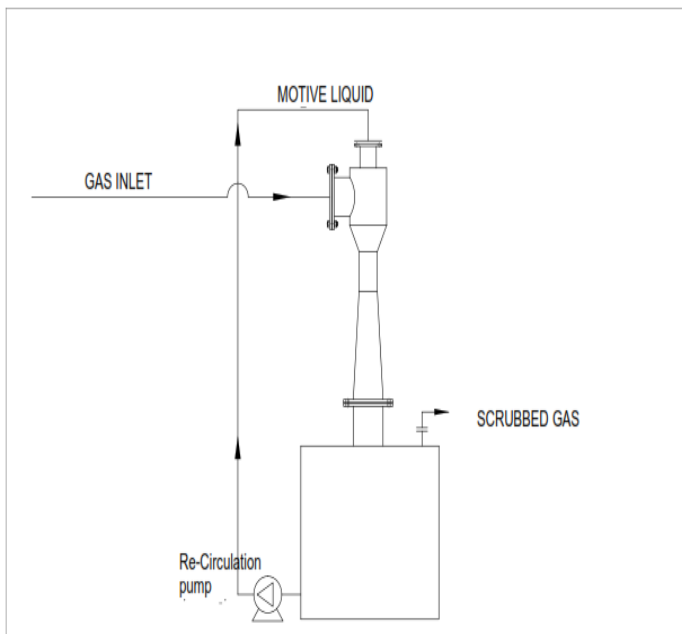
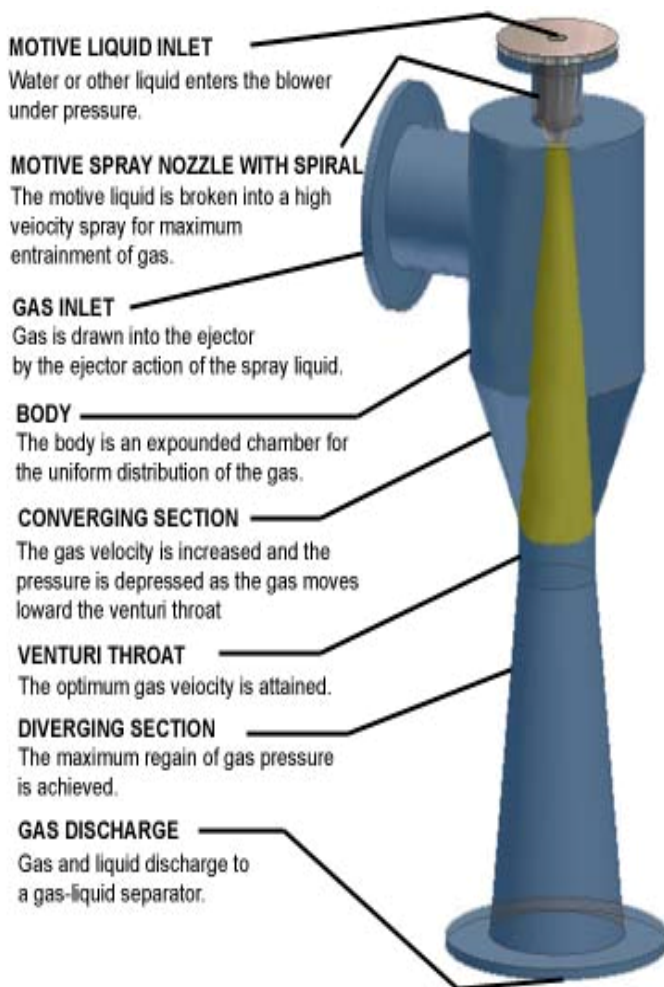


# Ejector Venturi Scrubber & Blowers

## E800 Series



Ejector Venturi scrubber or blower is a gas handling equipment, which utilizes the energy of a high-pressure motive liquid to effectively entrain gas. The venturi scrubber/blower is self-priming, capable of sucking large volume of gas and delivering with slight boost in pressure to few mm of water column. .

