



ADVANCED POWER
TECHNOLOGIES

Rapid Deployment Electrical House (e-House) Walk-In Switchgear Container Module



PwrContainer Outdoor Walk-In & Skid-Mounted Switchgear Solutions Brochure

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**SAFE SMART SERVICEABLE SWITCHGEAR &
ENGINEERED POWER SYSTEM SOLUTIONS**



ALN: 546 Rev. 03

Low & Medium Voltage PwrContainer



Figure 1: Interior of Medium Voltage 40' Mobile PwrContainer-Based Walk-in FAC Switchgear



Figure 2: Interior of Low Voltage 40' Mobile PwrContainer-Based Walk-in SBU Switchgear

Paralleling, Transfer, Distribution & Motor Control Applications

- ⦿ Fully designed & manufactured low or medium voltage switchgear
- ⦿ Packaged in a modified and reinforced 20-foot, 40-foot, or 45-foot ISO container, to meet your exact needs, and for the ease of transportation, handling, and installation
- ⦿ Walk-in switchgear isle is constructed as one piece of custom enclosure to simplify onsite installation
- ⦿ All equipment inside is factory installed and wired.
- ⦿ Available with insulated walls, floor, and ceiling
- ⦿ Optional aluminum diamond plate provides a safe, long lasting, easy to clean floor
- ⦿ Complete with internal lighting (AC and/or DC) and convenience receptacles
- ⦿ Heating and/or cooling units designed for its operating environment
- ⦿ Separate Rooms when appropriate for the application (transformer compartment, etc.)
- ⦿ Rugged, durable, weather resistant construction for the world's harshest environments
- ⦿ Long life, no maintenance aluminum, insulated walls, and ceiling
- ⦿ For operator safety and a finished look and feel, all internal wiring is run in enclosed ducts, or conduit
- ⦿ Utility metering compartments can be integrated in the switchgear
- ⦿ Configurable for a wide range of applications:
 - Automatic and/or manual generator paralleling switchgear
 - AC or DC variable speed motor control
 - Power distribution switchgear
- ⦿ Side, top, or bottom cable entry and exit
 - Power and control quick connect receptacles are available
- ⦿ Optional site control and monitoring:
 - Modbus serial or Ethernet communications
 - SCADA computer systems
 - Master control panels

