

### **100% product uniformity and distribution at any viscosity level**

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

The even stirring characteristics of this low shear static mixer are ideal for many industrial jobs. For example: the blending of liquids, acids and bases, dispersing gases into liquids or other gases, etc.

### **No moving parts, no electrical requirements**

- Materials include Teflon (PTFE) machined from solid bar, or alloys including Titanium, Monel, Hastelloy B & C, Carpenter-20 and others.
- End options: plain, NPT threaded, and ANSI flanges
- 1/2" through 12" diameter sizes
- Low capital cost and maintenance
- 50-90% less power consumption than mechanical mixers
- Easy installation



### **Ideal for Low Shear Applications**

- ✓ Wastewater Treatment
- ✓ Emulsions
- ✓ Adjusting pH
- ✓ Polymerization
- ✓ Pigmentation
- ✓ Gas Dispersions
- ✓ Gas Blending

## How to Select a Static Mixer

### Models, Specifications & Performance

Static mixers from Admix are designed to process flow streams from as low as 0.25 GPM to as high as 250 GPM or greater. The Admixer will blend most combinations of flow, viscosity and density even from multiple incoming streams (see side bar for allowable ranges). The limiting factor will be the pressure drop through the mixer, which is very dependent upon all 3 variables.

Most “turbulent flow” static mixing applications can be well blended with 6 mixing elements or vanes at a pressure drop of 2-3 psi or less, while thicker “laminar flow” applications could require 12 to 18 elements and upwards of 25 psi or more pressure drop.

The guidelines provided below are based on 6 element configurations. Please consult your local sales representative indicated below for a detailed sizing analysis.

Model	Nominal Diameter (inches)	Flow Rate (gpm)	I.D. (inches)	Pressure Rating @ 300* F (psi)	Length (inches)	Weight (lbs)
PTF1-6R-F3	1	1 - 15	0.81	150	10.0	8
PTF1.5-6R-F3	1.5	3 - 30	1.38	150	15.0	13
PTF2-6R-F3	2	5 - 50	1.81	150	19.0	19
PTF2.5-6R-F3	2.5	10 - 80	2.20	150	23.0	35
PTF3-6R-F3	3	20 - 150	2.81	150	28.0	60
PTF4-6R-F3	4	50 - 250	3.81	150	37.0	85

## PERFORMANCE CHARACTERISTICS

**Mixing Action:** Plug Flow

**Viscosity Range:** 1 to 1,000,000 cps

**Viscosity Ratio:** 10,000:1 max

**Volumetric Ratio:** 10,000:1 max

**Density Ratio:** 100:1 max

**Shear Rate:** Low, but uniform

**Velocity Dependency:**

Laminar flow - none

Turbulent - 1ft/sec (minimum)

**Dispersion Capability:**

Good to Very Good

**Pressure Drop:** Low (1 to 5 psi)

**Maintenance:** Low (no moving parts)

**Injection Requirements:**

Important (especially at high viscosity or volumetric ratios)

**Energy Cost:**

Low (25% of dynamic agitators)

**Capital Cost:** Low

## How the Admixer Static Mixer and Blender Works

### Turbulent Flow - Low Viscosity



### Laminar Flow - High Viscosity



Cross Sectional View



Additional sizing and application tips can be found in the following bulletins available at [admix.com/admixer-specs](http://admix.com/admixer-specs) or by calling your local representative.

Tech Note #101 Admixer Theory of Operation

Tech Note #102 Sizing the Admixer

Tech Note #201 Sanitary Static Blending with the Admixer