Static Mixer / Motionless Mixer / Inline Mixer

ENVIFAB EQUIPMENTS

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Static Mixer

Static mixers can be applied to a wide range of process operations, including dosing, dispersion, laminar flow heat exchange and emulsion formation. They offer many key benefits for combining liquids, gases and powders and they are tried, tested and trusted in many different industries. Mixing action is achieved by the continuous splitting, extension and transportation of the components. Motionless mixers use a series of precisely configured mixing elements to process the components. Differences in concentration, temperature and velocity are equalized over the flow cross-section. Mixers are supplied as simple plain ended pipe sections, flanged with multiple injectors and sampling points, fitted in bends, or in square or rectangular section for ducts and open channels. They are manufactured in a wide range of materials, including carbon steel, stainless steel, exotic alloys, GRP, uPVC, cPVC, PTFE, etc

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Static Mixer

Benefits:

- Static mixers deliver a high level of mixing efficiency, therefore the consumption of dosed chemicals and formation of byproducts can be dramatically reduced.
- They eliminate the need for tanks, agitators, moving parts and direct motive power and they allows to gain highly efficient mixing with low energy consumption.
- The energy required for mixing is efficiently extracted as pressure drop from the fluid flow through the elements. Mixers are invariably installed in existing systems without reducing the capacity of existing pumps.
- The installation is very easy, no special skills are required other than normal engineering skills.
- Mixers have no moving parts and are virtually maintenance free.
- Static Mixers are available in all standard pipe sizes and, in the case of open channel designs, are available in any size with no upper limit.
- Each Static Mixer is carefully designed to meet the specific requirements of each application.

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Helical Static Mixer

It is most suitable for use in small diameter turbulent flow and laminar flow applications where the mixing task is simple and where it's characteristic features of low pressure drop and open geometric structure are best for the specific application.

Its mostly used for the Highly Viscous Material.

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PTFE Lined Static Mixer

- PTFE static mixers are excellent for strong acid and corrosive chemical applications.
- PTFE (Teflon) has great chemical resistance, but poor physical strength. PTFE mixers either need to be used at lower hydraulic pressures, or if a higher pressure mixer is needed, a PTFE lined carbon steel or stainless steel pipe system is used.
- Elements are Available with SS with 1mm Teflon Coated or Halar Coating.

Typical applications include:

- acid dilution
- corrosive chemicals

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PP Static Mixer

- Polypropylene is also good for the mixing of wastewater with the Other Dosing chemicals.
- PP Static mixer used where low Pressure and Low Temperature mixing is done.
- PP Static mixer is economic solution compare to the other material and widely used where mixing is done at low pressure and Ambient Temperature.

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HDPE Static Mixer

HDPE Pipe is strong, durable, flexible and lightweight compare to other metal pipes.

Chemical resistance and non-stick surface characteristics nearly eliminate scaling and pitting,

HDPE pipe will not rust, corrode, tuberculate or support biological scale or growth, and has superb chemical resistance compared to traditional pipe materials.

HDPE performs exceptionally well in mining, dredging and similar applications, outwearing many more costly piping materials, and offers excellent corrosion resistance to corrosive acids, bases and salts.

HDPE is also unaffected by bacteria and fungi, offering resistance to many organic substances.

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UPVC Static Mixer

- UPVC Material is widely used in water and wastewater treatment Plant as well in Industrial RO plant for the Piping.
- UPVC Static mixer used where higher Pressure and Temp up to 60 Degree.
- UPVC Static mixer is economic solution compare to the other material and widely used.
- Fast Delivery of Static mixer compare to Other Material.
- Customized fittings available like as flanged, socket end, Threaded and Union Connection available.
- Its also available in Clear / Transplant Pipes.

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FRP Static Mixer

- FRP static mixers are excellent for strong acid and corrosive chemical applications.
- FRP Static mixer are used in corrosive atmosphere.
- It’s suitable for higher pressure and higher temperature application.

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PVC FRP Static Mixer

- FRP static mixers are excellent for strong acid and corrosive chemical applications.
- FRP Static mixer are used in corrosive atmosphere.
- Inside Part of the static mixer is PVC and Elements are also available in PVC/FRP/PTFE Material.