20' 2.4kV-480V Switchgear PwrContainerT

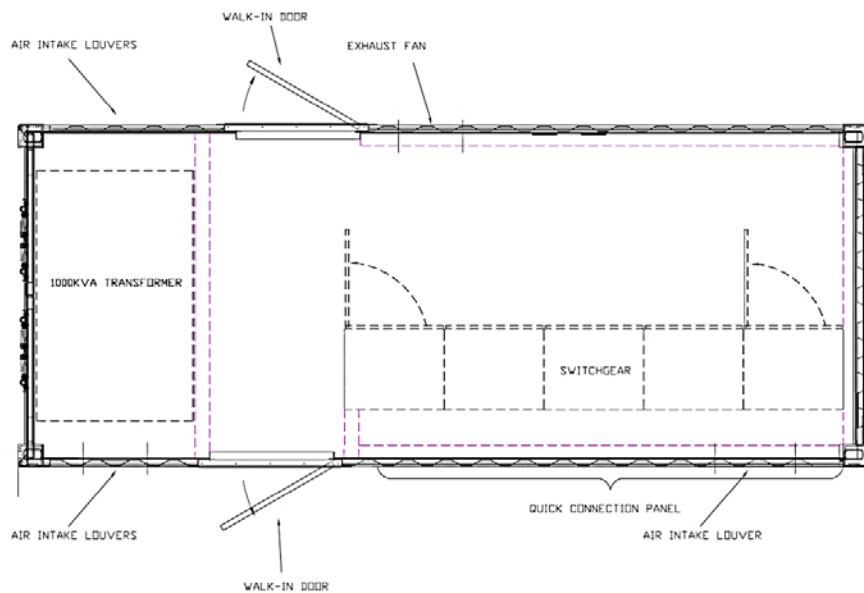


Figure 3: 20' ISO Container-Based Walk-in Switchgear Module Sample Layout



Figure 4: 20' Inside ISO Container-Based Walk-in Switchgear Module



Figure 5: 20' ISO Container-Based Walk-in Switchgear Module

40' 15kV Switchgear PwrContainer



Figure 6: 40' ISO Container-Based Walk-in Switchgear Module



Figure 8: Inside of ISO Container based Switchgear Module with Ultra Compact Front Access (FA) Air Insulated Vacuum Circuit Breaker Switchgear



Figure 7: Front Access Switchgear, Isolated from Local and Remote Operator Control Stations

