

# **Savings Analysis Report**

## **Powerboss Integra**

### **Sand Crusher 200kW**

**6/9/06**

**Distributor: Erco**

**Somar Representative: John Lee/Development Engineer**

**Testing Instrument: AR5 3-phase Network Analyser Circuitor/Ideal System**

**S O M A R**

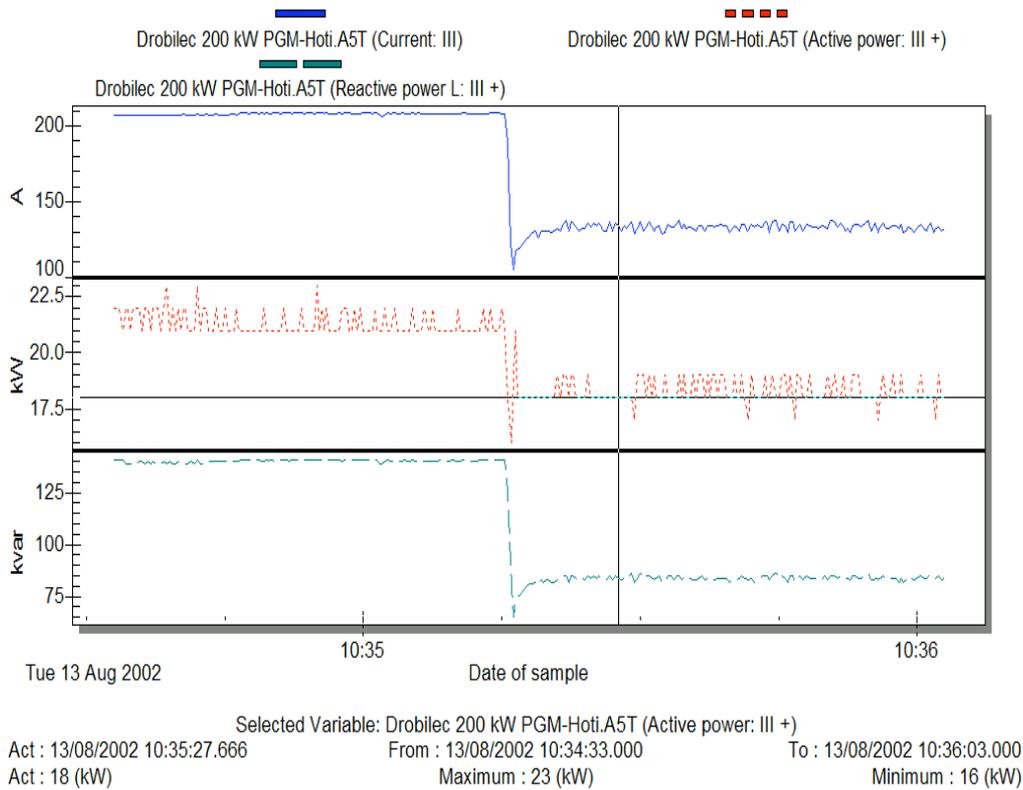
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### MULTIGRAPHIC



## Description of Operation & Comments

This sand crusher works by spinning a 3 ton metal wheel which has a large amount of inertia. A 200kW motor is required to start the wheel, but once it is up to speed there is hardly any load on the motor. Small stones are fed into the crusher and come out the other side as sand. This motor is under partial load 100% of the time. The green line in the reading above represents the point at which the energy saving feature was turned on.

**kW Before – 22kW    kW After – 18kW    kW Savings = 4kW (18%)**

## Return on Investment Calculation

16 hours per day X 100% (Time off-load) = 16 hours

16 X 4kW (kW saved) = 64kW per day

64kWh per day X 0.07 Pence (UK average electricity price) = £4.48 saving per day

£4.48 X 350 days = £1,568 savings per year

Cost of Powerboss Integra = £2,661

Return on Investment = 1.69 years

If this application was operating 24/7, the ROI would be reduced to 1.13 years

This ROI calculation is based solely on the optimisation feature of Powerboss. It does not include the additional cost saving benefits/features of a Powerboss installation. Depending on the application these could include Soft-Start, Stored Energy, Automatic Switch Off, Signal Optimisation, Dry Well Protection, Belt Breakage Protection, Heat Reduction, Maintenance Reduction + Downtime Reduction to name but a few. These factors can have a significant effect on the ROI. Powerboss Distributors are trained to include all of the cost saving benefits of a Powerboss installation when they calculate the ROI for their customers. When they do this the ROI can be reduced to such an extent that they can significantly increase their 100% mark-up and still meet their customers expectations.