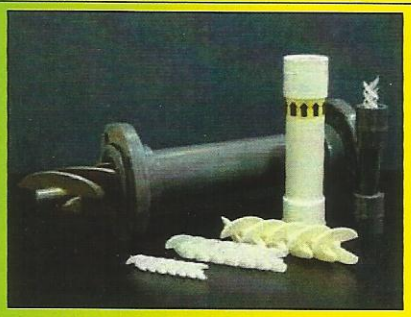
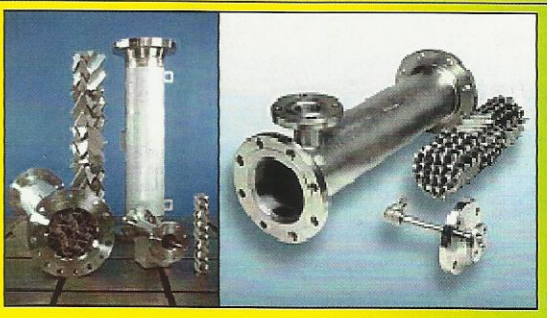
FLUIDYNE MAKE STATIC MIXER MODEL SMX - 100



(PP/PVC/UPVC/HDPE/PTFE)



(CS/SS 304/SS 316/SS 321)

IMPORTANT FEATURES OF FLUIDYNE STATIC MIXERS

- ☐ Economical prices
- ☐ Wide range of materials
- ☐ Easy installation
- ☐ No maintenance
- ☐ Low operating cost
- ☐ Rugged design

INTRODUCTION

FLUIDYNE Static mixers are a series of geometric mixing elements fixed within a pipe, which use the energy of the flow stream to create mixing between two or more fluids. FLUIDYNE has optimized the design of static mixers to achieve the greatest amount of mixing with the lowest pressure loss possible. whether your application involves low viscosity fluids, high viscosity fluids, fibrous materials, or just the need for a quick flash blend, FLUIDYNE has a static mixer design available to optimize your blending process.

DESIGN PRINCIPLE

FLUIDYNE Static Mixers are a row of carefully designed mixing elements within a pipe ensure mixing between two or more fluids. FLUIDYNE's design of static mixer creates very little pressure drop and the greatest amount of mixing. FLUIDYNE Static Mixers are used in blending processes as well as mixing. FLUIDYNE Static Mixers are also called "motionless mixers" This is because the mixing is done by removable or permanently affixed mixing fins, obstructions, or channels mounted in pipes, designed for promoting mixing as fluid flows through the mixer. The criteria for using motionless mixers is to achieve homogeneity of composition in a liquid without the need for external process mixing, which can be very costly and often questionable. When sizing/designing a static mixer the main factors to consider is the flow rate and the properties of the fluid, and it is possible to calculate the number of mixing elements required to produce a homogeneous mixture. FLUIDYNE Static Mixer come in Type - A (Standard) and Type - B (with injection port) as per customer's choice.

TABLE-2

MIXING PERFORMANCE

Number of Mixing Elements required

Volumetric Ratio of Components To Be Mixed A : B	Viscosity Ratio of Components to be Mixed A : B	"Satisfactory" Pre-Mix Quality" Homogeneity 80% Degree of Mixing Achieved (CoV = 0.2)	"Fair Quality" Homogeneity 90% Degree of Mixing Achieved (CoV = 0.1)	"Good Quality" Homogeneity 95% Degree of Mixing Achieved (CoV = 0.05)	"Very Good Quality" Homogeneity 99% Degree of Mixing Achieved (CoV = 0.01)
1 : 1	1 : 1 - 100 : 1	3	3-4	4-5	5-6
5 : 1	1 : 1 - 100 : 1	3-4	4	5	6
9 : 1	1 : 1 - 100 : 1	4	5	6	9-12
99 : 1	1 : 1 - 100 : 1	5	6	9	12
999 : 1	1 : 1 - 100 : 1	6	9-10	10-12	12-18

