Design Features

- Effective, economical way to Circulate liquids in closed or open tanks
- No Moving parts
- Inherently clog resistant
- Requires minimal maintenance
- Nozzles operation creates multiplying effect on fluid flow

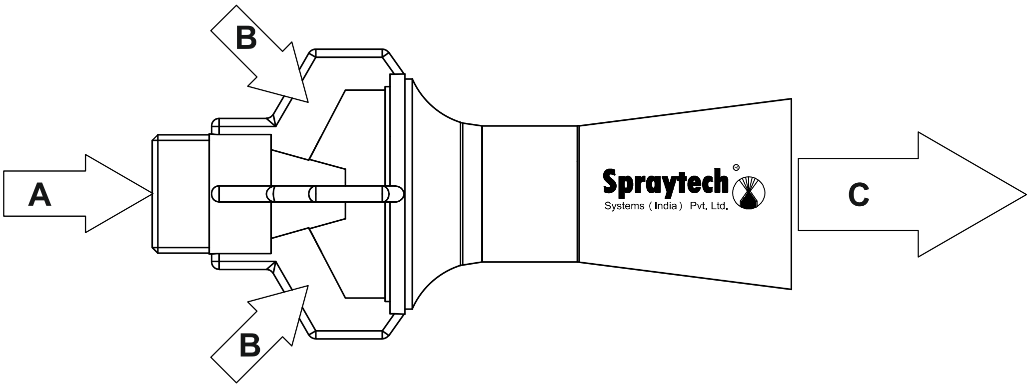
Plastic Versions

Metal Versions

Spray Characteristics

- Cone -shaped plume Flow rates: 26.7 to 12000 L/min (motive)
- The volume of discharge liquid will be 3-5 times greater than the motive liquid pumped.
- It's unique venturi design ensures proper mixing of tank Solution.

Eductors have a unique venturi design which enables smaller pumps to circulate large volumes of tank solution. The eductor will circulate four to five gallons of solution for each gallon pumped. Eductors are used for mixing chemicals, suspending solids, adjusting pH," sweeping" debris or sludge toward a filter intake and many other useful applications.



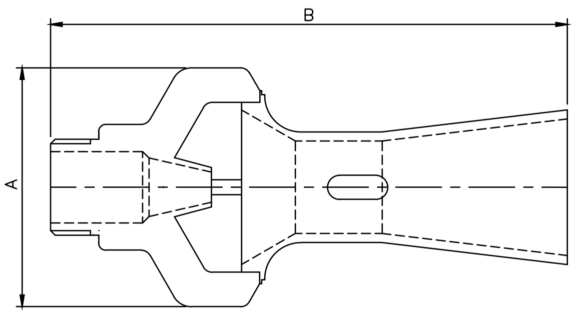
Application

- Plating Tanks
- Phosphating Tanks
- Fertilizer tanks
- Pulp Tanks
- Sludge Tanks
- Paint Booths
- Anodizing Tanks
- Cooling Towers
- Decorative Fountains

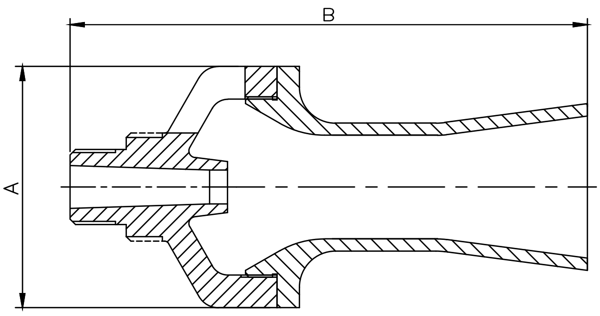
A = Inlet Flow Rate

B = Entrained Flow Rate

C = (A+B) Out Flow



Plastic Versions



Metal Versions

Performance Data

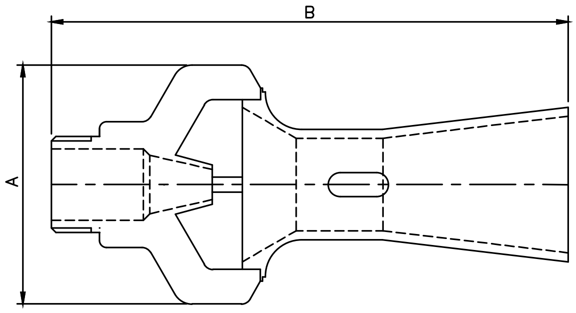
SIZE	FLOW RATE	INLET LIQUID PRESSURE (bar)							
		.5	1	1.5	2	2.5	3	3.5	4.0
1/4	Inlet Flow Rate (l/min)	11.3	16.0	19.5	23	25	28	30	32
	Circulation /Rate (l/min)	53.3	75	91.5	107	118	130	140	150
	Effective Flow Field (m)	0.91	1.5	2.1	2.6	3.0	3.7	4.3	5.2
3/8	Inlet Flow Rate (l/min)	29	42	51	59	65	70	77	82
	Circulation /Rate (l/min)	145	210	255	295	325	350	385	410
	Effective Flow Field (m)	1.2	1.8	2.4	3.0	3.7	4.3	4.9	6.7
3/4	Inlet Flow Rate (l/min)	43	64	74	85	97	106	116	124
	Circulation /Rate (l/min)	215	320	370	425	485	530	580	620
	Effective Flow Field (m)	1.5	2.4	3.4	4.3	5.2	6.1	7.3	10.1
1 1/2	Inlet Flow Rate (l/min)	106	151	184	215	243	259	288	308
	Circulation /Rate (l/min)	530	755	920	1075	1215	1295	1440	1540
	Effective Flow Field (m)	2.3	3.7	4.9	6.1	7.3	8.8	10.4	14.0

