

PowerPlus™ Switchmode Power Supplies for Rapid Capacitor Charging

PowerPlus has become the switchmode power supply of choice in the Electrostatic Precipitator market during the past decade. NWL offers the widest variety of sizes and configurations available, with outlet power ranges from 4.3 to 120kW.

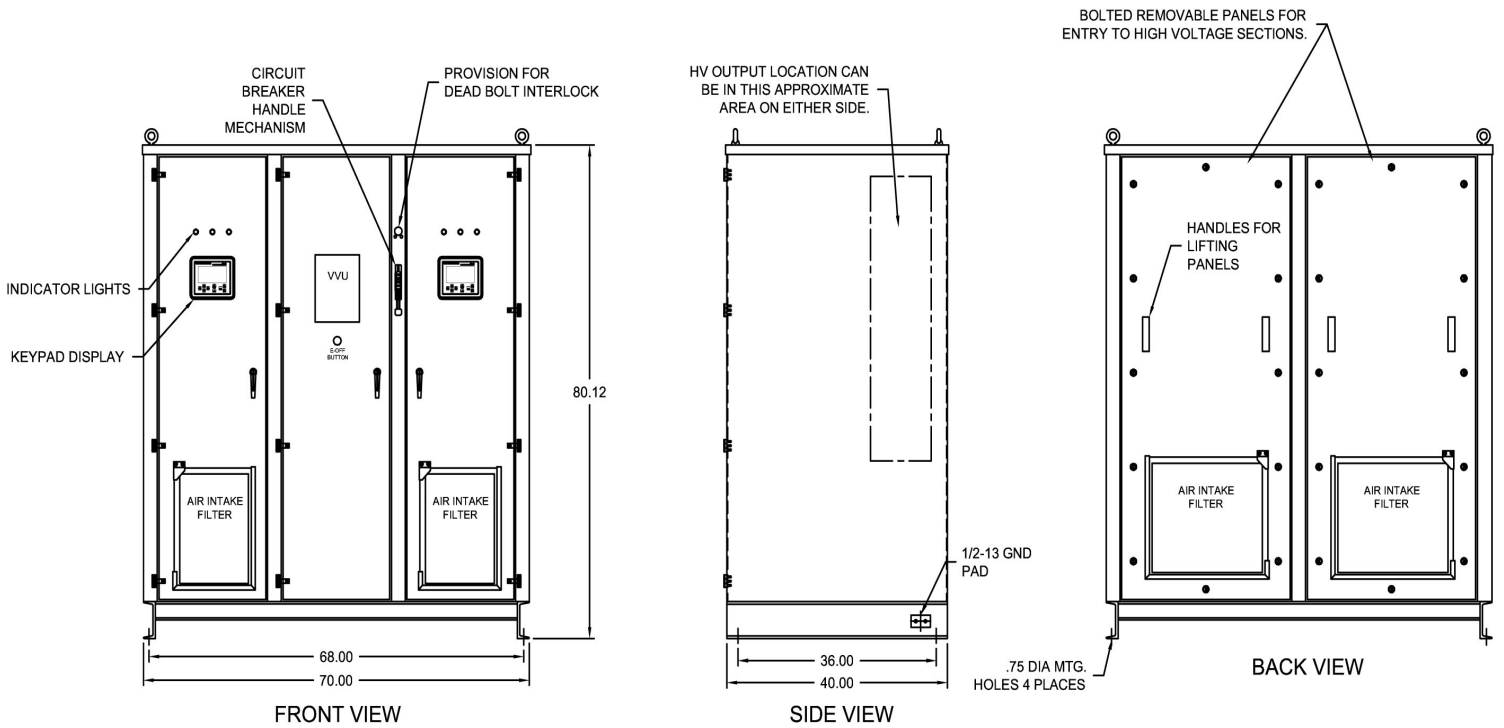
NWL has modified this power supply so that it can be used for other applications, such as electron beam melting and capacitor charging. PowerPlus output voltages start at 50kV and go up to 80kV, with power levels up to 120kW per module. The DSP based controller can be configured for many industrial applications and is outfitted with a communications module that will allow data transfer between PowerPlus and a DCS or SCADA system.

The power electronics and switchgear are housed in a weatherproof enclosure, and the high frequency AC transformer and rectifier are in a separate high voltage, oil-filled tank. These modules can be paralleled to produce total output power levels up to 500 kW.



Why PowerPlus?

- **Experience** - PowerPlus systems have been in the field since 2000, and there are over 1,400 units in operation providing excellent results worldwide.
- **Expertise** - We work very closely with all our customers and understand the application of switchmode technology very well.
- **Support** - PowerPlus is built on a common chassis, so logistics and technical support are more convenient as compared to custom built equipment.



Modular PowerPlus unit - 224kW/15kV for a linear accelerator

Electrical Rating Ranges

Input Voltage 3Ø, 50/60 Hz	330- 690
Output Voltage – kVDC	10 - 100
Output Current	variable from 10-100%
Output Power – kW	Up to 500
Circuit Breaker Rating - amps	60 to 300
Power Factor	.94
Losses – KW	2 - 4
% Ripple – KVp-p	3.0
Output Switching Frequency – kHz	25

General Specifications

Protection Rating	NEMA 4/IP 56
Minimum Ambient Temp.	-20 C
Maximum Ambient Temp. (24 hrs)	40 C
Maximum Oil Temp. Rise	40 C
Maximum Tank Surface Temp.	75 C
Maximum Ambient Humidity	100%
Maximum Altitude	1000 m
% Ripple – KVp-p	3 - 5
Approx. volume for 250 kW unit	60 cu. ft.
Approx. weight for 250 kW unit	1250 kg