

VIBRA SCREW CASE HISTORY



CH-261

Winemaker's Filtration Aided by Bulk Bag Unloader

Customer

Bronco Winery, Ceres, California, produces a broad range of California wines including reds, whites, blush, and champagne.

Problem

Filtration is an important step, in fact, several steps, in the production of quality wines. And, diatomaceous earth (DE) and perlite are important filter media in a winery's sanitary filter systems. But neither diatomaceous earth nor perlite are easy products to work with. In damp conditions, both filter media often cake in standard 50 pound paper bags. Caking is compounded when DE is stored in 1000 pound bulk bags.

Manual dumping of the finely pulverized material in small paper bags is slow, heavy work which releases DE dust. And, with diatomaceous earth consisting of 60% silica, worker protection is critical to Bronco management.

Bronco wanted to increase its efficiency and remove the hazards in this area and experimented with occasional use of more modern 1000 pound bulk bags. Workers manually emptied these into the winery's pre-coat tank for use in its filter press, but continued to experience incomplete discharge. An outdoor storage area exposed the medium to dampness, and discharging filter medium in 1000 pound quantities continued to create dust.

Solution

Vibra Screw Bulk Bag Unloader with controlled vibration assist and a Vibra Screw 4-inch volumetric screw feeder.

Bronco installed this bulk bag discharge system to address the specific problems it had encountered with bulk feeding. Now, the Vibra Screw Bulk Bag Unloader quickly and completely empties the bags of diatomaceous earth and perlite with a gentle assist from a unique oil-lubricated gyrator. Bronco uses the

discharge system seasonally, approximately five months per year, during its grape harvest and pressing. They move about 250 tons of DE and perlite each year.

An on-board hoist raises the large bags into position on the system's discharge platform. The unloader's unique two-slope design safely supports and seals the bags. During discharge, material flows positively to a quiet volumetric feeder for controlled, variable feed to the filtering process.

Results

The Bronco Winery plant engineer says that although they continue to store DE bulk bags outdoors, they no longer experience difficulty in discharging the hard-to-handle diatomaceous earth or perlite. The Vibra Screw Bulk Bag Unloader operates efficiently and reliably even after long off season idle periods. Dust is a problem of the past, a special concern with the ever

stricter federal and California environmental restrictions.

Flow is always good, regardless of the filter medium they use.



Diatomaceous earth cakes due to outdoor storage, but a Vibra Screw Bulk Bag Unloader keeps it moving smoothly.

Bronco Winery eliminated dust and discharge problems with one Vibra Screw Bulk Bag Unloader.