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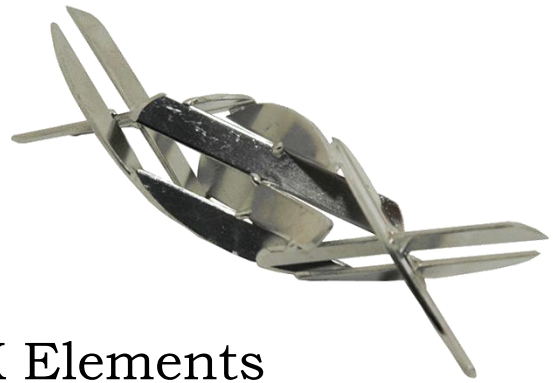
Static Mixer Elements

EHX Elements

EYX Elements



EXX Elements

ENC Elements

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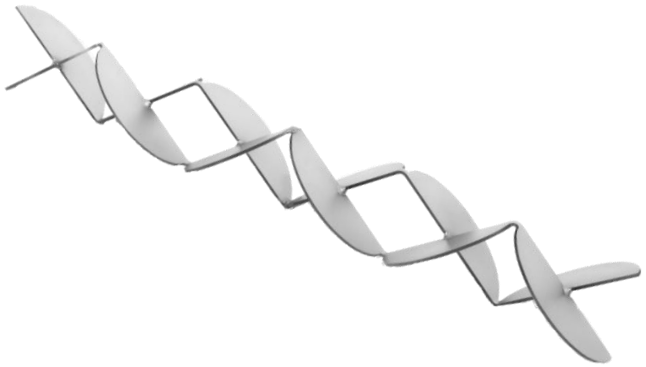
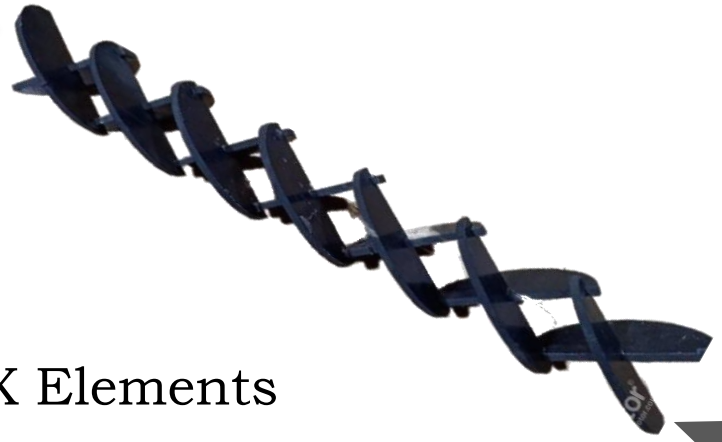
Static Mixer Elements

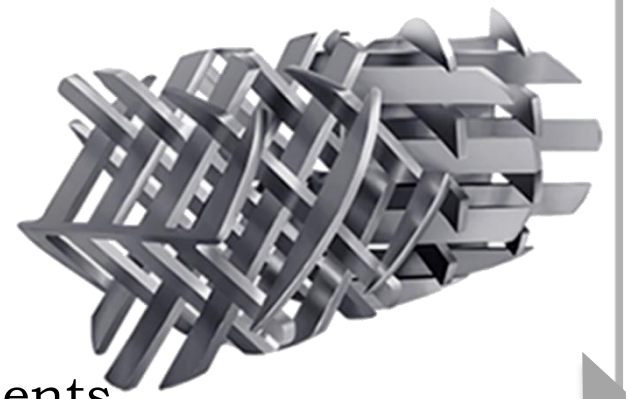


ECY Elements

ECP Elements



ECX Elements



ECC Elements

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Industrial Applications

Plastics Injection Molding & Extrusion

- Homogenize colorant, melt temperature and viscosity prior to mold/die.

Polymer Production

- Mix low viscosity additives into polymer melts
- Heat and cool polymers
- Polymerization in plug flow reactors

Chemical Industry

- Dispersing immiscible liquids in washing and extraction operations
- Mix gases with air in front of catalytic reactors such as in the production of Nitric Acid
- Dissolve gases into liquids such as NH_3, SO_2, Cl_2
- Mix Reactive materials in short length
- Heat and Cool viscous materials

Food Industry

- Blend fruit juice concentrates
- Add CO2 to fruit juices, wine, beer, etc.
- Dilute concentrates
- Heating and cooling chocolate

Water & Wastewater Treatment

- pH control of waste water with acids/bases
- Flocculants dilution and addition to waste water
- Dissolving CO2, O2, Cl2, ozone into water
- Mix ground and surface waters
- Aerate drinking water

Oil, Gas & Petrochemicals

- Blend crude oil from various storage tanks to provide uniform feed to refinery
- Contact crude oil and water to optimize desalter performance
- Blend additives into gasoline, fuel oil, lubricating oils
- Mix steam and methane feed to reformer

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