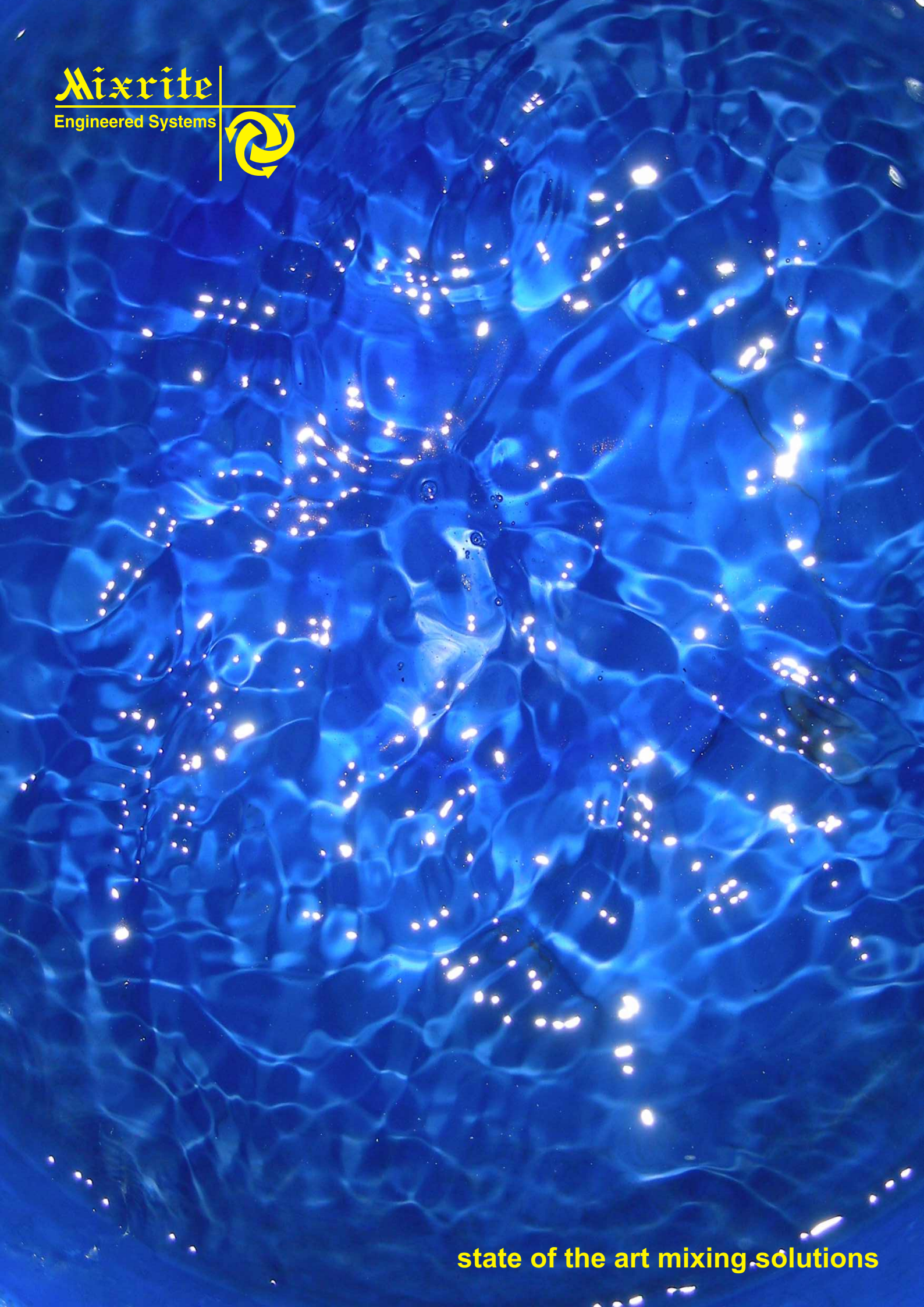

Mixrite
Engineered Systems
state of the art mixing solutions

About Us

Mixrite Mixing Systems (MMS), is the leading source that combines the highest standard of innovation and reliability with extensive know-how in designing and manufacturing of fluid mixing equipments and systems. Since 1972, the group has been offering energy efficient and unique mixing solutions to the process industry. Our unwavering commitment towards providing maximum customer satisfaction, has enabled us to produce a wide range of fluid mixers for Refineries, Petrochemicals, Oil & Gas, Nuclear Power Plant, Heavy Water Plant, Water and Waste Water Treatment, Research Establishments, Fertilizers, Synthetic Fiber, Edible Oil, Food, Dyes, Paints, Pharmaceuticals, Plastic, Basic Chemicals and other Allied Process Industries. As a quality driven company, Mixrite Products are manufactured with the highest level of QC standards that are strictly complied with at all levels right from the procurement of raw materials to the final shipment of the finished goods. Mixrite equipments are today in operation across the length and breadth of India and are also exported worldwide. Our tradition of quality and reliability, blended with an uncompromising quest for excellence, has enabled us to execute a wide range of prestigious and challenging jobs.

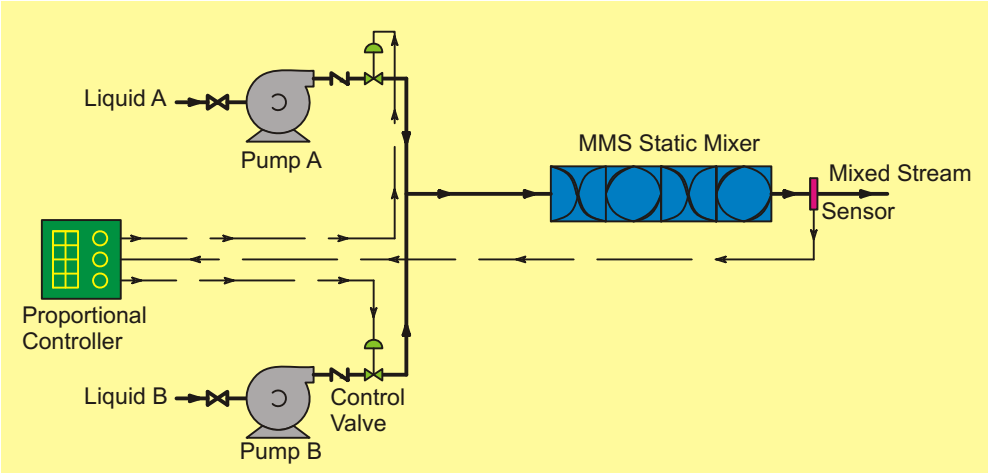
Static Motionless Mixer

A Static Mixer, as the name suggests, has no moving parts and is a continuous radial mixing device. The internal Kinetic and Potential energy of the liquid is utilized in combination with specially designed mixing elements to achieve a high level of turbulence. These mixing elements divide, reunite, spread, rotate and swirl the flowing fluid with controlled pressure drop and offer the desired mixing results. As Static Mixers have a relatively short residence time and little back mixing, it is important and crucial to precisely dose the feed components to get the desired mixing results. MMS Static Mixers are available in all sizes and in a wide range of materials like Carbon Steel, Stainless Steel, Titanium, PVC, PP, FRP, PTFE Lined and other exotic materials.

A Static Mixer consists of Pipe Housing with suitable end connection like Flanges, Threading, IDF etc. for hook-up to process lines. There are predefined numbers of specially designed mixing elements placed inside the housing pipe which offer suitable turbulence level to the flowing fluids. Depending on the application, a thermal jacketing is provided with an inlet and outlet connection. The geometry of the internal element is designed and selected on the basis of process requirements such as homogenization, blending, emulsification, pH control, Gas-Liquid contacting, mass transfer, dispersion, heat transfer, scrubbing, gas absorption etc.

