**SPECIFICATIONS**

**Model 506**

The Model 506 is a 6-pulse, secondary thyristor rectifier used in coating and other metal finishing applications that require DC power > 100VDC. Available in output voltages ranging from 100VDC to 1000VDC, the Model 506 provides a single transformer design, with thyristor semiconductor for rectification and regulation of DC power. In coating and other metal finishing applications, where low ripple is required, the Model 506 incorporates an L/C ripple filter to smooth the pulsating DC, and to effectively reduce the AC RMS voltage ripple.

**Model 5012**

The Model 5012 is a 12-pulse, secondary thyristor rectifier used in “low ripple, high current” coating and other metal finishing applications. Available with or without ripple filtering, the Model 5012 brings the output percent ripple to < 1% with filtering. The Model 5012 offers a significant advantage over the Model 506, in that it reduces input current harmonics, and delivers a smoother DC output. In large coating applications where the voltage is > 300V and the current is > 1500A, the Model 5012 is often the best solution.

**Controlled Power Company “Series 50” Rectifiers”**

Include two (2) distinct product models: Model 506 and Model 5012.

**Performance Specifications**

- Input Voltage: Standard 208V, 240V, 480V, or 600V, 3-phase (Other voltages available: Consult factory.)
- Input Line Variations: ± 5% from nominal. (Optional wider ranges available: Consult factory.)
- Frequency: 60 Hz. Optional 50 Hz.
- Efficiency: 95% typical, size dependent.
- Power Factor: 90% typical at full load.
- Voltage Regulation: ± 0.5%.
- Current Regulation: ± 0.5%.
- Ambient Temperature: 0º C (32º F) to 40º C (104º F) maximum, 50º C optional.
- Humidity: 95% non-condensing.
- Elevation: Maximum elevation 1524 meters (5000 feet) without de-rating.

**Warranty:** Controlled Power Company guarantees the unit to be free from defects in material and workmanship for a period of (1) year following shipment from the factory. Consult factory for details.

**MODEL 506 CABINET DIMENSIONS**

<table>
<thead>
<tr>
<th>DC Input Voltage</th>
<th>Cabinet Number</th>
<th>Height x Width x Depth</th>
<th>Weight</th>
<th>Dimensions</th>
<th>Nominal Power Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>100A</td>
<td>4W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>2,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>200A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>4,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>300A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>6,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>400A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>8,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>500A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>10,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>600A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>12,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>700A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>14,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>800A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>16,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>900A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>18,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
<tr>
<td>1000A</td>
<td>8W</td>
<td>29&quot; x 42&quot; x 30&quot;</td>
<td>20,000 lbs</td>
<td>125 cm x 107 cm x 76 cm</td>
<td>10% of full voltage and current.</td>
</tr>
</tbody>
</table>

**CABINET OUTLINES**

Consult factory for the dimensions and cabinet outlines of the higher-current Model 506, water cooled models, the 12-pulse Model 5012, and 5000 VDC power supplies.

**100V to 1000V DC 100A to 5000A DC**

**6 Pulse and 12 Pulse DC Power Supplies for Electrocoating and Industrial DC Powered Systems**

Applications:
- Electrocoating
- Ion Focusing
- Magnet Chipping
- (Including Superconducting)
- Anodizing
**Output Voltage and Current Meters**

**Automatic DC Overload Shut-off**

2010. Photo courtesy of a Controlled Power Company customer. All rights reserved.

**Output Voltage and Current Control Potentiometers** and beyond.

Rectifier we build. The result is a rugged, reliable rectifier system that will stand up to the rigors of 24x7 operation, even in harsh environments.

Experience, Quality, And Field Reliability

Controlled Power Company integrates and manufactures the industry’s highest quality **Industrial DC power supplies** (rectifiers) capable of withstanding 10 years of exposure to the most severe environments. **Metal parts and components** – all of which are manufactured using **12-pulse standard models**. Compatible with current advanced manufacturing processes, the rectifier is designed for optimum, reliable performance. The result is a rugged, reliable system that will stand up to the rigors of operation, even in harsh environmental conditions.

