

ADMIXER™

FOR SANITARY AND CRITICAL
INLINE PROCESSING



ADMIX INC.
ADVANCED MIXING TECHNOLOGIES

Features & Benefits

- Highly predictable mixing and dispersion
- Superior (100%) product uniformity and distribution from controlled shear and turbulence
- Low capital cost and maintenance
- 50-90% less power consumption than mechanical mixers
- Improves safety and sanitation of mixing operation
- Eliminates expensive tanks and agitators
- Total mechanical reliability - no moving parts, no electrical, easy installation
- Superior corrosion or abrasion resistance
- Excellent process versatility, capable of handling viscosities over 1 million cps

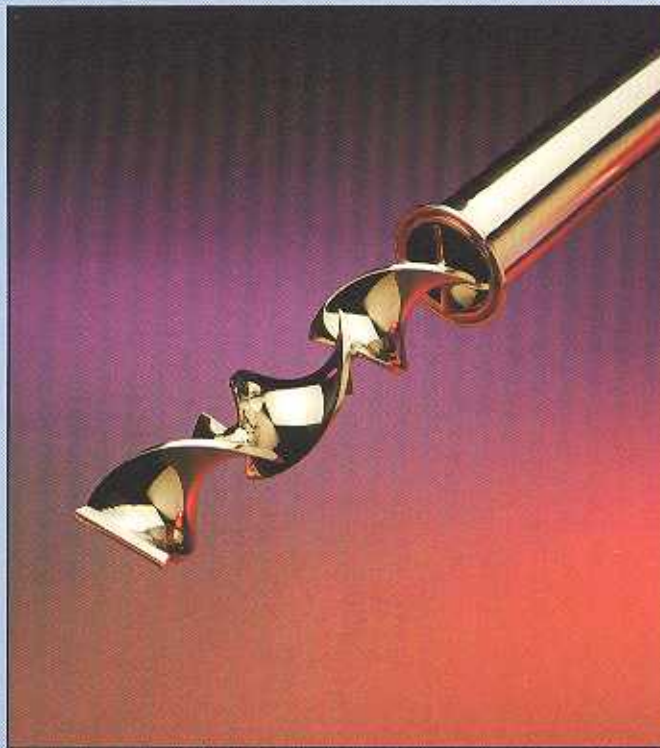
The ADMIX Advantage

However you describe it, static mixing technology has been the solution to inline, continuous-flow processing for more than 25 years. Over the years, many variations of internal geometries have been attempted to optimize mixing efficiency. Although most configurations were successful to some degree, the end-user's choices were dependent upon the manufacturer's technical database, manufacturing methods and the ability to address specific concerns relative to specialized mechanical and/or process requirements.

Since 1989, Admix has dedicated the most advanced manufacturing and development to providing a premier product line — the ultimate in performance reliability. Our high-alloy static mixers are manufactured from Titanium, Alloy 20, Monel, Hastelloy C or other superior quality, high-corrosion-resistant materials. Our thermoplastic products feature the most rugged solid Teflon® and solid Tefzel® elements in the industry. Every element assembly is CNC machined from solid bar stock, complete with a retainer bar to remove the assembly — never just coated or lined.

When superior sanitation or CIP is mandatory, our 15 RA (micro-inch) stainless Sanitary Static Blenders approach a mirror finish, complete with removable element assemblies. Admix provides certification and hydrotesting to assure the finest quality and reliability.

Admix goes beyond passing the test for mechanical integrity. It is our goal to improve and upgrade your operation. To guarantee the highest degree of mixing in a short pipe span with less than 1% bypass or coefficient of variation, we feature only offset helix-type element configurations. Based on thousands of successful installations in service, these configurations are well-proven with minimal pressure loss. If our existing database does not match your application requirement, or if you require a custom application, Admix will test your materials in our laboratory.



ADMIXER™ Characteristics

Mixing Action	Plug Flow
Viscosity Range	1 - 1,000,000 CPS
Viscosity Ratio	10,000 - 1
Volumetric Ratio	10,000 - 1
Density Ratio	100 - 1
Shear Rate	Low but Uniform (up to 10^4 sec^{-1})
Velocity Dependency	Laminar Flow - None Turbulent - 1 ft/sec min.
Dispersion Capability	Good to Very Good
Pressure Drop	Low (1 to 5 ft)
Maintenance	Low
Injection Requirements	Very Important (Especially at High Viscosity or Volumetric Ratios)
Energy Cost	Low (25% of Dynamic Mixers)
Capital Cost	Low

The ADMIXER™ Processing Capability

Mixing, Blending and Flow Conditioning

The ADMIXER™ excels at processing any combination of miscible fluids. Where laminar flow conditions exist, complete homogeneity is achieved through geometrically precise flow division, independent of viscosity, density or velocity. In turbulent flow, the ADMIXER™ utilizes radial momentum and inertia reversal to eliminate stratification of flow, temperature and all processed materials.

