SNP | THE SPRAY NOZZLE PEOPLE

TurboMix®

Eductor Mixing Nozzle

MIXING

DESIGN FEATURES

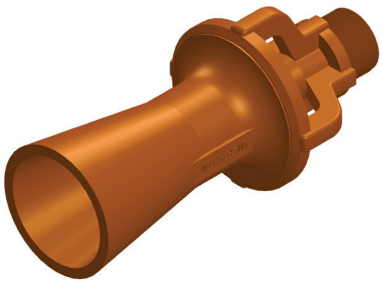
- Effective, economical way to circulate liquids in closed or open tanks
- No moving parts
- Inherently clog resistant
- Require minimal maintenance
- Nozzle operation creates multiplying effect on fluid flow
- The volume of discharge liquid will be 3-5 times greater than the motive liquid pumped
- Available in metal (brass, carbon steel or 316ss) or plastic (glass reinforced polypropylene or Kynar®/PVDF)

SPRAY CHARACTERISTICS

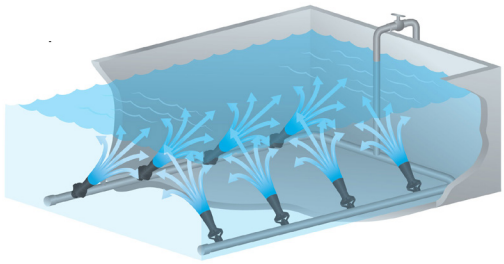
- Cone-shaped plume
- Flow rates: 26.7 to 1200 l/min (motive)

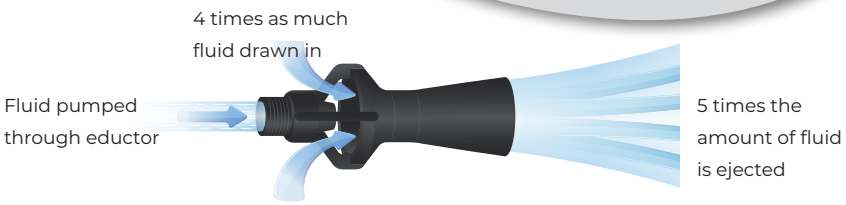
BETE® PERFORMANCE SPRAY ENGINEERING

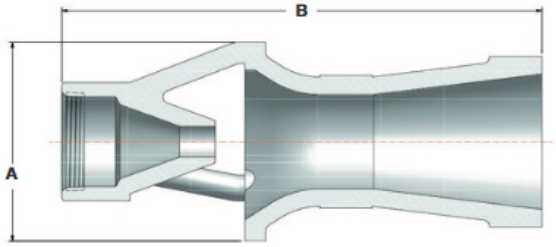
Uni-Spray Systems Inc.



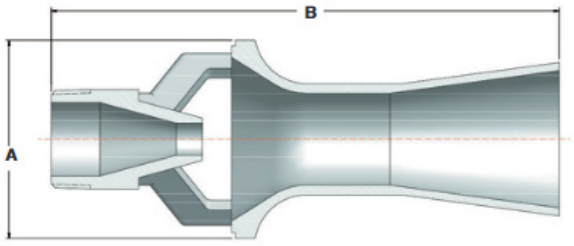
Eductors are a simple and cost-effective way to improve mixing and recirculation systems. Submerged in a tank, liquid is pumped through the eductor. The design is such that the motion of the pumped liquid entrains the surrounding liquid via the Venturi effect. This means that approximately 5 times the volume of the pumped liquid is moved. In effect, the efficiency of the pump is increased 5 fold.







Metal



Plastic

Metal Eductor Flow Rates and dimensions

Female Thread	K factor	Motive (pumped) flow in litres per minute @ BAR						Dimensions	
		0.5	0.7	1	2	3	5	A	B
⅜" BSPT	31.9	22.6	26.7	31.9	45.1	55.3	71.3	43	108
½" BSPT	50.1	35.4	41.9	50.1	70.9	86.8	112.0	55	133
¾" BSPT	68.4	48.4	57.2	68.4	96.7	118.5	152.9	67	159
1" BSPT	105	74.2	87.8	105.0	148.5	181.9	234.8	83	200
1 ½" BSPT	146	103.2	122.2	146.0	206.5	252.9	326.5	97	233
2" BSP	282	199.4	235.9	282.0	398.8	488.4	630.6	121	286
3" BSP	684	483.7	572.3	684.0	967.3	1185	1529	146	492
4" BSP	1130	799.0	945.4	1130	1598	1957	2527	213	864
6" BSP	2720	1923	2276	2720	3847	4711	6082	321	1320
8"BSP	4550	3217	3807	4550	6435	7881	10174	416	1730

Plastic Eductor Flow Rates and Dimensions

Male Thread	K factor	Motive (pumped) flow in litres per minute @ BAR						Dimensions	
		0.5	0.7	1	2	3	5	A	B
1/4" BSPT	14.5	10.3	12.1	14.5	20.5	25.1	32.4	32	69.6
⅜" BSPT		24.5	29.0	34.7	49.0	60.1	77.5	54.0	114.0
½" BSPT	48.9	34.6	40.9	48.9	69.1	84.6	109.2	64.0	165.0
¾" BSPT	64.5	45.6	54.0	64.5	91.2	111.8	144.3	73.0	162.0
1" BSPT	111.5	78.9	93.3	111.5	157.7	193.1	249.3	89.0	241.0
1 ½" BSPT	160.4	113.4	134.2	160.4	226.8	277.8	358.6	114.0	248.0

Discharge Lengths: **Approximate discharge plume length is 220 mm per 0.1 bar pressure drop. For example and eductor operating at 0.7 bar has an ejection plume of 1.54**

Flow Rate (l/min) = $K\sqrt{bar}$