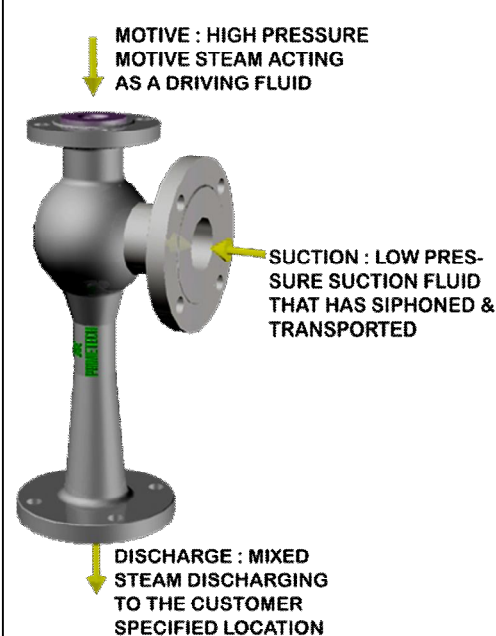


STEAM JET SYPHONS

E1800 SERIES



- **Steam Jet Syphons** are a class of ejector pumps that are used to heat, mix and lift fluids that range from slurries to liquids.
- The Operation of **steam jet syphons** are similar to that of other ejector pumps and it uses the kinetic energy of the **Steam** which is the motive fluid to entrain and transports the fluids that are to be handled.
- Steam Jet Syphons are used for emptying storage tanks, pumping out of liquids, mixing and heating of liquids, priming of pumps, handling and transferring slurries etc.
- Steam Jet Syphons are especially suitable for those processes which require heating and pumping simultaneously and also these are capable of working in corrosive and erosive environment.



PRINCIPLE OF OPERATION

- The motive fluid which is steam at high pressure is utilised in pumping a low pressure water-based liquid which is our suction fluid against a counter pressure (discharge pressure).
- Steam enters the motive nozzle and undergoes an isentropic expansion because of which the inlet pressure energy is converted to velocity energy (Kinetic Energy).
- The momentum carried by the steam is utilised to lift, pump and entrain the suction fluid. The steam then condenses into the suction fluid while passing through the diffuser.
- The resultant heated liquid stream enters the venturi tail wherein the velocity energy is converted to pressure energy.
- The motive steam is the available energy source that performs both entrainment and transportation of the suction fluid.

