



SERFILCO®

SERIES 'ME' TANK MIXING EDUCTORS

BULLETIN
A-404B
FEB. 1991

For use in process solutions

- MIXES AND AGITATES WITHOUT AIR
- ELIMINATES HEAT BUILD-UP DUE TO MECHANICAL RECIRCULATION
- ONE GALLON OF PRESSURE LIQUID CIRCULATES FOUR ADDITIONAL GALLONS OF INDUCED LIQUID
- MOLDED OF POLYPROPYLENE
Excellent corrosion resistance to 190°F (90°C)
- SMOOTH, CLEAN SURFACES
Resist build-up of solids or plugging

SERFILCO SERIES 'ME' Eductors permit the use of relatively small pumps to circulate large volumes of liquid in a tank, thus avoiding stratification of liquids or settling of solids. One GPM of pressure liquid circulates four GPM of suction liquid.

Pressure liquid is pumped through the nozzle and enters the diffuser at high velocity, entraining the suction fluid. The large velocity difference between the input liquid and the induced liquid causes the intimate mixing of the two streams and entrainment of the suction liquid. The pressure liquid may be provided by a pump or filter discharge.

SELECTION OF TANK MIXING EDUCTORS

PIPE SIZE	INLET PRESSURE (PSI)							
	10	15	20	25	30	35	40	50
NOZZLE FLOW OUTPUT(GPM)								
3/8"	7.5	9.2	10.7	11.9	13.1	14.1	15	17
3/4"	13.5	17	19	21	23	25	27	30
1-1/2"	33	41	47	53	58	63	67	75

EXAMPLE A:

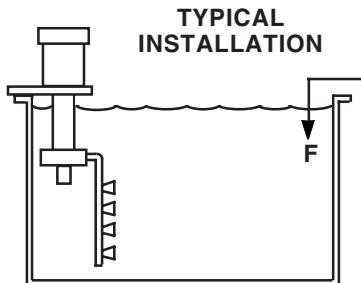
It is necessary to turn over the contents of a 12,000 gallon tank once every hour to prevent settling of the contents.

PROCEDURE FOR SIZING:

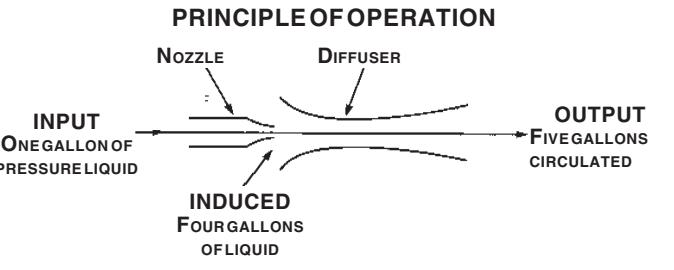
Total circulation rate is 12,000 gallons per hour, or 200 gallons per minute. Each GPM of nozzle flow gives a total circulation of 5 GPM.

The required nozzle flow is $\frac{200}{5}$ or 40 GPM.

Pumping pressure available is 20 PSI. At 20 PSI, the 3/4" model results in 19 GPM. Therefore, if 3/4" size is being used, 2 eductors are required.



F.O.B. Glenview, Illinois



TO ORDER:

MODEL	CONNS. MNPT	DIMENSIONS		PRICE CODE NO.
		Length	Dia.	
ME 3/8"	3/8"	4-1/2"	2-1/8"	33-1732
ME 3/4"	3/4"	6-3/8"	3"	33-1733
ME 1-1/2"	1-1/2"	9-7/8"	4-5/8"	33-1734

EXAMPLE B:

It is necessary to select eductors for a waste treatment reaction / acid neutralization tank.

F = flow rate into tank, T = tank size, R = recirculating flow (see chart)

$$\text{Total required eductor flow rate is: } E_F = \frac{R}{5}$$

Then select quantity and size of eductors required to provide E_F as in Example A.

R - RECIRCULATING FLOW (Recommended)

T (Gallons)	F (GPM)			
	10	25	50	100
100	100	200	300	500
250	200	250	300	500
500	300	500	800	1300
1000	600	1000	1300	2000
2000	1200	2000	2000	2500
3000	1800	2500	3000	3000



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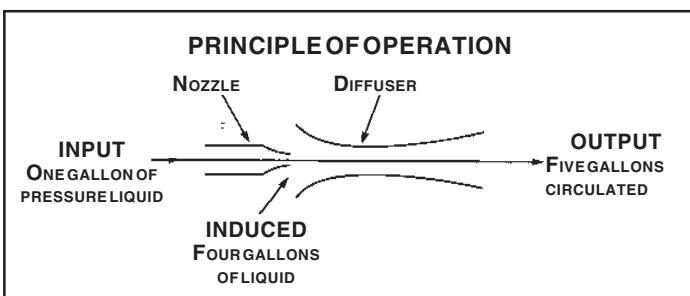
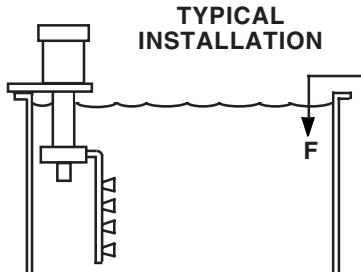
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