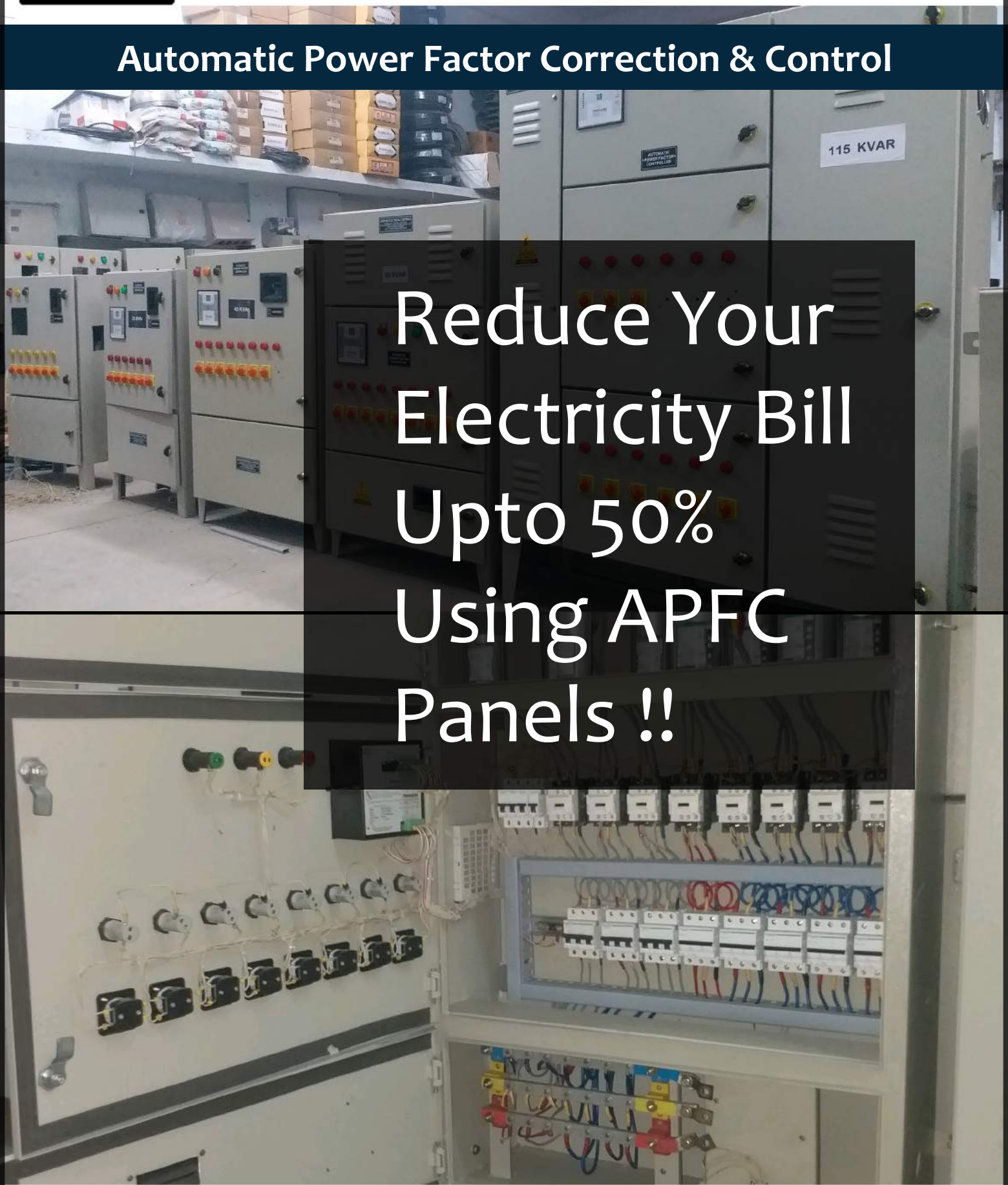
ANUPAM ELECTRICAL CONTROLS

Complete Electrical Solutions Under One Roof

Automatic Power Factor Correction & Control



Reduce Your Electricity Bill Upto 50% Using APFC Panels !!

