides these benefits:

- Easy installation
- High quality, cost effective mixing
- Long, maintenance-free life – no moving parts to wear out
- Self-cleaning design – saves time and money
- Low operating costs – no energy expense
- Can be used in explosion proof areas

Typical Applications:

- Mixing
- Blending
- Liquid dispersion
- Emulsion formation
- Chemical reactors
- Laminar-flow heat transfer
- Mass transfer
- Gas dispersion



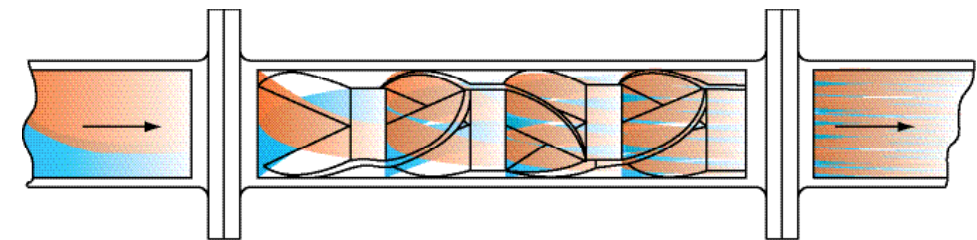
Static Mixing

Kestrel static mixers contain precision elements designed to modify the product flow and create specific splitting, rotating and mixing patterns to ensure optimal mixing and homogenization based on application requirements. Reliable and cost effective to operate, each mixer is guaranteed to produce a predictable process result.

Mixing Principle

The mixing operation is based on splitting and then diverting input streams via a series of elements positioned in a pipe housing. A single element consists of two semi-elliptical plates perpendicular to each other.

The sequence of elements results in systematic mixing of liquids flowing through the tube. Each mixing element directs the flow radially toward the pipe walls and back to the center. Alternating elements provide additional velocity reversal and flow division, increasing the mixing efficiency. All material is continuously and completely mixed, eliminating radial gradients in temperature, velocity and material composition.



Low Viscous Fluids

Mutually soluble low viscous fluids mix using the process of flow reversal. These liquids can be sufficiently mixed using a relatively small number of elements.

High Viscous Fluids

Mixing of high viscous fluids involves division of flow and radial mixing.

Dispersion of Liquids

Dispersion is possible through the process of radial mixing, even for immiscible low viscous liquids, such as water and oil.

Laminar Blending

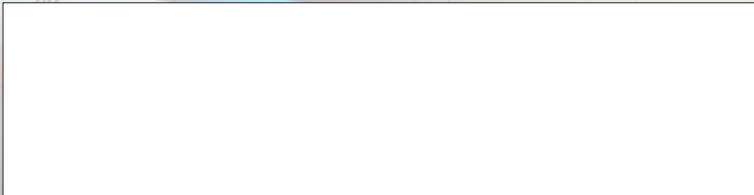
Alternating elements continually divide, extend, and reorient the stream producing complete mixing with minimum pressure drop.

Turbulent Blending

Circular patterns created by flow reversal at each element intersection enhance random dispersion resulting in rapid mixing.



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