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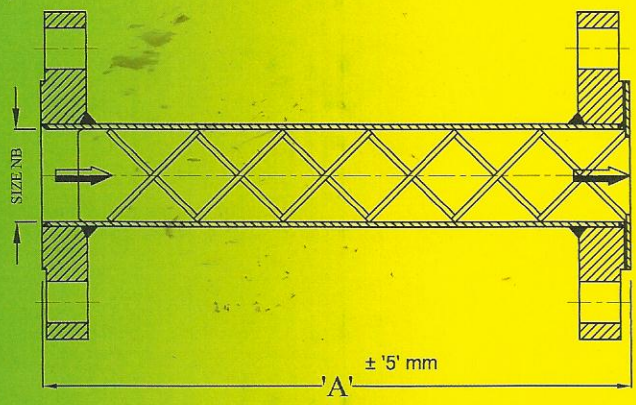
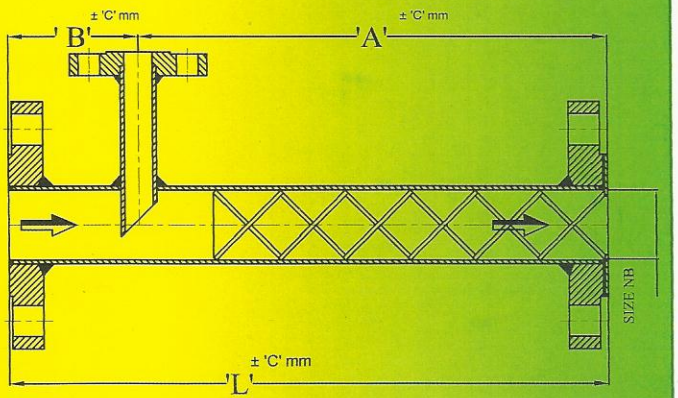
TYPE 'A' Flanged Static Mixer - Low Pressure Loss Design



TYPE 'B' Flanged Static Mixer - Low Pressure Loss Design



TYPE 'A'

N P S		MIXER PIPES				NEWTON NUMBER Ne	'A' Set of mixing elements Ne			TOLERANCES 'C'
SIZE	SIZE	Stainless Steel		Carbon Steel						
mm	in	Da x s DO x THIK mm	D (I.D) mm	Da x s DO x THIK mm	D (I.D) mm		3	6	9	
10	1/4	13.5 X 1.8	9.9	13.5 X 1.8	9.9	2.6	90	120	200	
10	3/8	17.2 X 1.8	13.6	17.2 X 1.8	13.6	3.6	90	120	200	5
15	1/2	21.3 X 2.0	17.3	21.3 X 2.0	17.3	4.5	90	120	200	
20	3/4	26.9 X 2.3	22.3	26.9 X 2.3	22.3	2.1	100	150	200	
25	1	33.7 X 2.6	28.5	33.7 X 2.6	28.5	2.5	100	200	250	5
32	1 1/4	42.4 X 2.6	37.3	42.4 X 2.6	37.2	2.9	150	250	350	
40	1 1/2	48.3 X 2.6	43.1	48.3 X 2.6	43.1	3.0	150	300	400	
50	2	60.3 X 2.9	54.5	60.3 X 2.9	54.5	2.2	200	350	500	10
65	2 1/2	76.1 X 2.9	70.3	76.1 X 2.9	70.3	2.6	260	450	650	
80	3	88.9 X 3.2	82.5	88.9 X 3.2	82.5	2.5	300	550	800	
100	4	114.3 X 3.2	107.9	114.3 X 3.6	107.1	2.0	360	650	950	10
150	6	168.3 X 3.2	161.9	168.3 X 4.5	159.3	1.9	500	1000	1400	
200	8	219.1 X 3.2	212.7	219.1 X 5.9	207.3	1.9	700	1250	1850	
250	10	273.0 X 3.2	266.6	273.0 X 6.3	260.4	1.9	800	1600	2300	10
300	12	323.9 X 3.2	317.5	323.9 X 7.1	309.7	1.9	1000	1900	2750	

TYPE 'B'

N P S		MIXER PIPES				NEWTON NUMBER Ne	'A' Set of mixing elements Ne			"B"	INJECTION / DOSING PORT SIZE (NB)	TOLERANCES 'C'
SIZE	SIZE	Stainless Steel		Carbon Steel								
mm	in	Da x s DO x THIK mm	D (I.D) mm	Da x s DO x THIK mm	D (I.D) mm		3	6	9			
10	1/4	13.5 X 1.8	9.9	13.5 X 1.8	9.9	2.6	90	120	200		10	
10	3/8	17.2 X 1.8	13.6	17.2 X 1.8	13.6	3.6	90	120	200	65	10	5
15	1/2	21.3 X 2.0	17.3	21.3 X 2.0	17.3	4.5	90	120	200		10	
20	3/4	26.9 X 2.3	22.3	26.9 X 2.3	22.3	2.1	100	150	200			
25	1	33.7 X 2.6	28.5	33.7 X 2.6	28.5	2.5	100	200	250	75	15	5
32	1 1/4	42.4 X 2.6	37.3	42.4 X 2.6	37.2	2.9	150	250	350		15	
40	1 1/2	48.3 X 2.6	43.1	48.3 X 2.6	43.1	3.0	150	300	400	100	15	
50	2	60.3 X 2.9	54.5	60.3 X 2.9	54.5	2.2	200	350	500	100	20	10
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300	12	323.9 X 3.2	317.5	323.9 X 7.1	309.7	1.9	1000	1900	2750	200	25	

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