

# DARRAH'S

## Switchmode D.C. Power Supplies for Plating & Anodizing



**DARRAH ELECTRIC COMPANY** is pleased to introduce **Water Cooled Switchmode** D.C. Power Supplies for the Metal Finishing industry

Darrah's Switchmode Water Cooled Rectifiers offer a dependable compact design where **continuous duty** is required and the rectifiers are located near **corrosive atmospheres**.

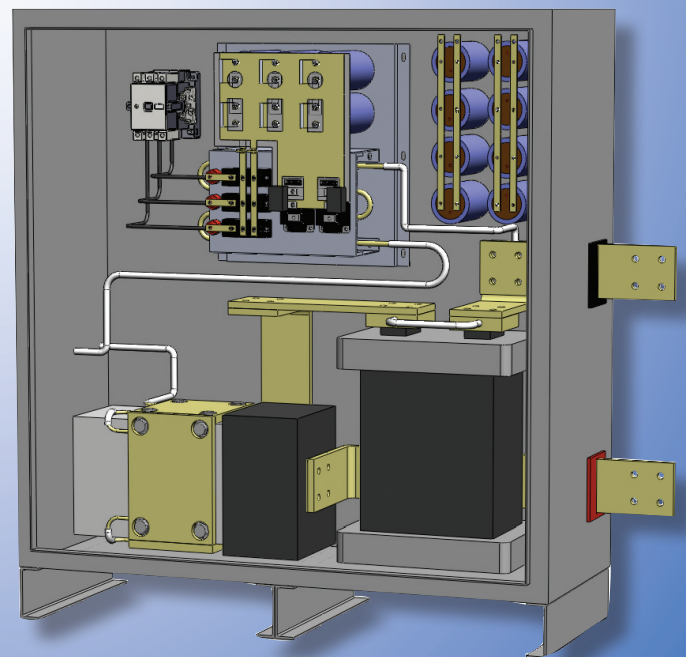
New models range in size from 1,000 through 10,000 Amp Continuous Output in all standard plating voltages.

**Solid State IGBT Controlled Rectifiers** feature independent voltage and current adjustments and provide  $\pm$  DC voltage regulation with current limit and  $\pm$  1% DC current regulation with voltage limit.

**Solid State Controlled Models** can be connected to computers or process control systems. Rectifiers can be supplied to operate with inboard controls or from a remote controlled station. Standard models also include an adjustable D.C. output voltage ramp.

### Features

- Reduced size and weight
- Low output ripple
- Continuous nameplate rating
- Improved power factor over conventional 60 hz models
- Available with or without D.C. Polarity Reversing
- Accepts all PLC Interfacing



# Switchmode Power Supply Options

## PLC Interfacing and Controlling

Darrah offers a four channel PLC interface, where two channels control the DC output current and voltage, and two monitor the current and voltage.

### Use PLC controllers to :

- Start/stop the rectifier
- Initiate ramp cycles
- Operate timer cycles
- Program safety circuits and alarms

## Digital LED Meters

.5" high display, available with NEMA rated clear sealed covers

## Ampere Time Meters

Accurately record coating thickness over time and available in preset or totalizing counters

## Batch or Cycle Timers

Unlimited number of uses available in seconds, minutes, or hours

## Internal DC Polarity Reversing

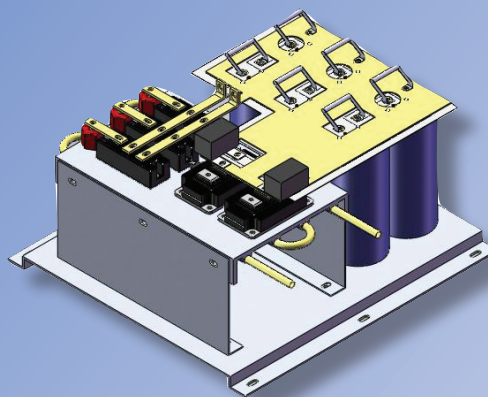
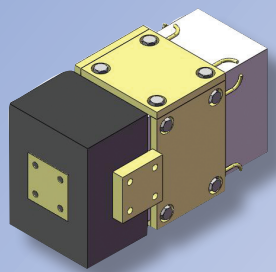
Manual, automatic, or PLC controlled

## Adjustable DC Voltage Ramp Control

Repeatable accuracy in processes requiring a DC voltage rise over an adjustable time period

## Custom Enclosures

Special enclosure shape or size and multiple independent units can be mounted in a single cabinet.



## Standard Protection and Safety Circuits

- AC Line Fuses
- Start and stop control circuits stepped down to 115 volts, includes isolation transformer with primary and secondary fuses
- AC Line phase loss and phase imbalance protection
- AC Line Contactor
- Thermostats located in strategic areas as power transformer, SCR's, and diodes
- DC current and DC voltage limit controls
- Fast response electronic DC overload protection
- Water flow rate switch with indicating fault lights
- Timed controlled incoming water solenoid, shuts off water flow when rectifier is off

## Input Line Requirements

208 through 600 volts, 3 phase, 50 or 60 hertz.

## Duty Cycle

All models are designed to be operated at 100% nameplate rating continuously at 40°C maximum water temperature.

## Power Transformer/Rectification

- Direct water cooled power transformer and diode assembly
- Fully encapsulated copper windings and coolers



# DARRAH ELECTRIC COMPANY

5914 MERRILL AVENUE • CLEVELAND, OHIO 44102

Toll Free 800-621-0014 Cleveland 216-631-0912 Fax 216-631-0440 E-mail decdarrah@earthlink.net

[www.darrahelectric.com](http://www.darrahelectric.com)

