Power Consultants Ltd

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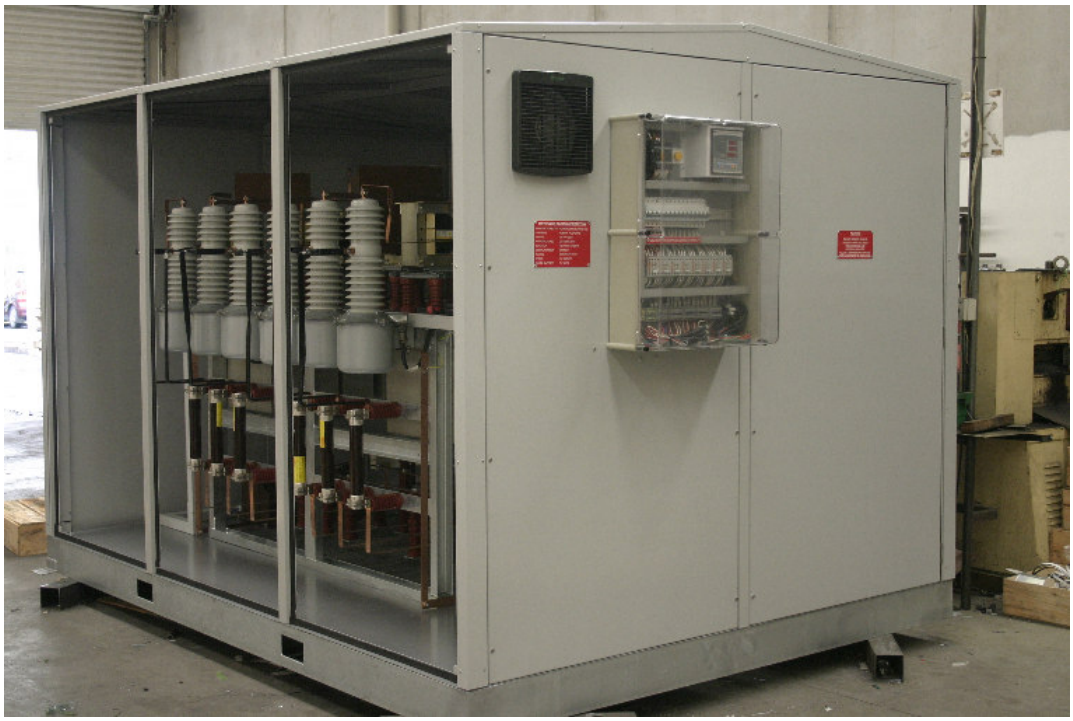
Power Consultants is a New Zealand manufacturer, supplying power factor correction units for power factor correction and/or voltage support for either low or high voltage systems to various industries and utilities throughout New Zealand and Australasia.

Our High Voltage unit is a packaged reactive compensation system, which combines primary components and secondary control within a compact enclosure.

The system can either be configured as a switched or fixed capacitor bank. The switch bank can consist of single or multiple steps, automatically controlled to improve power factor or voltage support.

The design, built to customer specification, provides compensation for both large industrial consumers and electrical distribution utilities.



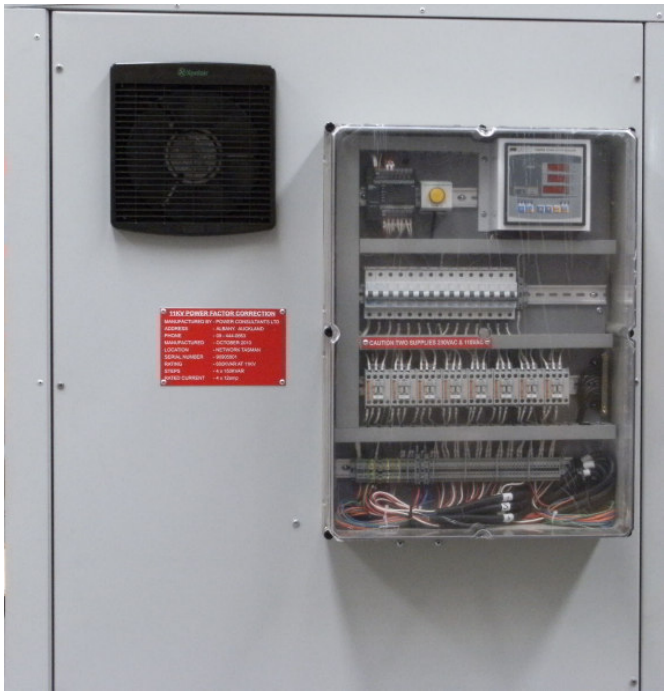
Design configuration

The design consists of a control section/panel and a power section, housing the primary equipment and is adaptable to incorporate specific needs as required.