Implementing Electrical Solutions Since 1995

20+ Experience in the industry

We are "A" Class Govt. Authorized Electrical Contractors

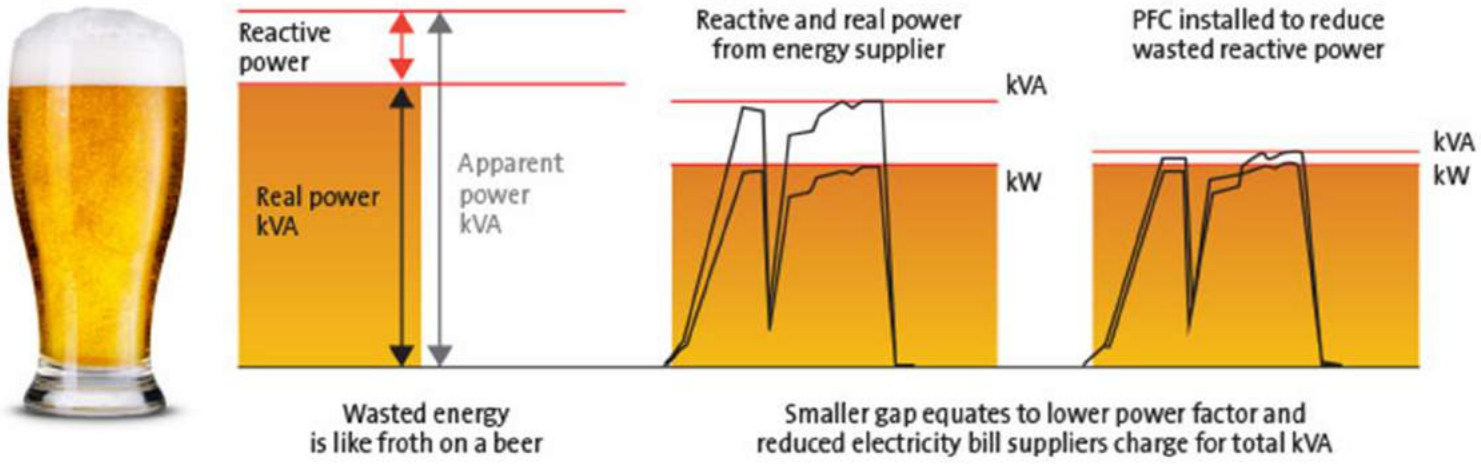
Dedicated Team for Power Factor Correction

100+ APFC Panels Manufactured & Delivered

50+ Annual Maintenance Contracts Provided

Best Quality Assurance

What is Power Factor Correction . . . . ??



Every electric machine needs active power (kW) and reactive power (kVAr) to operate. The power rating of the installation in kVA is the combination of both: (kVA)2 = (kW)2 + (kVAr)2 or kVA = $\sqrt{kW2 + kVAr2}$ [The active power (in kW) is the real power transmitted to loads such as motors,lamps, heaters, computers, etc. The electrical active power is transformed into mechanical power, heat or light Whereas The reactive power (in kVA) is used only to power the magnetic circuits of machines, motors and transformers]

The Power Factor has been defined as the ratio of active power (kW) to apparent power (kVA), Power Factor = (kW) / (kVA).

Our objective under Reactive Energy management is improvement of Power Factor, or "Power Factor Correction".

Drawbacks of Having Poor Power Factors . . .