Our rectifiers’ durability and performance maintains constant voltage and current outputs. If a field service is necessary, Controlled Power Company will provide available parts and offer tips for the installation and repair of every device we manufacture, which is often 24/7 year-round.

Controlled Power Company is ISO 9001:2015 certified, assuring quality and customer satisfaction from your order to system start-up and beyond.

**OM&Es and Integrators**

Our rectifiers are designed and manufactured to pass a tight MITI (mine tested to requirements) test. Components and sub-assemblies can be easily gathered, ordered, and serviced without excess cost and time frames of manufacturing.

Each Controlled Power rectifier is backed by 24/7 customer support and service. Experienced, knowledgeable service technicians, including e-coating and other metal finishing applications, and are ready to assist and answer any questions or concerns you may have.

Controlled Power cabinets and panels are designed to be easily shipped to customers globally. Suitable for indoor or outdoor environments, these control cabinets are built to provide the quality and reliability that is needed to meet your application needs.

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**Customer Support And Field Service**

Controlled Power Company is ISO 9001:2015 certified, assuring quality and customer satisfaction from your order to system start-up and beyond.

Controlled Power has a variety of cabinet, controls, wiring, and safety options available to suit specific requirements. Our technical personnel is always ready to assist with field expansion, power monitoring, controller improvements or maintenance needs.

Controlled Power Company’s “Series 50” Rectifier reflects a single transistor, secondary thyristor design, and is the preferred choice for e-coating or metal finishing applications. The Series 50 Rectifier is manufactured using 12-pulse standard models. Compatible with current advanced manufacturing processes, the rectifier is designed for optimum, reliable performance. The result is a rugged, reliable system that will stand up to the rigors of operation, even in harsh environmental conditions.

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**In itial Protection Breaker**

Standard main output AC circuit breaker complete with a decoupled safety mechanism.

**Cabinet Design**

A standard 120VAC and 230VAC enclosure. Other NEMA ratings available for indoor and outdoor enclosures. The “Series 50” Rectifier is designed and engineered to withstand the industrial environments associated with e-coating and metal finishing processes. All enclosure designs are industrial-grade, suitable for control, with a double-screw stainless-steel powder-coat finish. High-grade stainless-steel end panels are available as standard. A specific version of this enclosure is available for indoor use with a powder-coat finish.

Each Controlled Power rectifier is backed by 24/7 customer support and service. Experienced, knowledgeable service technicians, including e-coating and other metal finishing applications, and are ready to assist and answer any questions or concerns you may have.

Controlled Power cabinets and panels are designed to be easily shipped to customers globally. Suitable for indoor or outdoor environments, these control cabinets are built to provide the quality and reliability that is needed to meet your application needs.

**Transformers**

Efficiency, low inrush current, and dynamic loading, the “Series 50” Rectifier transformers are constructed from high-temperature copper wound coils and industrial-grade transformer and rectifier components. These transformers have a low inrush rating, and are mechanically and electrically designed to withstand the stress that occurs under fault conditions.

Thyristor (SCRs)

Thyristors are carefully selected, phase locked gating circuitry is used to control the thyristors, eliminating gate noise, and increasing system efficiency. Each SCR is phase-shed protected using MOV suppression and an AC shunt resistor. For maximum efficiency and reliability, thyristors are constructed to be current optimized at a current level much higher than their device rating. Additionally, each thyristor is designed to maintain the temperature increase and component life.

**Control And Monitoring**

Standard digital metering and local controls on every “Series 50” Rectifier include:

- Output Voltage and Current Meters
- AC/DC Power Supply
- Output Current and Control Response Specifications
- Automatic DC Overload Shut-off
- Optional features and benefits are as follows:

**Cooling**

“Series 50” Rectifiers offer a choice of cooling methods, designed to control heat output and increase longevity in harsh environments.

Air Cooled

Armed with a robust air-cooling system, the rectifier is protected from overheating. The power transformer is connected directly to the cooling unit, ensuring optimal performance and reliability for the cooling unit, even in harsh environments.