### PRINCIPLE OF OPERATION:

#### VENTURI BLOWER:

When a high velocity liquid jet spray passes through the Venturi throat, it induces a draft action. This ejector draft action draws gas/air from source in to the blower. The sucked gas is entrained in the high velocity liquid spray flow and attains a good velocity at Venturi throat. The gas liquid mixer then passes thro' the Venturi-divergent section where in velocity energy is regained as moderate pressure energy. Also in this section of Venturi the sprayed motive liquid droplets gets together for subsequent gas liquid separation.

#### VENTURI SCRUBBER:

This ejector Venturi also functions as a scrubber effectively when the scrubbing liquid entrains and removes the toxic noxious gases, fumes, odor, particulates and dusts from the gas drawn into it. Venturi throat is a high turbulence zone, where in drawn gas & scrubbing liquid mixes intimately and intensively which results in effective scrubbing. As a scrubber, it performs the following unit operations effectively

- Absorption of gases odors.
- Aiding chemical reaction between gas & liquid.
- Air moving.
- Static pressure boosting of handled air/gas.

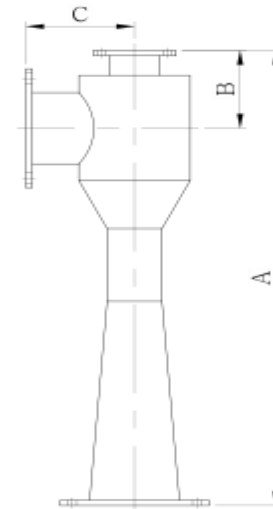


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### APPLICATIONS:

- The chemical industry for the removal of dust and aerosols.
- The metallurgy for several types of degasses.
- Waste combustion installations.
- Gasification process
- Potato industry for the disposal of starch
- Glass industry
- Sinter processes



### DIMENSIONS&CAPACITY TABLE:

MODEL	Nominal Air Handling capacity in m <sup>3</sup> /hr @ Motive water@27°C Motive pressure@4.5kg/cm <sup>2</sup> Suction draft@25mmwc	Motive liquid inlet size in NB	Dimensions in mm		
			A	B	C
EVS-03	92.71	40NB	490	125	145
EVS-04	168.57	50NB	625	150	150
EVS-05	278.135	50NB	725	165	170
EVS-06	421.42	50NB	825	175	180
EVS-08	775.4	65NB	1025	215	225
EVS-10	1298.0	80NB	1165	250	280
EVS-12	2022.8	80NB	1310	290	320
EVS-14	2865.6	80NB	1430	325	475
EVS-16	3961.3	80NB	1610	360	525
EVS-18	5225.57	80NB	1780	400	555
EVS-20	6742.67	80NB	1930	430	600
EVS-24	10114.0	100NB	2265	500	700
EVS-30	16519.5	150NB	2725	600	900
EVS-36	34387.6	150NB	3200	700	1075
EVS-42	46355.87	150NB	3635	800	1270
EVS-48	60347.0	200NB	4120	925	1400

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### MATERIAL OF CONSTRUCTION:

Various materials can be employed for the ejector depending on the type and nature of the fluids used.

- Steel
- Stainless steel
- Inconel
- Hastelloy
- Titanium MS Rubber lined
- Fiber glass

**END CONNECTIONS:** Flanged to ANSI-B16.5-150#

### OPERATING CONDITIONS:

S.No	Pollutants	Pressure drop ( $\Delta P$ )	Liquid to gas ration (L/G)	Liquid inlet pressure ( $P_L$ )	Removal efficiency
1	Gaseous	13-250 cm of water (5-100 in of water)	2.7-5.3 l/m <sup>3</sup> (20-40 gal/1,000 ft <sup>3</sup> )	< 7-100 kPa (< 1-15 psig)	30-60 % per venturi, depending on pollutant solubility
2	Particles	50-250 cm of water (50-150 cm of water is common) 20-100 in of water (20-60 in. of water is common)	0.67-1.34 l/m <sup>3</sup> (5-10 gal/1,000 ft <sup>3</sup> )		90-99 % is typical

### ADVANTAGES:

- Relatively little maintenance
- High disposal efficiency
- Simple and compact construction
- No mechanical components
- Gaseous components are absorbed
- Insensitive for fluctuating gas flows
- Aerators are not required