**Unprecedented Safety
& Peace of Mind to
Switchgear Operators
In a Sheltered Isle**

Construction Details & Features



Figure 9: 5kV ATS Line-up*



Figure 10: Optional Bus PT Drawer*

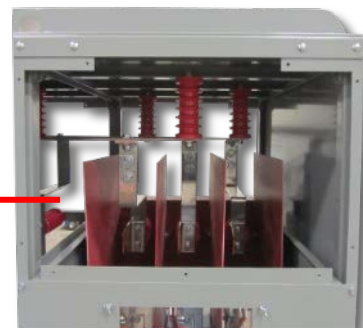


Figure 11: Close-up of Main Bus Compartment*



Figure 14: 5kV ATS Typical Generator Section Configuration*



Figure 12: 15kV Max Vacuum Circuit Breaker over Vacuum Circuit*



Figure 13: Rear Vacuum interrupters*



Figure 15: Close-up of Vacuum Interrupters from the front of the section*

MV Drawout Auxiliary Drawers



Figure 16: Carbon Steel NEMA 1 Metal Enclosed Type
5kV Drawout Auxiliary Drawer

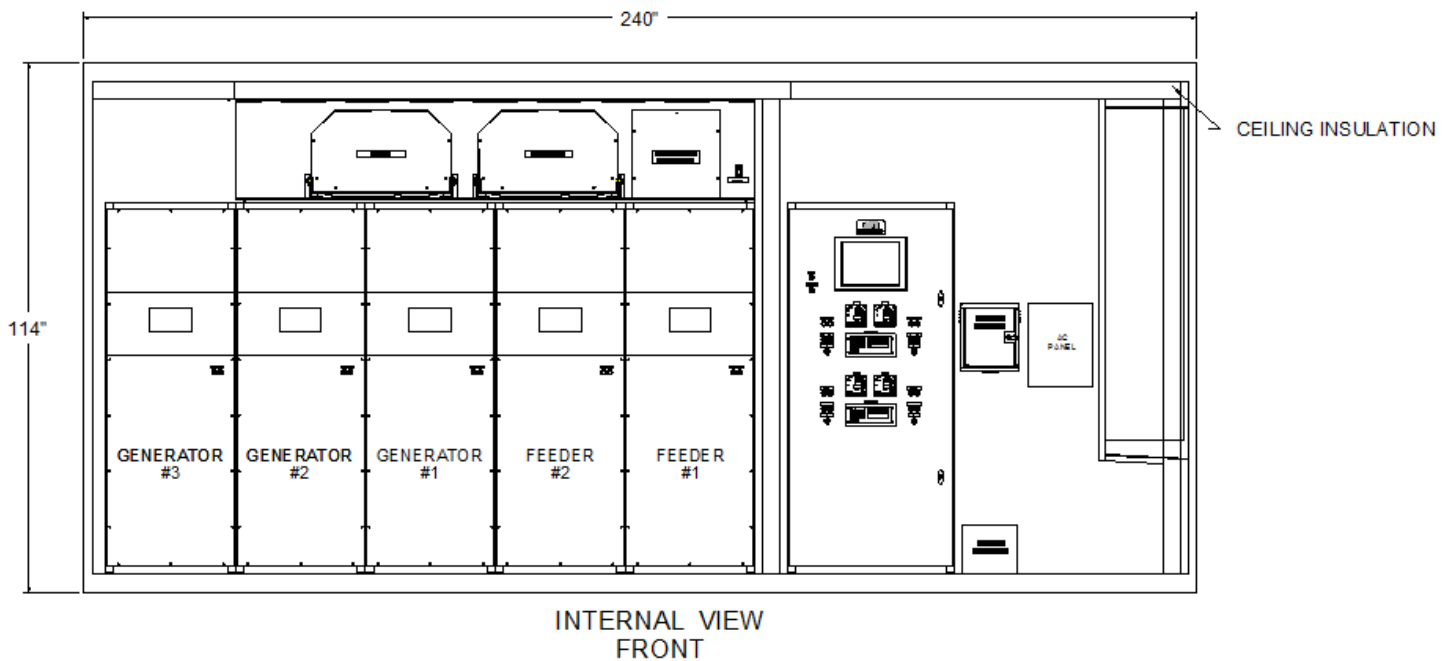
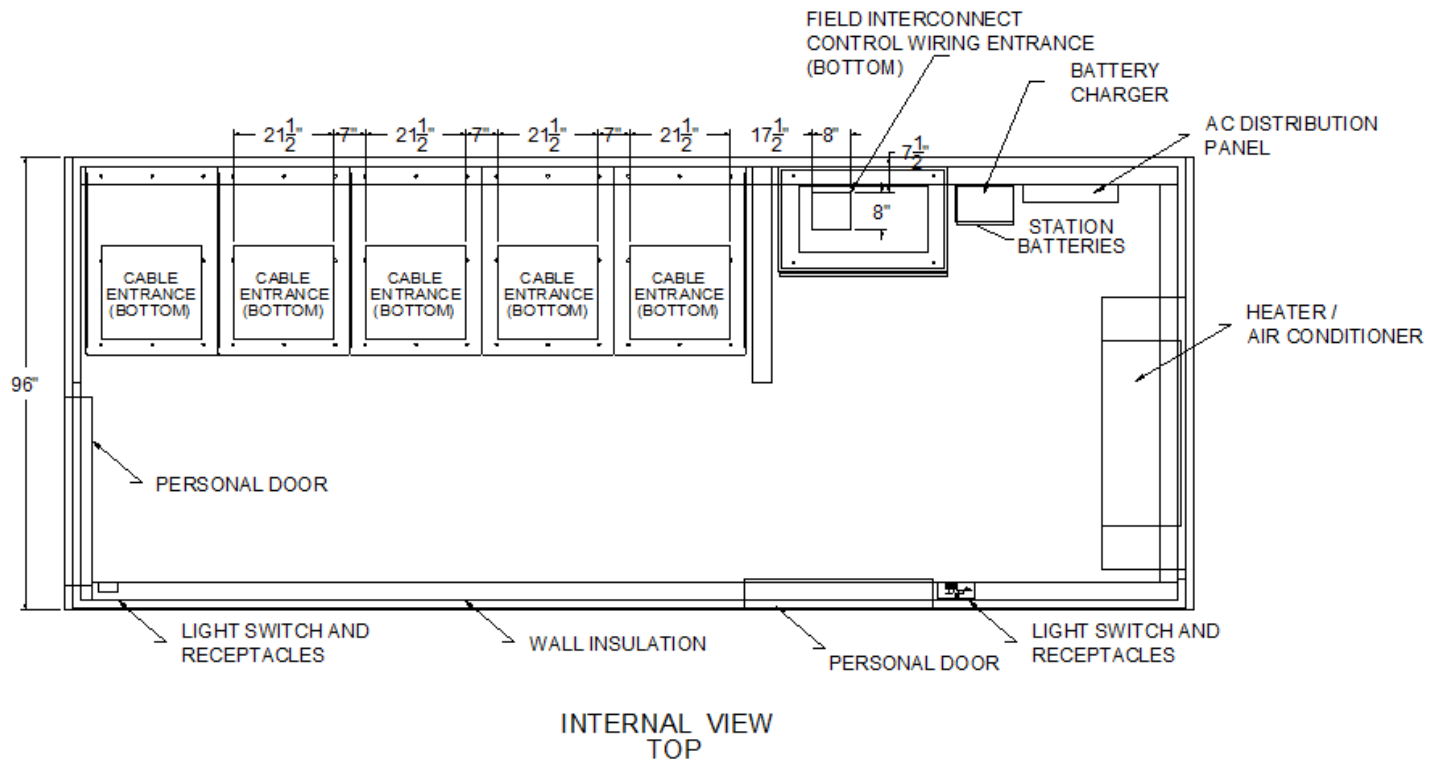
**Accommodates
Drawout:
Fuses
Control Power
Transformers
Voltage
Transformers**



