



Description

HIGH SHEAR MIXERS (HSM) from Samhwa provide continuous in-line mixing of fluids, gases, or powders using no moving components. The unique, intermeshing element design provides high levels of mixing in a very short overall length and product residence time. The design is very adaptable to many types of applications.

HIGH SHEAR MIXERS are custom-designed for each application. The number of elements and design specifics are determined by the specific application. Mixers can be jacketed or electrically heated, and supplied with fixed or removable mixer element assemblies. Sizes range from 2 mm to 2 meters and larger in diameter.

Advantages

- Provide excellent mixing or blending of two liquids, a liquid and a gas, two gases, or two powders
- Plug flow device (first in, first out)
- Short, uniform residence time
- Uniform temperature, no "hot spots"
- Can be used for materials with low to high viscosities, up to 20,000 poise or more
- No maintenance (since no moving parts)
- Can process highly corrosive materials
- High degree of mixing in short overall length

Applications

Processes:

- Mixing
- Reacting
- Coloring
- Polymerization
- Heat exchange
- pH control
- Neutralization
- Diffusion
- Gas mixing
- Powder mixing
- Liquid mixing
- Laminar and turbulent mixing applications
- Obtaining product temperature uniformity
- Extrusion
- Compounding

Industries:

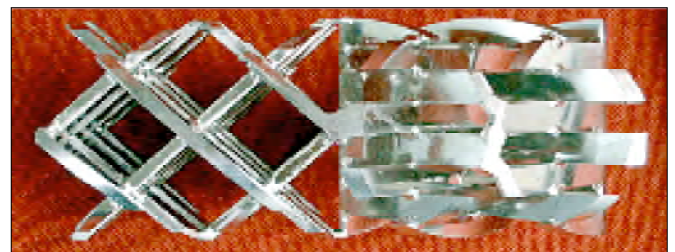
- Polymer processing
- Fiber production
- Plastics extrusion
- Foods including edible oil, mayonnaise, ice cream, chocolate, beverage, milk, yogurt, and cheese
- Pharmaceutical
- Injection molding
- Fine films



1.5" HSM 6 Element



2.5" HSM 4 Element



4" HSM 2 Element

Materials

Elements can be constructed of:

- Stainless steel
- Hastelloy
- Teflon
- Carbon steel
- PVC
- PP (Polypropylene)
- PE (Polyethylene)
- FRP (fiberglass reinforced plastics)
- Tantalum
- Kynar
- Inconell and many other materials

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Mixing Application Questionnaire

For a quotation on static mixers for your application, please copy this page, complete, and fax to JLS International.

Company _____ Dept./Div. _____ Building _____
 Address _____ City _____ State _____ Zip _____ Country _____
 Contact _____ Title _____
 Phone _____ Fax _____ E-mail _____ Submit quote by _____

Process Information

Stream / Fluid	#1	#2	#3	Total Mixture
Product name (stream)				
Flow rate ____ /hr.				
Pressure				
Temperature				
Density				
Viscosity				
Connection size				

Design Information

Housing <input type="checkbox"/> Yes <input type="checkbox"/> No Size:	
Type element <input type="checkbox"/> Helical <input type="checkbox"/> High shear	
No. of elements	
Mixer length (mm) max.	
Connection type	
Material of construction	
Heating jacket <input type="checkbox"/> Oil <input type="checkbox"/> Steam <input type="checkbox"/> Electric <input type="checkbox"/> None	
Injection ring <input type="checkbox"/> Yes <input type="checkbox"/> No	
Use <input type="checkbox"/> Mixing <input type="checkbox"/> Uniform temperature	

Material	Housing	
	Element	
	Flange	
Pressure Drop	Allowable	
	Operating	
Design Condition	Pressure	
	Temperature	
Testing required: <input type="checkbox"/> Yes <input type="checkbox"/> No Type:		
ASME Code Stamp: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Other stamp type:		