Control Section

The control cubicle can accommodate the following options:

- Power Factor Controller with relevant communication protocol where required.
- Capacitor Switch operation - PLC Controlled or Zero Volt Closing Controlled(ZVC).
- Control Relays & Terminals

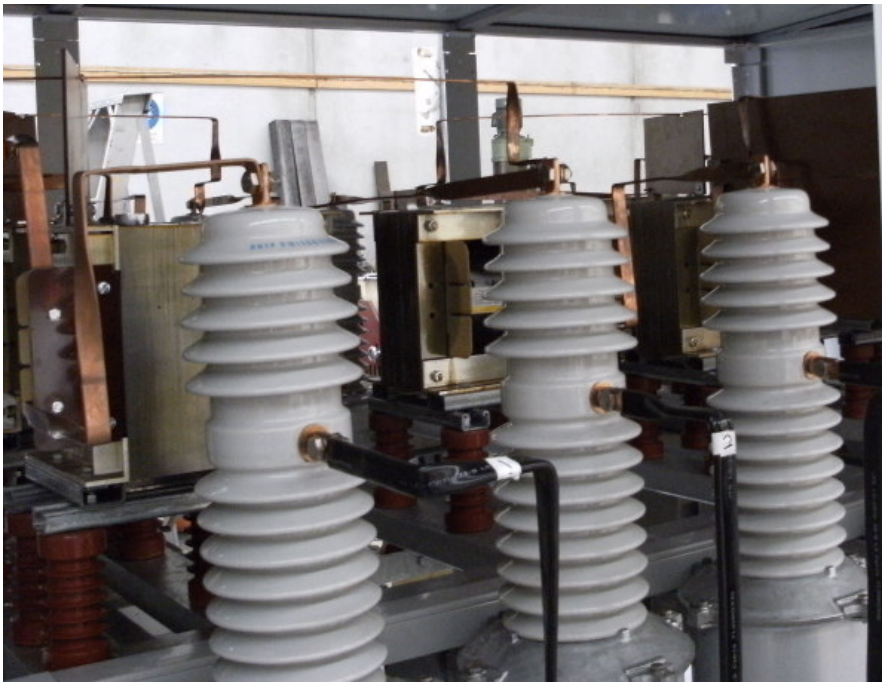


High Voltage Section

The High Voltage section can, according to the options selected, accommodate the following:

- Incoming High Voltage supply which is terminated on the copper bus bars
- Line Current Transformers
- Connecting busbars
- High Voltage measuring Voltage Transformers
- Capacitor HRC Fuses
- Current Limiting Reactors and/or detuning reactors
- Capacitors
- Anti condensation heaters
- Cooling fan
- Thermostat

- Capacitor Switches



We are making use of Joslyn Capacitor switches, which are specifically manufactured for use as a capacitor switch.

The Joslyn Switches can be applied in two different methods. The one is as a switch and the other is by making use of the Zero Volt Closing control. Zero Volt Closing Control reduce system over voltages and stress on capacitors due to over voltages and high inrush currents. This in itself increase the life of the capacitor switch and the capacitor.

Specification

General

Voltage	1 - 11 kV
Control Voltage	240V Standard
Output	Up to 2.4MVAR was supplied previously,(higher will be possible)
Location	Indoor or outdoor

Capacitors

Type	Single phase, double pole
Fusing	External
Discharge Resistor	Build-in

Inrush Reactors

Type	Single phase, Iron-cored
Continuous current	1.43 x Capacitor current

Capacitor Switches

Manufacturer	Joslyn VSV
Type	Vacuum

Enclosure

Material	Corrosion resistant coated steel
Base Frame	Hot Dipped Galvanized
Paint	Powder Coated

Power Factor Controller

Manufacturer	SATEC C192PF8 or as specified
Measuring System	Microprocessor-based system
Control Voltage	110V; 690V

Measuring Components

Voltage Transformers	11000V/110V
Current Transformers	Secondary current 5 Amp or 1 Amp