

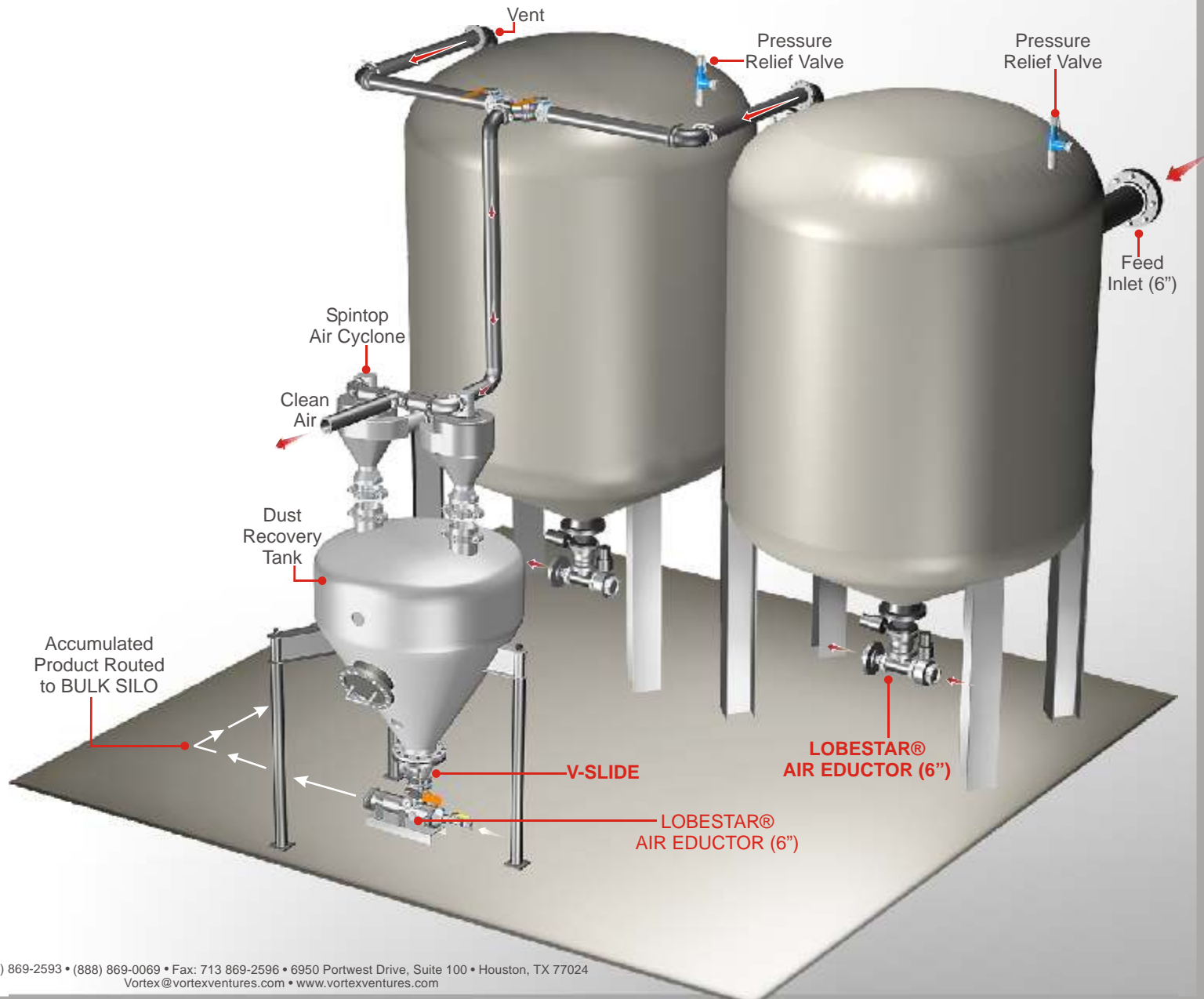
# BULK•SILO

## DUST RECOVERY SYSTEM



### Vortex Ventures Flow Process for Dust Recovery Tank

- (1) A dense phase pneumatic conveying system is employed to transfer and store bulk barite and bulk cement when transferred from a Marine Supply vessel.
- (2) During the conveying process of material transfer, the expanding air generates dust that is exhausted through the "P" Tank vent lines.
- (3) The vented dust is routed through a connecting pipe to a Dust Recovery Tank (DRT). The DRT is fitted with an Air Cyclone that employs special features developed by Vortex Ventures Inc. to separate the air and suspended solid particles. The exhausted air is discharged from the Air Cyclone with a particle size of less than 12 microns. A filter sock may be employed on the vent line from the Air Cyclone to further reduce solid particle release to the atmosphere. Solid particles with a size greater than 12 microns are directed downward out of the Air Cyclone into the DRT. This process will insure minimal product loss. Care should be taken during the filling process not to over-fill the "P" Tank. This could cause downstream plugging in the pipe leading to the DRT.
- (4) A return line connected to the P-tank(s) inlet manifold from the bottom of the DRT is used with a Lobestar Eductor and air nozzle to form a vacuum to pull the barite or cement from the DRT while conveying the recovered material back to the "P" Tank. The DRT can be emptied after each batch of transferring is complete or anytime the high level alarm signals that the unit is full. A completely separate system is employed for the barite and cement. Each system has its own DRT.



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