

SAUCONY MIXER E900 Series



Tank Mixers of type-Saucony known as SAUCONY MIXERS are ideally suitable for effective liquid mixing applications in

- a) Tall storage tanks
- b) Mixing requirement in tanks storing liquids with wide specific gravity difference

Primetech offers complete range of SAUCONY MIXERS usually custom built to specific process liquids and tank dimensions.

PRINCIPLE OF OPERATION

High pressure motive liquid when passed through a nozzle its pressure energy is converted into kinetic energy there by increasing its velocity manifold. This high velocity jet of liquid when passes through a throat area of the saucony mixer it creates a suction effect at its ports.

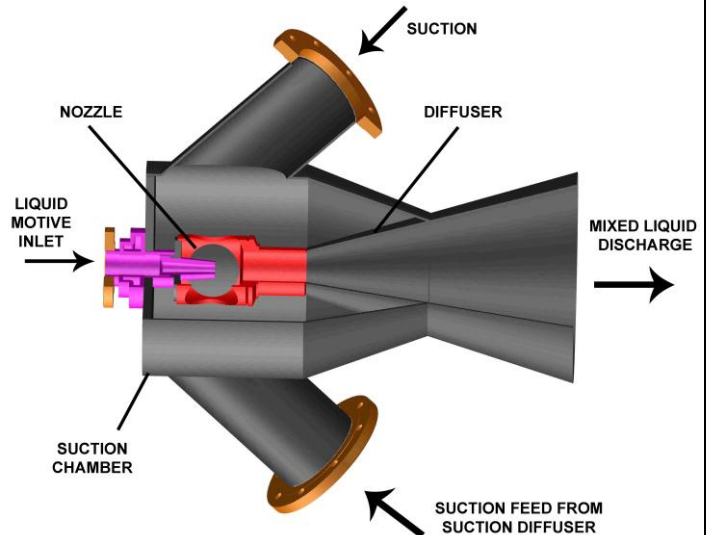
The saucony mixer suction ports are encapsulated in a suction chamber, which in turn connected to a Suction Manifold Diffuser.

The Suction Diffuser Manifold is a custom designed vertical pipe manifold with liquid inlet ports strategically located at various heights. The diffuser suction ports are sized at each height to enable a uniform suction of tank liquid contents throughout the tank's vertical liquid column.

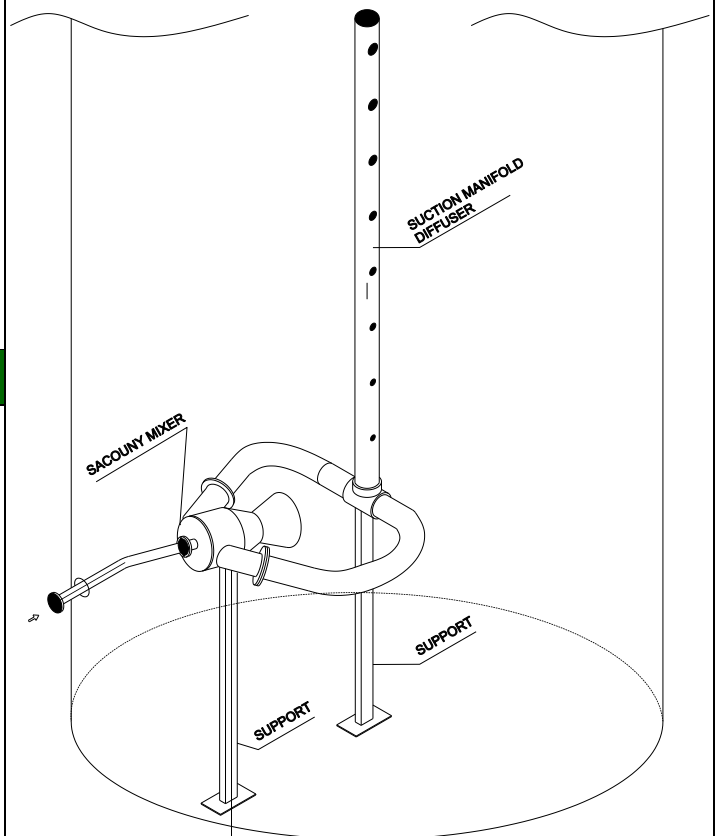
This mixing technology enables uniform mixing of the tank content instantly without a dead pocket of unmixed liquid at different elevations of tank.

ADVANTAGES

1. Adopts proven eductor technology with new improved features.
2. Enable uniform mixing of liquid at all elevation of tank liquid column instantly.
3. Guide suction of liquid at various elevations in the tank.
4. Quicker and homogenous mixing.
5. Have no moving parts and hence less or nil maintenance.
6. Cost effective mixing solution.
7. Construction from wide range of materials.
8. Technical support from experienced team.



TYPICAL INSTALLATION DRG



PERFORMANCE & MIXING TIME

If one or several tank saucony mixer are properly arranged, a three dimensional flow pattern can be produced in the tank. This mixes the whole of the tank liquid homogenously. Liquid suction ratio range of 1motive: 2 to 3 suction liquid at a maximum pressure drop of 1.5kg/cm^2 at eductor inlet.

The mixing time for these tank mixers can be calculated using

- o Tank liquid volume to be mixed - $V\text{m}^3$
- o Number of tank mixers employed - n
- o Liquid flow delivered to each tank mixer - m^3/hr

Use the formula.

- a) $t_{\text{mix}} = 18x(v)/(n \times Q_m)$ minutes

MATERIAL OF CONSTRUCTION

Eductors consist of a nozzle & venturi usually made out of a single piece. The tank mix eductor can be supplied in the following MOCs

- Carbon steel
- Stainless Steel
- Monel
- Hastelloy
- Titanium
- PVC
- PP
- Teflon
- Fiber glass, etc.

End connection: Flanged to ANSI 16.5, 150#. Other flange standards on request.

MODEL & DIMENSIONS

Custom built higher capacity can be supplied

	Motive Inlet (NB)	Suction Inlet (NB)	No. of Suction ports	Discharge port	End connection
SM-50	50	100	2	Free Inside Tank	Flanged to 150 # ASA
SM-80	80	200	2		Flanged to 150 # ASA
SM-100	100	200	2		Flanged to 150 # ASA
SM-150	150	300	2		Flanged to 150 # ASA
SM-200	200	400	2		Flanged to 150 # ASA

PERFORMANCE DATA OF SM-50

Tank Mixer pressure drop- Δ_p Kg.cm ²	Motive water flow m ³ /hr	Suction flow range m ³ /hr
0.75	14	50-60
1.5	20	65-78
2.25	26	17.5-90
3.5	32	80-96
4.25	36	90-108
5	38	96-114
5.75	44	110-132
6.5	46	116-138
7.25	48	120-144

TANK MIXER EDUCTOR MODEL

Model	SM-50	SM-80	SM-100	SM-150	SM-200
Capacity ratio	1	2.36	4	9	16

DATA REQUIRED WITH ENQUIRY

1. Mixing liquid properties.
 - Composition in percentage of each liquid.
 - Density of each liquid.
2. Operating temperature.
3. Tank diameter & height.
4. Max & Min liquid level.
5. Recirculation pump capacity & head.



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