In Electrical Networks, a LOW POWER FACTOR(LPF) is responsible for increased line currents which causes these main consequences :

- **Necessary over sizing of transmission and distribution networks by the Utilities**
- **Increased voltage drops and sags along the distribution lines : results in overloading of the network**
- **Additional power losses and line losses which creates heating problems**
- **Increases in KVA rating & size of electrical equipments/installations : LPF results in needing greater conductor cross-section size since more current is absorbed by the compensated installation and hence total cost of equipment is increased**
- **Low Efficiency of electrical installations as well as increased "Maximum Demand" on your electricity bill**

Reasons for having poor or detrimental power factors : When an equipment draws current out of the phase with supply voltage & it can also happen when the drawn power is in non-sinusoidal wave

This is resulting in increased electricity bills for industrial customers because of

- **Penalties applied by most Utilities to reactive energy,**
- **Increased overall kVA demand,**
- **Increased energy consumption within the installations.**

Under reactive energy management we aim to optimize your electrical installation by reducing energy consumption, and improve power availability. CO2 emissions are also globally reduced.

Upto 50%
reduction in utility power bills
Reduce energy cost
by improving electrical networks

Solutions & Benefits of Power Factor Correction

Optimize energy consumption

- **By reducing electricity bills**
- **By reducing power losses**
- **By reducing CO2 emissions**

Increase the power availability

- **Compensate for voltage sags detrimental to process operation**
- **Avoid nuisance tripping and supply interruptions**

Improve your business performance

- **Optimize the installation size**
- **Reduce harmonic distortion to avoid the premature ageing of equipment and destruction of sensitive components**

Ensure Reliability & safety at installations

Quality and reliability

- Continuity of service thanks to the high performance and long life expectancy of capacitors.
- 100% testing in manufacturing plant.
- Design and engineering with the highest international standards.

Safety

- Tested safety features integrated on each phase.
- All materials and components are free of PCB pollutants.

Efficiency and productivity

- Product development including innovation in ergonomics and ease of installation and connection.
- Specially designed components to save time on installation and maintenance.
- All components and solutions available through a network of distributors and partners.

Automatic Power Factor Correction Panels APFC

For compensation of highly fluctuating loads, fast and highly repetitive connection of capacitors is necessary, and static switches must be used.The basic operation of the APFC is as follows :

- To continuously sense and monitor the load conditions by the use of the external load CT (Whose output is fed to the controller).
- To automatically switch ON and switch OFF relevant capacitor steps to ensure consistent power factor.
- To ensure easy user interface for enabling reliable understanding of system operation, such as display real time power factor, number of switching operations are carried out.
- To protect against any electrical faults in a manner that will ensure safe isolation of the power factor correction equipment.

Advantage

- Consistently high power factor under fluctuating load conditions
- Elimination of low power factor penalty levied by electrical supply authorities and avail the incentives as per Electricity board.
- Reduced kVA demand charges
- Prevention of leading power factor in an installation.

CAPACITOR PANEL RATINGs - 25 to 200 KVAr in Standard Ratings of "25, 35, 45, 55, 75, 115, 150, 200 KVAr" with suitable banking arrangement. Following our clients requirements we also offer these in Other ratings with specified banking arrangement and specifications.

Important : Please feel free to reach us for ANY of your questions and queries. Also, please keep these details such as :

Motor Load Heater Load Drive Load & latest electricity bill copy

with yourself, so that we can help you better as well as calculate your exact requirements for Power factor correction

No need to worry If you don't have these details, We can send our certified engineer to visit your location to get an estimate of the same & then provide you the details adhering to your requirements for power factor correction(We charge an amount of Rs. 1,000/- for this)

Repairing charges for APFC Panels

- Rs. 1,000/- : Upto 55 Kvar Panels
- Rs. 2,500/- : from 75 Kvar to 200 Kvar Panels

ANNUAL MAINTENANCE CONTRACT AMC for APFC Panels

We provide annual maintenance contracts for APFC panels which includes Monthly 1 visit by our certified electrical engineer + Anytime Fault Support. We have already provided 50+ AMC's to various clients all around DELHI-NCR. Our Charges are :-

- Rs. 6,000/- Upto 25 Kvar rating panels
- Rs. 8,000/- From 35 to 45 Kvar rating panels
- Rs. 12,000/- From 55 to 115 Kvar rating panels
- Rs, 15,000/- From 150 to 200 Kvar rating panels

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