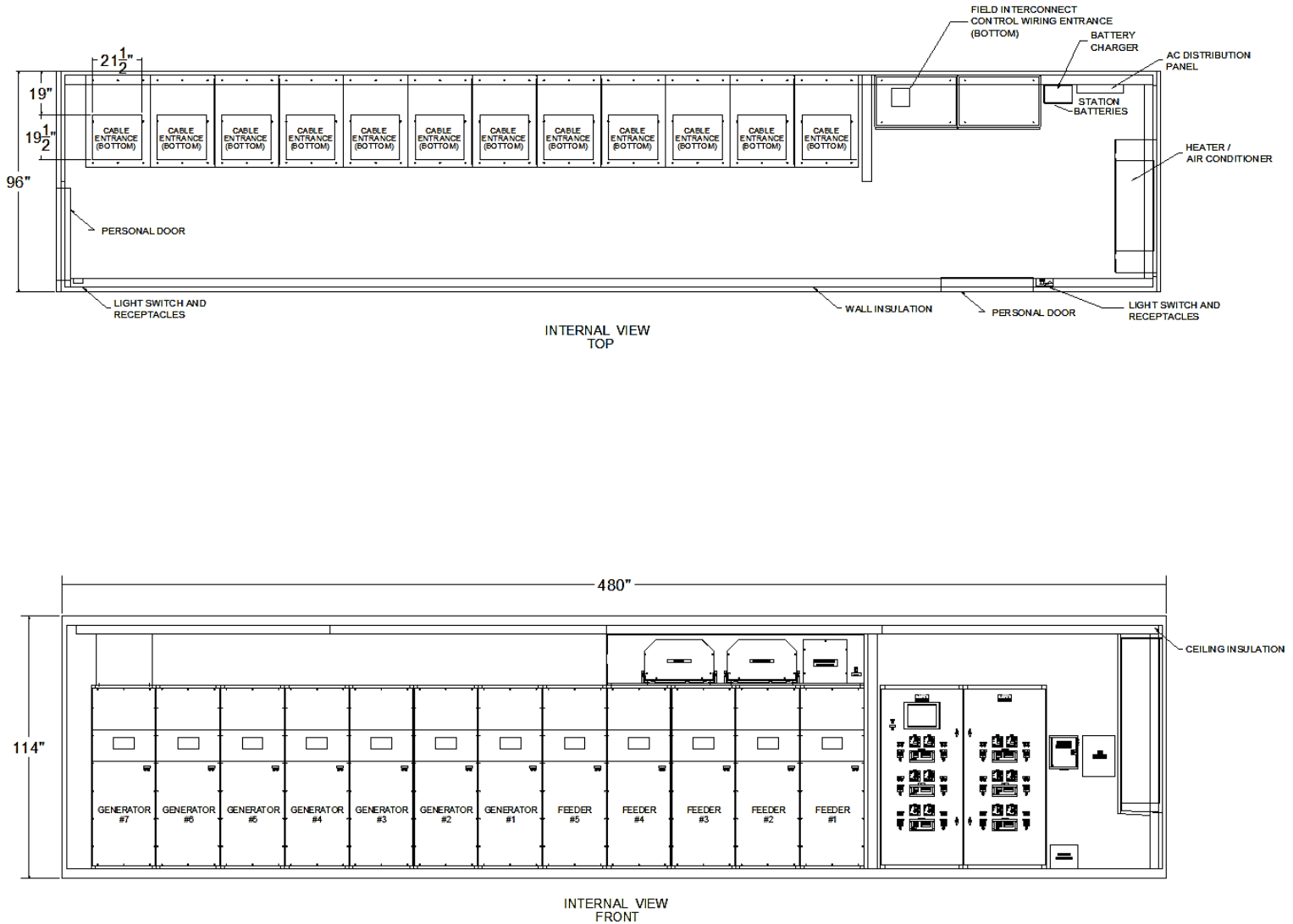
Figure 17: Carbon Steel NEMA 1 Metal Clad
Type 15kV Drawout Auxiliary Drawer