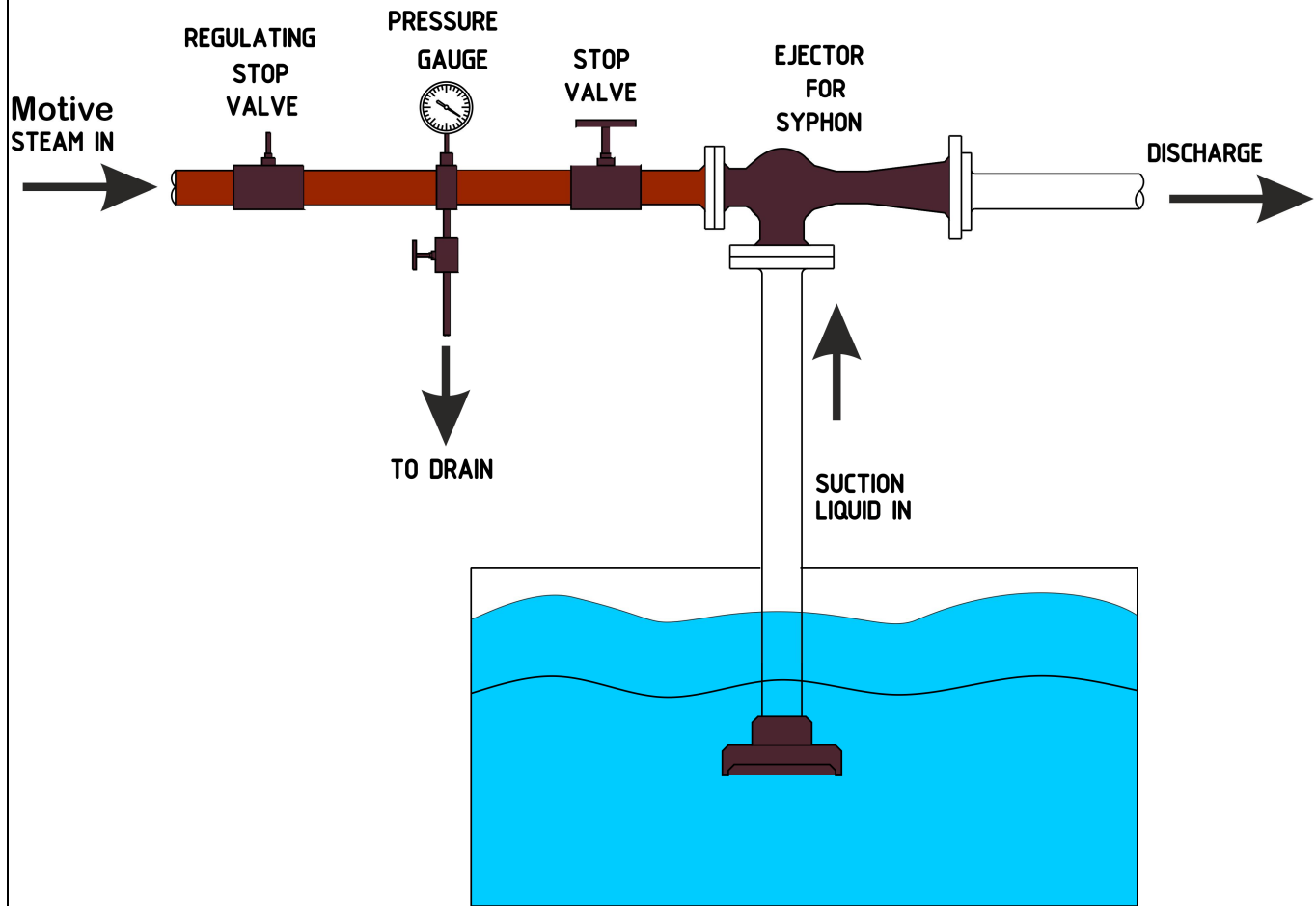
APPLICATIONS

- **Steam Jet Syphons** find a wide variety of applications in a diverse range of industries. Some typical applications are :
- Pumping of aqueous solutions such as sulfuric and hydrochloric acids.
- Pumping of radioactive waste water from holding tanks or decay vessels.
- Pumping of food products, in-line cooking and blanching of Foods
- Heating of liquids and slurries
- Providing heated water to hot water supply stations
- Pumping filtrate from vacuum vessels and condensate from surface condensers.
- Removing liquid from pickling baths, extracting chemicals in reaction chamber.
- Handling soap solutions in textile plants, Pumping sugar juice and various liquids in canning plants.
- Supplying heated water to the jackets of stills and graining bowls.

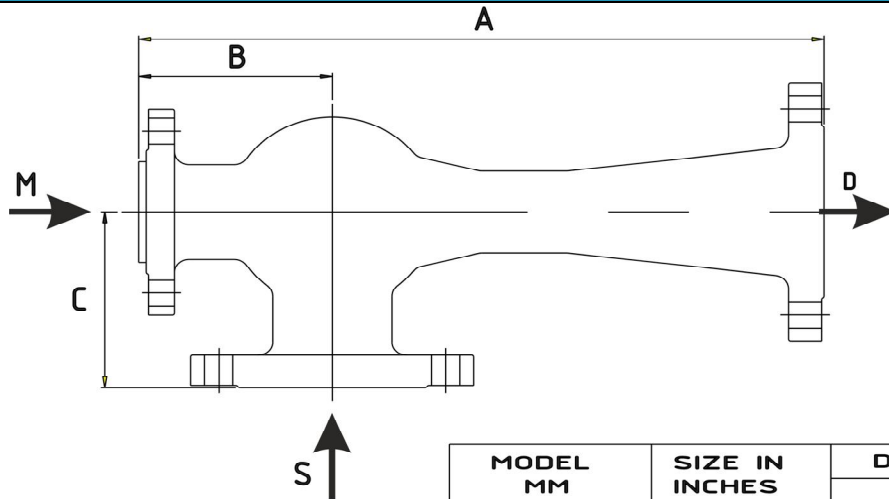
ADVANTAGES

• Self Priming	• Easy to install
• Simple & Safe	• No moving parts involved
• Donot require any maintainence	• Donot require Electricity
• Low Cost	• Performs Double Duty (Pumping & Heating)