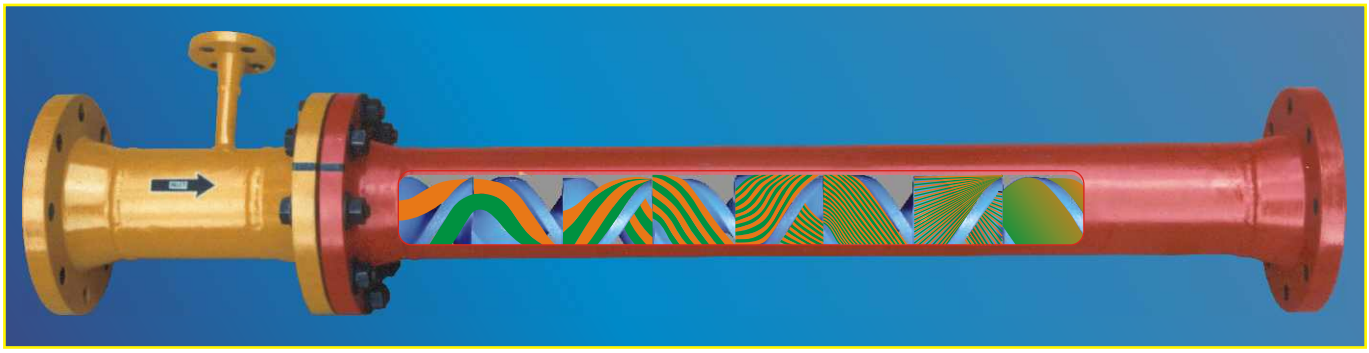
Salient Features of MMS Static Mixers

- Proven Design & Guaranteed Performance
- Energy Efficient and Power Saving
- No moving Parts and hence maintenance free
- Ideal for Continuous operation
- Compact and Ease of Installation
- Custom designed
- Low Capital Cost
- Eliminates Radial Gradients



Static Mixer Installation

MMS Mixers are used in a wide range of applications and practically in all types of process industries like chemical, cosmetics, detergents, energy, environmental protection, electronics, food, natural gas, polymer, plastics, textile fibers, petrochemicals, pulp & paper, refining, water and waste water treatment.



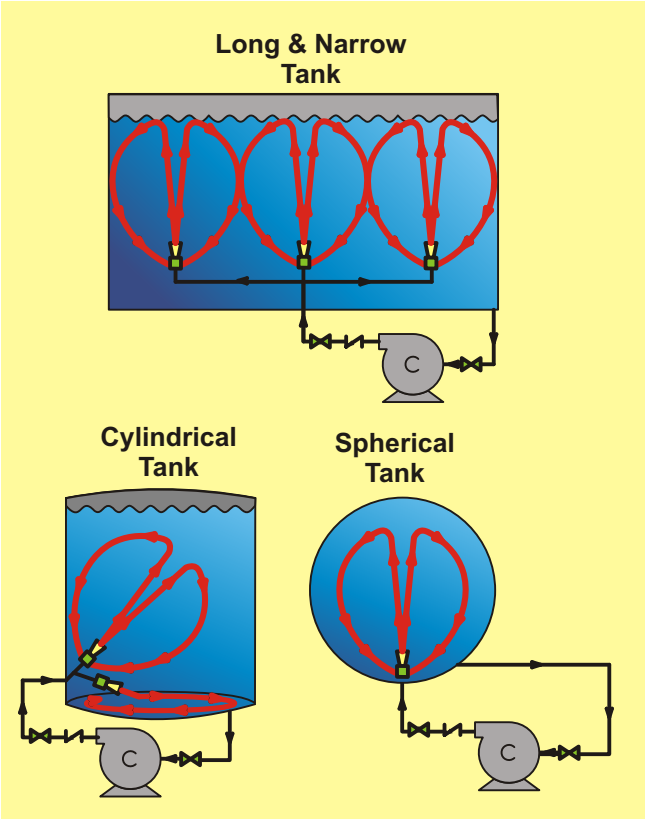
Jet Mixer

A Jet Mixer, sometimes also referred to as a Mixing Eductor is used to agitate liquids, mix two or more liquids, homogenize tank contents and dissolve fine solids in liquid in open as well as closed tanks. These mixers can be installed and used in neutralization basin also. Jet Mixers can often be a good substitute for conventional Agitators. The range of application of these Mixers is governed by the viscosity of the liquids. As a rule of thumb, Jet Mixers can be used for all those applications wherein the liquids to be mixed or homogenized can be pumped using a centrifugal or gear pump.

