

CASE STUDY: Conveyors

Conveyors have been identified as an ideal application for use with Powerboss.

The AC Induction Motor driving the conveyor must be sized to handle a full load on the conveyor. Many conveyors run with varying loads or continual partial loads.



The Cornwall Calcified Seaweed Company is an established family business processing commercially dredged seaweed to produce agricultural fertilizer for grazing land.

Their prime consumption of electricity within the facility is through the use of conveyors, which transport the calcified seaweed from the Quay into the main building, where it is dried and bagged for distribution.

Prior to use with Powerboss, no soft start was in operation and associated maintenance issues were apparent, in addition to peak demand penalties.

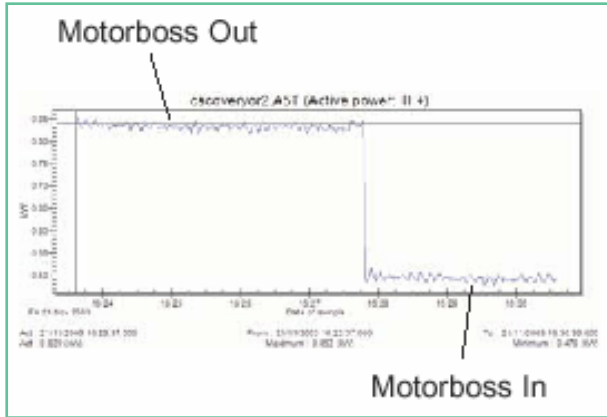


Conveyors - The Benefits of Powerboss:

- Soft Starter
- Peak Demand
- Energy Saving Optimization
- Reduced Maintenance Costs
- Broken Belt Protection
- Reduced Downtime
- Quieter Machinery

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Measurements being taken using the Circutor AR5 Energy Analyzer. A range of parameters including readings for kW, power factor, current and harmonics can be taken in this way to accurately assess and prove the benefits of installing Powerboss.

A trial Powerboss installation was undertaken on two conveyors within the seaweed facility. The conveyors are hopper fed, which creates a continual but partial load.

When the results were measured using a high quality 3-phase analyzer, it was identified that kW savings obtained were 38%, which equated to a return on investment of just over 18 months.

Powerboss has a special feature termed 'Broken Belt Protection'. In the event of a conveyor belt breaking, the unit will sense the change in load and shut off the motor. This not only has a maintenance benefit, but could also have Health and Safety benefits.

Cornwall Calcified Seaweed have confirmed their satisfaction with both the product and its trouble-free operation. Although this is a relatively small processing facility, they are looking forward to installing Powerboss on their other conveyors.



Annual Consumption	\$880
Savings	38%
Annual Savings	\$330
Cost of Powerboss	\$510
Return on Investment	18 months

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