

Applications of Fox Venturi Eductors

Case Study No. 58

Product : Calcium Carbonate

Particle size : below 10 microns. Moderately abrasive, very fine dust.

Problem : This manufacturer of specialty minerals required a cost-effective means of returning fines from the dust collector serving his packing operation back to the main packaging silo, about 100 feet away, so the fines could be reclaimed and packaged as finished product. The traditional approach of using a rotary valve for conveying this material was ruled out due to previous experiences with airlocks that resulted in blowback and high maintenance costs.

Solution : The moderate rate of 500 lbs/hr permitted Fox to select a small 2" eductor coupled to a compact 4 HP Rotron blower, operating at 3 psig. As in most applications of this type, the negative pressure in the dust collector is easily overcome by the significantly higher vacuum created by the eductor. This allows the eductor to bolt up directly to the dust collector discharge flange, eliminating an airlock entirely. To make the installation as simple as possible, a custom fabricated eductor with an integral transition was provided. The system has performed flawlessly since installation and has needed no maintenance.

Reclaiming Dust from Bagging Operation

