

# integra<sup>™</sup>

intelligent fixed speed motor control



# The problem

**If you use electric motors you can profit from Integra.**

Energy can be a significant component cost in the production of most products we purchase. Indeed, some 65% of all energy in industry is consumed by AC induction motors.

Approximately 10% of all these motors are operating in applications that require variable speed conditions. However, the vast majority needs to operate at a single or fixed-speed.

Installing a variable speed drive onto a fixed speed application is a bad idea. It can increase the running cost by as much as 6-8%.

The loading on a motor during the typical duty cycle can fluctuate dramatically, ranging from 0-100%. While there is a measure of reactance within the motor windings, the motor has no way of intelligently adjusting the amount of power it consumes in relation to the job of work it does. Wasted energy is converted to heat, vibration and noise.



Installation: Granulator

# The solution

Integra is a range of intelligent controllers for fixed speed motors and are suitable for many motor sizes and applications; Integra provides an extensive array of special application pre-sets and easily configurable parameters.

It combines world leading soft start, intelligent load monitoring, energy optimisation and controlled stopping in a smartly designed, easy to install and competitively priced unit.

In effect; Integra electronically 're-sizes' the motor to both its application and load cycle every 10 milliseconds. Integra is perfect for fixed speed applications because motor rpm is maintained at all times. Integra can also be configured to turn off the motor when no load is detected.

Integra can extend motor life, reduce maintenance costs and save a fortune in the process. Payback is normally achieved within two years, sometimes just a few months.

*"A motor's initial purchase price represents only 2% of its total lifetime cost. A motor's power usage represents almost 98% of its total lifetime cost."*

*"Focussing on energy efficiency will do more than protect the earth's climate; it will make business and consumers richer."*

**Rocky Mountain Institute**



Installation: Mechanical Power Press



## How it works

### Intelligent cruise control for motors

Cruise control on a car will intelligently adjust the amount of power being produced by the engine in order to maintain a fixed speed. Integra can do the same for your motors and save 10% - 40%. It achieves this by converting the motor into its own load sensor to ensure that it uses the exact amount of energy required to do the job of work at any instant in time, no more – no less!

In effect Integra ensures that the motor runs at optimum efficiency throughout the load cycle by constantly monitoring and controlling torque. This means that the full load capability of the motor is never compromised. The motor can still draw full power when required in 50th of a second but

at partial loads, particularly below 50%, significant savings can be achieved. Integra is perfect for fixed speed applications with variable loads because the exact synchronous speed of motor is maintained at all times.

### Additional benefits

- **Increased contactor life & drive train components.**
- **Preventing dips in supply when starting larger motors.**
- **Allowing you to attach more equipment to a single supply.**
- **Reducing the worrying threat of peak demand penalties.**
- **Smooth acceleration without the torque transients.**
- **Improved power factor at all load cycles means reduction in kVA**
- **Reduces the KVA KW and KVAR as well as in creasing the PF through the loading cycle**



**We provide Ultra Smart Clean technologies designed to reduce Energy spend and Carbon Footprint.**

On our journey over the last two decades we are delighted to have provided intelligent control solutions for many forward thinking organisations around the globe.



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