Jet Mixer Selection Chart

MOTIVE FLOWRATE (m^3/h)	PRESS. DIFF.------ Pm–Pd [Bar]	MIXER MODEL							
			J20	J25	J40	J50	J80	J100	J150	J200
		0.7	3.50	5.00	7.00	14.0	32.5	57.0	137.0	228.0
		1.4	5.00	7.00	9.50	20.0	46.0	80.5	193.0	323.0
		2.1	6.00	9.00	12.0	24.0	56.5	99.0	236.5	395.5
		2.8	6.50	10.0	14.0	27.5	65.0	114.0	273.0	456.5
		3.5	8.00	11.0	15.5	30.5	72.5	128.0	305.5	510.5
		4.2	8.50	12.5	17.0	33.5	80.0	140.0	335.0	559.0
		4.9	9.00	14.0	18.5	36.5	86.0	151.0	361.0	604.0
		5.6	9.50	15.0	20.0	39.0	92.0	161.5	386.5	645.5
		6.3	10.0	15.5	21.0	41.5	98.0	171.0	410.0	685.0
		7.0	11.0	16.0	22.0	44.0	102.5	180.5	432.0	722.5

A Jet Mixer consists of a Motive Nozzle and a Mixing Element / Diffuser. The motive fluid is fed under pressure to the motive inlet connection. This motive fluid can be a liquid either from the same tank where Jets are installed, or from a separate tank. This liquid flow emerges from the motive nozzle at a high velocity, thereby, creating vacuum at the entrance of the diffuser cone inlet on account of Bernoulli's principle. This vacuum entrains the surrounding liquid and the combined (motive and entrained) flow progresses through the diffuser. In the diffuser, the kinetic energy of the mixture is converted into potential energy until the pressure equalizes at the exit point. The discharge flow or plume continues the mixing action and imparts uniform mixing throughout the tank. Some of the common applications of Jet Mixers are Lube Oil Blending, Caustic Homogenization Storage tanks, Electro Coating Pretreatment Tank, Agrichemical Tank, Fertilizer Tank, Sludge Tank etc.



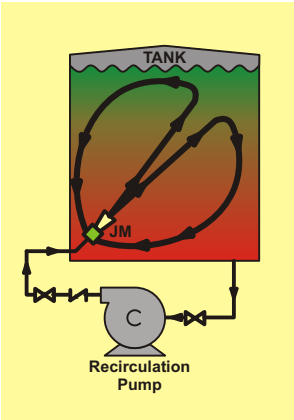
Jet Mixer Configuration

Salient Features of MMS Jet Mixers

- Proven Technology
- No moving Parts and hence maintenance free
- Compact and Ease of installation
- Eliminates requirement of heavy mounting structures as are required for Agitators
- Eliminates stratification and promotes homogenous tank mixing
- Effectively covers full tank volume leaving no dead zones
- Designed to suit existing Pump
- Low capital cost
- Offers Flexibility of Operation

Jet Mixer Installation & Configuration

The design and placement of the Jet Mixer is based on Tank Geometry, Floating Roof, Transport Properties of the Liquids, Mixing Time and Pressure. Jet Mixers should be installed at the deepest possible point in the tank so that efficient operation is ensured even at lower operating liquid levels. The number of Jet Mixers and its position is established in such a way that the complete tank volume is effectively covered, thereby practically leaving no dead spots in the tank.



Jet Mixer Installation