

PUMPS WITH EDUCTORS

... Replace air blowers to agitate plating solutions

SER-DUCTORS® are a method of agitating the plating solution with a centrifugal pump to draw solution from the tank and deliver it through a sparger system similar to that used for air agitation, but with the addition of eductors strategically placed along the horizontal pipe. Each eductor creates, without additional horsepower,

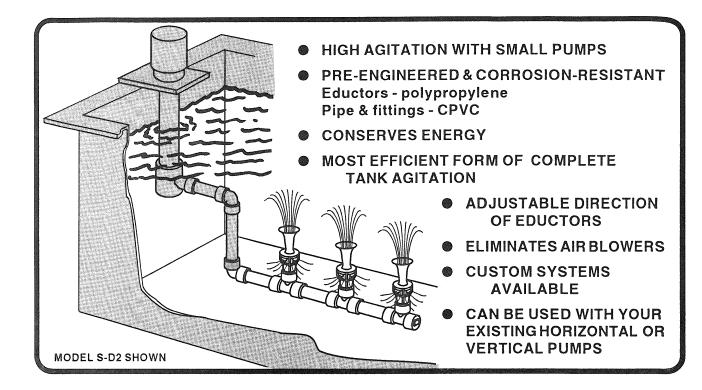
up to four times the actual pumped liquid being delivered to its nozzle. Consequently, for each gallon per minute through the eductor nozzle, you will be circulating four additional gallons. This means that 50 GPM into the **Ser-Ductor** will result in 15,000 GPH agitation.

We have received reports suggesting the almost universal success of this new method of agitation. Now consider the advantages provided by the **SER-DUCTOR**:

- Eliminates contaminating vapors and particulates being introduced into the plating solution.
- Elimination of uncontrolled temperature change, i. e. heat loss.
- Elimination of air bubbles entering the suction line of the filtration system which could cause problems with pump and filter performance.
- Minimizing of brightener breakdown due to oxidation.
- Eliminates crystallization forming in air sparger holes during shut-down.

With SER-DUCTOR agitation, plating is accomplished with a solution which is totally self-contained. No introduction of particulates or vapors, and the major source of temperature loss is eliminated. It brings us one step closer to 'Clean Room - Solution - Environment'. Now proceed to filter the solution to remove particulates, and flow a portion through carbon for control of organics.

SER-DUCTOR° AGITATION SYSTEMS



KIT MODEL	PIPE SIZE	NO. OF EDUCTOR TEES	EDUCTOR SIZE	LENGTH		AGITATION		PUMP	PRICE
				Inches	M	GPM	LPM	REQUIRED *	CODE NO.
S-D1	1"	2	3/8"	33	.83	75	284	15 GPM @ 10 Ft. 57 LPM @ 3 M	33-5983
S-D2	1"	3	3/8"	48	1.2	100	378	20 GPM @ 15 Ft. 76 LPM @ 4.6 M	33-5984
S-D3	11/4"	6	3/8"	96	2.4	175	662	35 GPM @ 20 Ft. 132 LPM @ 6.1 M	33-5985
S-D4	11/4"	4	3/4"	65	1.6	250	946	50 GPM @ 20 Ft. 189 LPM @ 6.1 M	33-5986
S-D5	11/2"	6	3/4"	97	2.5	350	1325	70 GPM @ 20 Ft. 265 LPM @ 6.1 M	33-5987
S-D6	2"	4	1-1/2"	66	1.7	400	1514	80 GPM @ 30 Ft. 303 LPM @ 9.1 M	33-5988
S-D7	2"	11	3/4"	176	4.4			100 GFM @ 30 FL 303 LFM @ 9.1 M	33-5989

- 1. All kits assemble into a single leg agitation system as shown in drawing(shaded areas). Eductor tees are pre-assembled.
- 2. Pipe and fittings between pump discharge and inlet elbow are ordered separately.
- 3. For dual leg agitation system, order additional tees, elbows and pipe as necessary.
- 4. Custom systems available, consult factory.
- * An in-tank or out-tank pump with this flow and TDH performance will produce the agitation stated. A smaller or larger pump will similarly affect the agitation flow. Consult factory for specific pump recommendation.

Note: pump-motor assembly is not included with agitation system.

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