Effective Flow Field is defined as 1"(30 cm) of flow/second.

Dimensions :

Serial No.	Inlet Connection. BSPT (M)	Orifice Dia. in. (mm)	Length in. (mm)	Dia. in. (mm)	Net Weight (kgs)
1.	1/4"	06	81	33	0.275
2.	3/8"	12	120	50	0.400
3.	1/2"	15	170	66	0.750
4.	3/4"	18	170	66	0.850
5.	1"	23	99	57	2.0
6.	1 1/2"	35	250	95	3.0

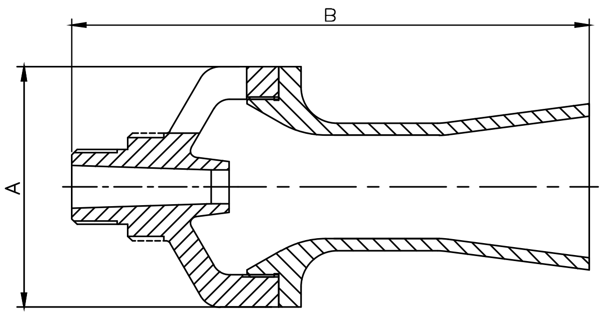
TE



Plastic Versions

PLASTIC

Connection Size BSP	Model Number	Motive Flow Rate LPM @ BAR						Dimensions (mm)	
		0.7 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	A	B
1/4	TE30	11.54	13.79	16.89	19.50	23.88	27.58	30.8	82.0
3/8	TE80	30.94	37.00	45.30	52.30	64.00	74.00	52.0	114.7
1/2	TE93	35.50	42.43	51.96	60.00	73.48	84.85	71.0	161.0
3/4	TE120	44.37	53.03	64.95	75.00	91.86	106.07	71.7	164.3
1	TE240	88.74	106.00	129.90	150.00	183.71	212.13	--	--
1 1/2	TE350	133.11	159.10	195.86	225.00	275.57	318.20	115.4	254.1



Metal Versions

METAL

Connection Size BSP / BSPT / NPT		Model Number	Motive Flow Rate LPM @ BAR						Dimensions (mm)	
			0.7 bar	1 bar	1.5 bar	2 bar	3 bar	5 bar	A	B
Threaded	1/4	TE35	13.6	16.2	19.92	23	28.1	36.3	36	80
	3/8	TE73	27.8	33.2	40.70	47	57.5	74.3	49.5	115
	1/2	TE120	45.8	54.2	66.4	76.7	93.94	121.2	59.5	150
	3/4	TE150	57.2	68.3	83.7	96.7	118.4	152.9	69.5	167
	1	TE240	88.74	106.7	129.9	150	183.7	237.1	89	241
	1 1/2	TE340	129.5	154.8	189.6	219	268.2	346.2	114	252
	2	TE620	236.5	282.1	345.5	399	488.6	630.8	134	290
	3	TE1500	572.0	683.7	837.4	967	1184.3	1528.9	174	375.5
Flange End	4	TE2510	952.5	1138.4	1394.3	1610	1971.8	2545.6	--	--
	6	TE6010	2271.7	2715.2	3325.5	3840	4703.0	6071.5	378.8	800
	8	TE10050	3804.0	4546.7	5568.5	6430	7875.1	10166.7	--	--

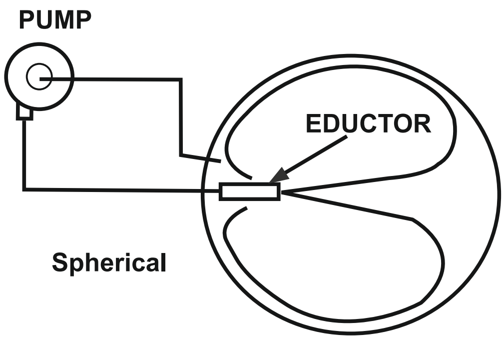


Figure 1
Eductor in a round tank

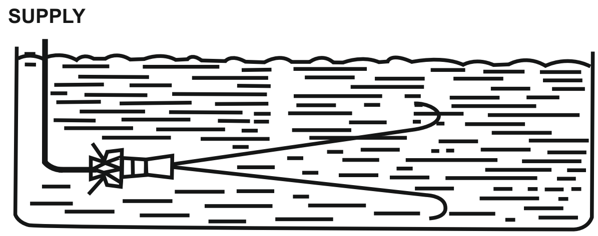


Figure 2
Eductors in a tank providing mixing.

