

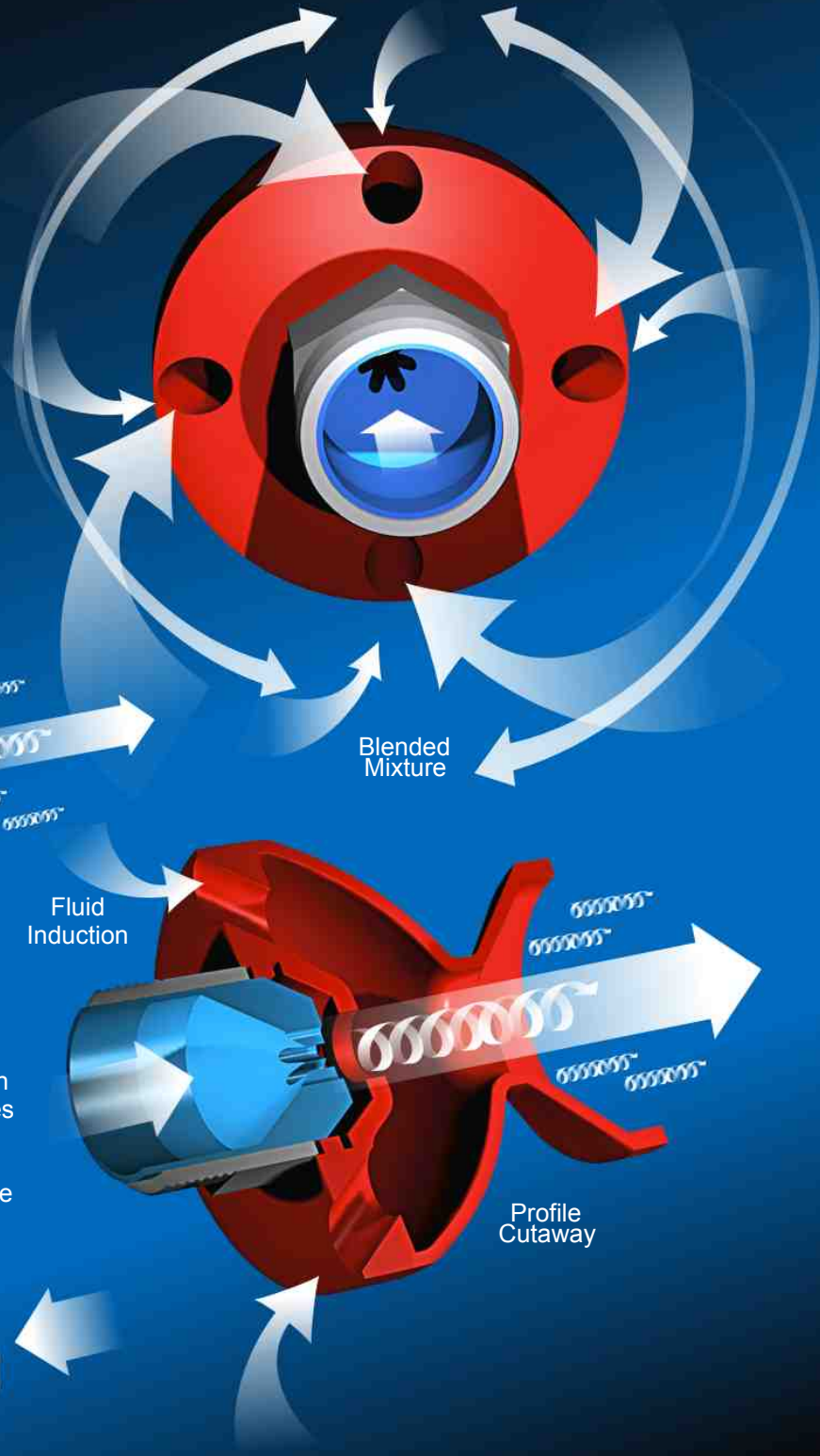
# Radial Eductor-PS Series

Drilling Fluid Applications on Drilling Rigs, Work Boats and Mud Plants

Tank Eductor 3" NPT Pipe Connection

RADIAL EDUCTOR PS-3 model is the newest in a series of tank eductors especially designed for mixing and suspending drilling fluids uniformly without stratification and settling.

Delivering premixed liquid drilling fluids to an offshore rig site without loss of product is a challenging operation. A simple manifold arrangement using RADIAL EDUCTORS installed in tanks of any configuration can solve the problems of stratification and barite settling to the tank bottom. Additionally to barite savings, dramatic cost reductions are realized in rig time, man/hour exposure during tank cleaning with savings in disposal cost.