**For operator
safety, these
devices are
automatically
grounded
during
movement to
disconnected
position**

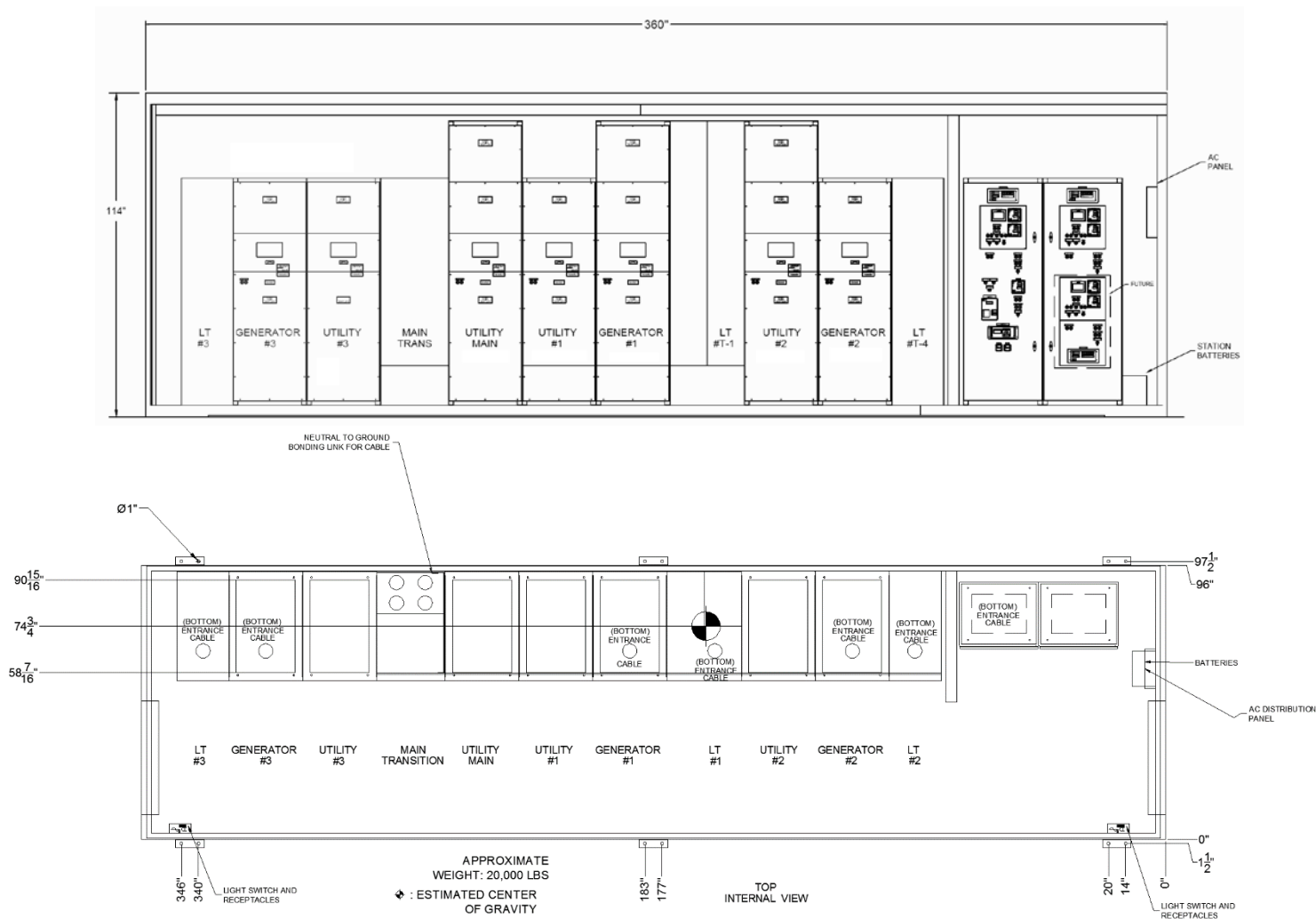
20' 15kV Switchgear PwrContainer



40' 15kV Switchgear PwrContainer



30' 5kV ATS Switchgear PwrContainer



Single 1200 A section dimensions:

38.5" deep by 26" wide by 80" high

Table 2: Standard Section Weights	
Component	Weight Per
NEMA 1 Section (Less Breakers)	1800 lbs.
1200A Circuit Breaker	380 lbs.
2000A Circuit Breaker	410 lbs.

About Advanced Power Technologies



Advanced Power Technologies (APT) is on the cutting edge of the latest engineered power system smart technologies, as it relates to microgrid & storage management, renewable & conventional energy source deployment, demand peak shaving, and facility back-up and co-generation power systems. Located in the central United States and headquartered in Lafayette, Indiana with solutions development engineers around the country, APT provides domestic and international products and services to industry leading companies from around the world. APT engineers have decades of power system experience from working with some of the largest companies in all industries. Over the last two decades, we have produced successful solutions for hundreds of large-scale electric power projects involving utility/generator paralleling, transfer, peak shaving, and distribution. We pride ourselves in providing electrical power systems that are engineered and custom built, utilizing state-of-the-art technologies to fit our customer's exact needs. The core of our business is low & medium voltage engineered power systems for a wide range of indoor & outdoor applications, such as:

- ⊙ Utility(ies) and Generator(s) Paralleling/Transfer/Peak Shaving/Distribution Switchgear
- ⊙ Microgrids, Microgrid Master Control Panels, SCADA systems
- ⊙ Containerized Battery Energy Storage Systems (BESS)
- ⊙ Photovoltaic (PV) Solar Power Collection/Distribution & Renewable Energy Storage Systems
- ⊙ Low & High Resistance Grounding Systems, Grounding Systems for Photovoltaic Effective Grounding
- ⊙ High Efficiency Combined Heat and Power Switchgear & Control Systems (CHP, Co-generation)
- ⊙ Outdoor Walk-In Electrical Houses (E-Houses) & Skid-Mounted Switchgear
- ⊙ Motor Control Centers & Motor Control Switchgear
- ⊙ Automatic & Manual Load Transfer Switchgear
- ⊙ Bypass/Isolation & Power Distribution Circuit Breaker Switchboards
- ⊙ Generator/Loadbank Quick Connection Switchgear, Switchboards, & Tap Boxes
- ⊙ Industrial Control Panels

Please see our product webpages on www.appt-power.com for product brochures and relevant information. Actual products may look different from images shown on the website and in brochures, based on actual specifications.

APT cares and understands that each power system is different. We will evaluate various solutions to develop the best solution for a site. APT focuses on our ability to a combine several traditional pieces of equipment/functionality into as little of a footprint possible. This saves on space, the cost of equipment, cost of installation, and accomplishes the most optimal/state-of-the-art design for your facilities. APT's desires to foster and grow a culture of continued open communication with each customer. Let APT be your source to provide fully engineered power system equipment solutions for the full customer facility on time, on or under budget, and in the smallest footprint possible. We are always available to assist customers and engineers representing customers in the development of complex power solutions for all facility types.