Design

- Pedestal
- Bench
- Custom Available

ECLIPSE POWER

Get In Touch

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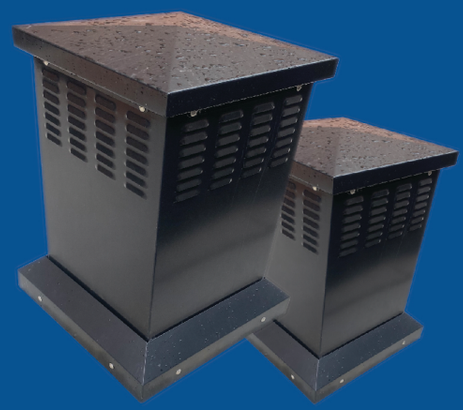
Our company has a breath of experience in the electrical industry, specifically in underground distribution. The products we offer are custom made to fit the rigors of the underground with an emphasis on reliability and safety. We work directly with our clients to insure that our products fit exact specifications and all undergo rigorous certification standards and testing. Our team has a diverse background in mechanical, electrical and electronic engineering with years of practical field experience at our disposal.

The VaultVent™

Providing Advanced Products And Solutions To Our Power Partners.



Features:

- Non corrosive Stainless Steel Fabrication
- Street Tamper resistant
- Designed Ascetically for Commercial appeal
- No exposed entry points for external foreign objects
- Long life exhaust fan with thermostat temperature and speed control

Options:

- Connection to SCADA via DNP 3.0 protocol for monitoring
- External control of Exhaust Fan
- Custom UV resistant graphic wraps
- Powder Coat color over stainless material

The VaultVent™

The VaultVent™ is specially designed to address many concerns. The built in exhaust fan maintains the correct ambient temperature while pulling hot thermals away for the equipment maintaining both life and safety of the surroundings. This design would eliminate the need for exposed, open gratings and would provide smart thermal control. Our standard design is a tamper proof pedestal or can be offered in the way of a custom park bench design with built in integral fans, extremely quiet in operation.

Traditional Open Grates In The Electrical Underground

Typically, underground electrical vaults are provided with sidewalk open grates for some natural convection advantages, but the disadvantages are many:

- Exposure to roadside salts leading to equipment corrosion and failures.
- Exposure to debris dropping down in the vault.
- Exposure to contamination dumping by businesses or pedestrians.
- Hazards of potential equipment failure exposure to walking pedestrians.

Advantages Of Targeted Fan Ventilation In Underground Vaults

- The ability to use solid access covers versus open grates.
- Engineered force air advantage.
- Equipment life extension.
- Water and outside solids control, reducing corrosion and equipment damage.
- Pedestrian safety.

ECLIPSE POWER

Transformers are a key component and one of the more expensive pieces of equipment found in a distribution network.

Preventative maintenance is often overlooked because transformers can offer long term robust service, but today with the need for non-linear loads and the addition of Distributed Generation, transformer long term sustainability and reducing age acceleration is a key consideration.

Generally, transformers are designed to function within their nameplate ratings, yet, in certain situations as in the case cited above they are often loaded above the nameplate ratings. In underground network distribution environments, the transformers are by design overloaded for contingencies as a standard practice.

When transformers operate they tend to generate large quantities of heat. The conversion of the energy inside the transformer is the reason for this heat. The generated heat varies with the load that is applied to the transformer. The higher the load, the higher will be the generated heat, due to the windings and also due to the associated core losses. The generation of heat cannot be avoided and consideration must be given to methods to control, cool and monitor thermal performances.

One of the main consequences of heat generation in transformers is accelerated aging which can be a legitimate public safety concern as these transformers are oil filled to aid in the cooling and any fault within the confines of the transformer can be catastrophic. This is in combination with the applied typical installation being directly below the feet of many pedestrians that walk over grated ventilation grates everyday in major city centers.

These built in grates give some natural convection flow but is very limited in controlling ambient temperature of the load environment and are exposed to the public and often a repository for trash, flood waters, and other contaminants.