Dispersions, Emulsions and Thermal Transfer

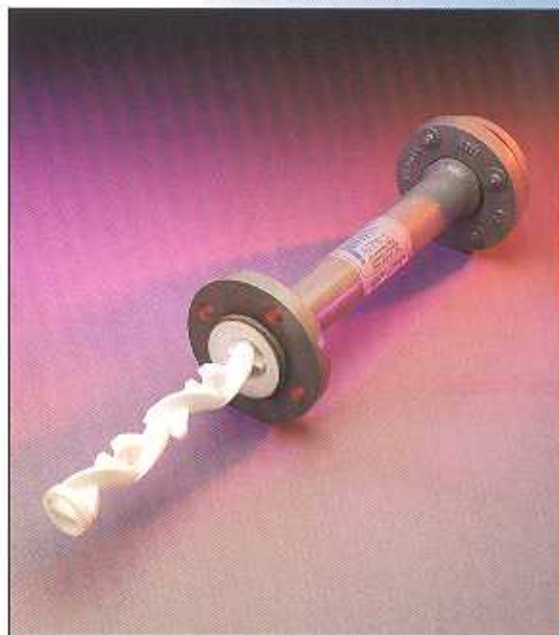
For more difficult mixing requirements involving immiscible fluids, gas and fluids, or other 2 and 3 phase operations, the ADMIXER™ approaches ideal plug flow combined with very uniform shear. This unique combination allows for very predictable droplet size formation and distribution, creating fine dispersions and stable emulsions. Where heating or cooling of fluids is critical, the ADMIXER™ will increase the transfer rate while eliminating temperature and velocity irregularities.

Technical Reports

For more information on understanding and applying ADMIXER™ technology, the following Technical Reports are available at your request:

Tech Note #101	ADMIXER™ Theory of Operation
#102	Sizing the ADMIXER™
#103	Estimating Pressure Drop in the ADMIXER™
#105	Gas Blending

Processing Report #200	Water and Wastewater Treatment
#201	Food, Beverage & Dairy Processing



Features & Benefits

Teflon Series

- PTFE elements machined from solid bar
- Heavy duty lined housings with flanged ends - no gaps or joints
- Retainer ring machined into element assembly allows easy removability
- Solid machined Tefzel or Kynar also available

Sanitary Static Blenders

- USDA Dairy Approved
- 304 or 316 SS with 16 micro-inch finish, near mirror polish
- Tri-clamp style connections
- All welds are completely ground, blended or polished
- Removable elements for easy maintenance and cleaning

ADMIXER SPECIFICATIONS

Teflon "PTF" Series					Sanitary "SAN" Series			
NOMINAL DIAMETER (in)	MODEL #	I.D. (in)	LENGTH (in)	WEIGHT (lbs)	MODEL #	I.D. (in)	LENGTH (in)	WEIGHT (lbs)
1/2	PTF1/2-6E-F	1/2	6	3-1/2	SAN1/2-R6-S	0.70	6-5/16	1/2
3/4	PTF3/4-6E-F	11/16	8	5	SAN3/4-R6-S	0.82	7-1/2	1/2
1	PTF1-6E-F	1-3/16	10	8	SAN1-R6-S	0.91	8-3/4	1
1 1/2	PTF1-1/2-6E-F	1-3/8	15	13	SAN1-1/2-R6-S	1.41	13	2
2	PTF2-6E-F	1-13/16	19	19	SAN2-R6-S	1.88	17-1/4	5
2 1/2	Not Available				SAN2-1/2-R6-S	2.34	21-3/4	8
3	PTF3-6E-F	2-13/16	28	60	SAN3-R6-S	2.85	26	12
4	PTF4-6E-F	3-13/16	37	85	SAN4-R6-S	3.84	34-1/2	20
6	PTF6-6E-F	5-5/8	54	145	Not Available			

Note:

- All PTFE mixers are rated for 150 psi at 300°F, all sanitary mixers rated for 250 psi at 300° F, except for 3" and 4" (150 psi only).
- See certified drawings for detailed mixer and flange dimensions.
- All mixers are complete with 6 elements.