

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

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 allow 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.

Industrial Application

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 CO_2 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 CO_2 , O_2 , Cl_2 , 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