Motive Inlet

Fluid Induction

Blended Mixture

Profile Cutaway

In operation, a pressurized fluid from a centrifugal pump enters a converging nozzle in the RADIAL EDUCTOR converting the pressure-energy into a high velocity jet stream. The high velocity jet stream causes a low pressure region that draws the surrounding drilling fluid into the mixing chamber of the RADIAL EDUCTOR, discharging a uniform mixture that is three times the motive feed rate.

**Model: V V-PS-3**

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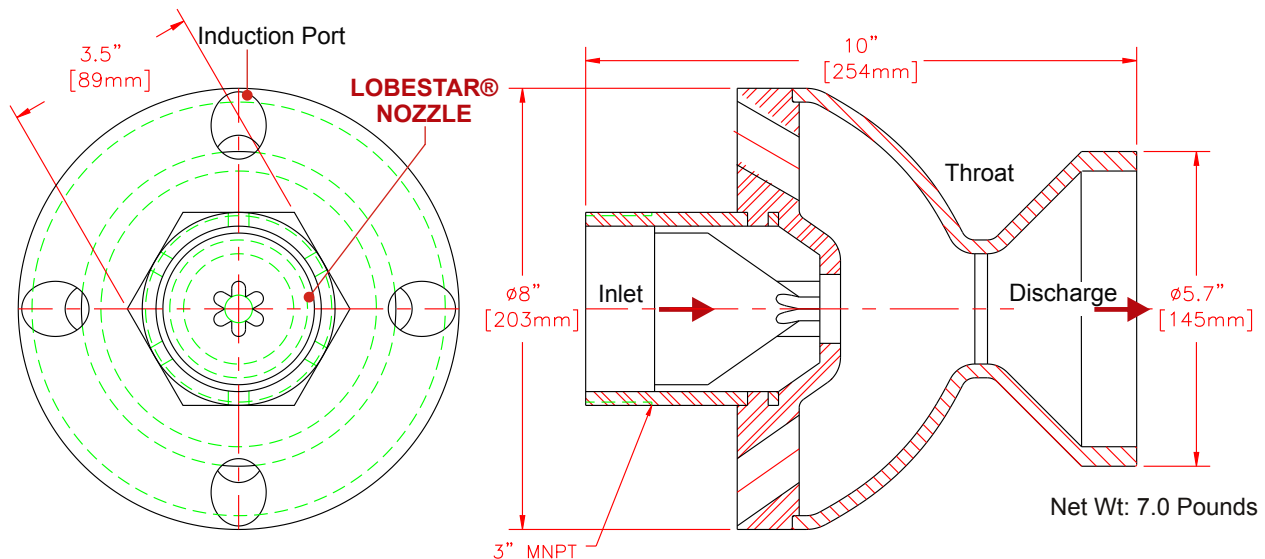
No more arriving at the rig site with part of the drilling fluid settled in the tank corners and on the tank floor. This can be a quadruple cost: (1) rig time to get the mud weight back up to the desired density, (2) cost for barite that you had already paid for, (3) boat company charges for cleaning out tanks and (4) disposal cost.

Suspending barite and mixing for uniform consistency in mud tanks is essential in optimizing product quality. The RADIAL EDUCTOR generates strong turbulence in a submerged environment. The RADIAL EDUCTOR provides the energy distribution to keep tanks uniformly mixed and solids suspended without moving parts.

The RADIAL EDUCTOR is a high volume mixing device that employs a **LOBESTAR® NOZZLE** to produce a strong turbulent pattern of mixing. The RADIAL EDUCTORS are strategically positioned in tanks to provide full tank coverage. The issuing plumes from the diffuser section of the RADIAL EDUCTORS generate a spreading, higher velocity pattern that is greater than the settling rate of barite. The benefits are numerous: uniform product rheology, stable emulsions, no loss of product, elimination of settling, reduced tank cleaning and disposal.

**Applications:** • Transporting drilling fluids • Storage tanks • Chemical and slurry tanks • Mixing liquids with liquids and stabilizing emulsions

## Mixing and Suspending Solids in Tanks with Radial Eductors



### Flow Rates

MODEL	NOZZLE INLET SIZE	Pounds Per Inch <sup>2</sup> (PSIG)													
		20		30		40		50		60		70		80	
		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Motive Fluid Flow Rate (GPM)															
PS-1	1/2"	27	108	33	132	38	152	43	172	46	184	50	200	54	216
PS-1.5	5/8"	41	164	51	204	59	236	66	264	72	288	78	312	83	332
PS-2	7/8"	81	324	100	400	116	464	130	520	142	568	153	612	164	656
PS-3	1"	107	428	131	524	151	604	169	676	185	740	200	800	214	856