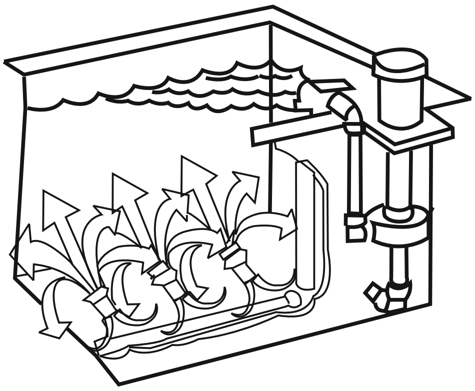


Figure 3
Multiple eductor assembly

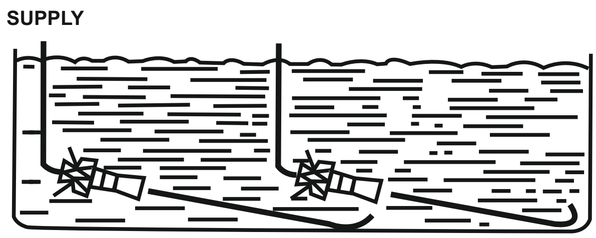


Figure 4
Eductors in a tank maintaining suspension and mixing of solids.

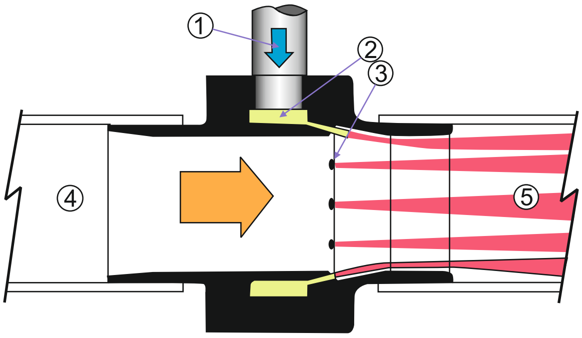
Mounting

An eductor can be mounted in any position. The supply line and manifold pipng to multiple eductors must be sized to supply uniform pressure to each eductor. It is important that the eductor be positions within the tank to insure the free flow of liquid to be mixed into and out of the units. the greatest agitation occurs within the discharge plume; therefore, the discgarge end should be aimed towards the most remote part of the tank. On the other hand, the intake end of the unit must be just far enough from the tank corner or wall to allow the free flow of liquid into the suction openings.

Tank shape and size influence the placement and number of eductors required ti maintain even agitation. With a spherical tank, a single eductor mounted as shown in the Figure 1 illustration makes the best use of the mixing characteristics of the eductor. With no corners to impede liquid flow, the liquid circulates evenly.

In simple mixing application in a cylindrical, square or rectangular tank, not a plating tank, the angular intersection of stagnation in these areas. A single eductor mounted as shown in Figure 2 will minimize this. For high agitation, use of multiple eductors are recommended as shown is Figure 3.

A slight downward angle of the eductors can be helpful in maintaining the velocity at the tank bottom which is necessary to keep solids in suspension for easier removal by a filter system. (See Figure 4)



Compressed air flows through the inlet

(1) into an annular plenum chamber (2) It is then injected into the throat through directed nozzles (3) These jets of air create a vacuum at the intake (4) which draws material in and accelerates it through the unit (5) for conveying over long vertical or horizontal distances.

Air Conveyor is available in a number of styles, materials, and sizes. Each has a large, smooth, straight bore that allows as much material to pass through as possible. Infinite control of the flow rate thought the Air conveyor can be controlled by a pressure regulator. Kits include a pressure regulator that is sized properly for flow.

The actual conveying rate is affected by the size. mass and geometry of the part to be conveyed along with the length, lift and number of bends in the hose, tube or pipe. These variables make it difficult to determine the exact conveying rate for any product, however, the application engineering can assist you by comparing the material you want to convey with something that has already been tested.

Air Conveyor Performance

80 PSIG (5.5 BAR)	Air Consumption		Vaccum	
Model	SCFM	SLPM	H2O	kPa
2710	10.7	303	-72	-18
4214	14.7	416	-42	-11
4225	25.9	733	-42	-11
3633	33	934	-36.8	-9
2845	45	1274	-28.5	-7
2358	58.5	1656	-23.5	-6
1468	68.5	1939	-14.7	-4
1395	95	2690	-13.6	-3.4
1012	128	3625	-10.5	-2.6

Air Conveyor Comparison		
Material Type	Temperature Rating	Corrosion Resistance
Aluminum	275° F (135°) C	Fair
Stainless Steel (Type 303)	400° F (204° C)	Good
Stainless Steel (Type 316)	400° F (204° C)	Excellent
High Temperature Stainless Steel (Type 303)	900° F (482° C)	Good

Applications :

- Hopper loading
- Fiber tensioning
- Material conveying
- Water/trim removal
- Chip removal
- Part transfer
- Filling operations