

POWER FACTOR CORRECTION

Power Factor Correction (PFC) is an energy saving technology. Through improved energy efficiency, PFC can reduce electricity costs by eliminating Reactive Power Charges, reduce network losses and even free-up available power for plant expansion.

WHAT IS POWER FACTOR?

Power Factor is basically a degree of electrical efficiency and in an AC circuit, the ratio between the useful power kW (true power needed to perform a task) and apparent power kVA (a combination of true power and reactive power – power drawn in addition to useful power but does not contribute to the task).

WHAT IS A GOOD POWER FACTOR?

Power Factor is displayed as a figure between 0.01pf to 1.00pf. In simple terms, you can describe power factor as a % of electrical efficiency.

A perfect power factor is 100% and is called unity.

A good power factor in excess of 95% is normally deemed as electrically efficient.

A poor power factor generally understood to be less than 0.95pf and a perfect power factor as 1.00pf known as unity.

IMPROVING POWER FACTOR

Correcting poor power factor involves installing power factor correction equipment to manage the power factor. The solutions we provide are tailored based on the results of our initial analysis and are then tailored to each individual customer's site needs.

OUR SOLUTIONS

Fixed PFC:

Perfect for the correction of steady state electrical loads and individual motors.

Automatic PFC:

Sometimes referred to as 'bulk' PFC as it tends to be installed at or close to the main electricity incomer, it corrects the power factor of the whole system.

Detuned PFC:

Fixed, automatic or dynamic, for use on harmonic-laden systems or to avoid possible resonance conditions.

Dynamic PFC:

Often referred to as 'real-time' power factor correction, thyristor-switched capacitor banks typically respond within one cycle for rapidly changing dynamic loads. This power compensation technology is also often used in voltage control applications.

BENEFITS OF PFC

- Improves renewable generation
- Reduces circuit currents and allows for connection of additional load
- Reduces maintenance costs
- Reduces energy costs by removing reactive power penalty charges on electricity bills
- Reduces availability, capacity and maximum demand-based charges on electricity bills
- Reduces transformer losses
- Reduces fuel consumption of generators
- Reduces carbon emissions