TYPICAL INSTALLATION



PRODUCT DIMENSIONAL DATA



MODEL MM	SIZE IN INCHES	DIMENSIONS IN MM		
		A	B	C
E1500.5	15	120	40	40
E1500.75	20	150	50	50
E1501	25	200	60	60
E1501.5	40	350	70	70
E1502	50	500	100	100
E1502.5	65	600	125	125
E1503	80	700	150	150
E1504	100	900	180	180

PERFORMANCE DATA FOR STEAM JET SIPHONS																			
CAPACITIES OF STEAM JET SIPHONS IN m³/hr																			
SUCTION LIFT	SUCTION TEMP	OPERATING STEAM PRESSURE				OPERATING STEAM PRESSURE				SUCTION LIFT	SUCTION TEMP	OPERATING STEAM PRESSURE				OPERATING STEAM PRESSURE			
(MWC)	(DEG C)	(BARg)				(BARg)				(MWC)	(DEG C)	(BARg)				(BARg)			
		0 M DISCHARGE HEAD				6 M DISCHARGE HEAD						12 M DISCHARGE HEAD				16 M DISCHARGE HEAD			
		3	4.5	7.5	13.5	3	4.5	7.5	14			3	4.5	7.5	13.5	3	4.5	7.5	13.5
0.3	20	12	12	10	8	10	11	10	7	0.3	20	3	9	10	7	---	7	10	7
	30	10	10	9	7	9	10	9	7		30	2	9	9	7	---	7	9	7
	40	9	8	8	6	9	8	8	6		40	3	8	8	6	---	7	8	6
	50	8	7	7	3	8	7	7	3		55	3	7	7	3	---	6	7	3
	60	6	6	6	3	6	5	5	2		65	3	6	6	2	---	6	6	2
	70	4	4	4	2	4	4	4	2		75	2	4	4	2	---	4	4	2
3	20	9	8	7	5	7	8	7	5	3	20	---	7	7	5	---	4	7	5
	30	8	7	6	4	7	7	6	4		30	---	6	6	4	---	3	6	4
	40	6	6	6	2	6	6	5	2		40	---	5	5	2	---	3	5	2
	50	5	5	4	2	5	5	4	2		55	---	4	4	2	---	2	4	2
	55	4	4	3	---	4	4	3	---		65	---	3	3	---	---	2	3	---
4.5	20	8	6	5	4	7	7	5	4	4.5	20	---	6	5	4	---	3	5	4
	30	7	6	4	3	6	6	4	3		30	---	5	4	2	---	3	5	2
	40	5	5	4	2.0	5	5	4	2		40	---	5	4	---	---	2	4	---
	50	4	4	3	---	4	4	2	---		55	---	4	1	---	---	2	---	---
	55	3	2	---	---	3	2	---	---		65	---	1	---	---	---	---	---	---
6	20	6	5	4	3	6	5	4	1	6	20	---	5	4	1	---	---	4	---
	30	5	4	3	3	4	4	3	1		30	---	4	3	1	---	---	3	---
	40	4	3	3	1	4	3	1	---		40	---	1	1	---	---	---	---	---

INDUSTRIES UTILISING STEAM JET SYPHONS

- | | |
|---|--|
| <ul style="list-style-type: none"> Chemical Pharmaceutical Petrochemical | <ul style="list-style-type: none"> Paper & Pulp Food Marine & Power Industries. |
|---|--|

MATERIAL OF CONSTRUCTION

Steam Jet Syphons can be made from practically any machinable material. Depending upon the nature of the fluid to be handled, the syphons could be made out of the following:

- | | |
|--------------------|-----------------|
| 1. Cast Iron | 4. Aluminium |
| 2. Bronze | 5. Hastelloy |
| 3. Stainless Steel | 6. Carbon Steel |

END CONNECTIONS

Flanged to **ANSI B16.5 150#** as a standard. We can also provide other standard end connection as per the requirement of the Customer.



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