Water Cooled

Installed with an air-cooled rectifier system, the cooling unit is designed to maintain optimal operating conditions. The water cooling system is designed to maintain optimal operating conditions.

**E-COAT RECTIFIER FEATURES AND BENEFITS**

The “Series 50” Rectifier’s e-coat specific options and benefits are as follows:

**DC Transfer Switch**

Available for both autotransformer (for rectifiers in a separate enclosure, the transfer switch is used in applications where both thyristors in a single 2-pole, double-throw design allows for the use of a common transformer). We use this option to reduce the DC flow to another rectifier from the same power supply, without affecting any other circuits or modifications to the system you design. Downside. When the transfer switch is in the “OFF” position, the rectifier or contactor is out for safety purposes. An optional design is available to integrate the transfer switch with the DC bus to ensure that the DC power remains intact when the device is open.

**Adjustable Voltage / Current Ramping**

Ramping or “Shaping” the DC output at a user-adjustable time to control the ramping process. This option allows the ramping process to be adjusted to the specific application.

**Command Two-Level Control / Holding Voltage**

Provides two (2) standard voltage levels at which the rectifier will operate. A two-level control provides the flexibility to control the output voltage. When the control returns to its open state, the DC will fall back to the lower level of voltage. The control allows for a two-level control system, where a single 2-pole, double-throw device can be used to control the output voltage levels. This option requires two (2) separate current transformers and high voltage circuits to produce two (2) independent means of delivering an accurate output.

**Automatic Average Current Density (AACD)**

In both configurations of the Series 50 Rectifier, larger parts require more voltage to achieve proper current and sub-stations requirements. The AACD is a built-in controller designed to automatically adjust the output voltage of the rectifier based on the number of strokes, the current density, and the user’s specific requirements. The Series 50 Rectifier or insulated external AACD reduces the DC voltage fed to the rectifier during multi-stroke applications, reducing the DC voltage fed to the rectifier during multi-stroke applications, reducing the DC voltage fed to the rectifier during multi-stroke applications, reducing the DC voltage fed to the rectifier during multi-stroke applications, reducing the DC voltage fed to the rectifier during multi-stroke applications.

**Ripple Meter**

An optional metering feature designed to measure the ripple in the output voltage. This meter is designed to measure the ripple in the output voltage. This meter is designed to measure the ripple in the output voltage. This meter is designed to measure the ripple in the output voltage. This meter is designed to measure the ripple in the output voltage. This meter is designed to measure the ripple in the output voltage. This meter is designed to measure the ripple in the output voltage. This meter is designed to measure the ripple in the output voltage.

**Amper-Hour Meter With 3-Pump Control**

The “Series 50” Rectifier’s 3-pump control system allows for the control of DC power in a single transformer. The 3-pump control system allows for the control of DC power in a single transformer. The 3-pump control system allows for the control of DC power in a single transformer. The 3-pump control system allows for the control of DC power in a single transformer. The 3-pump control system allows for the control of DC power in a single transformer.

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Output Voltage and Current Meters
Voltage or Current Regulation Mode Switch
Automatic DC Overload Shut Off
AC Power On and DC On Lights

EOMs and System Integrators
EOMs and System Integrators
Controlled Power Company provides fast order entry and delivery with all EOMs and system integrator’s specific requirements. A custom rectifier can be designed to meet specific needs including voltage and current levels, NEMA ratings, and mounting controls and meters. Dimensions, tolerances, and product weight. Optional features often include: remote reset, heater air, internal/external cabinet cooling, custom paint coat, copper or aluminum output cables, PLC control, and accessories.

Customer Support And Field Service
Each Controlled Power Company rectifier is backed by 24x7 customer service and support. Experienced, knowledgeable technicians are available to assist with e-coating and other metal finishing applications, and are ready to assist with any problem. Maximum confidentiality and medical privacy.

Cooling
In both continuous conveyor and batch e-coat processes, larger parts require more voltage to achieve proper paint strokes. The “Series 50” Rectifier offers a choice of cooling methods to reduce the DC output at a user-adjustable time rate to effectively reduce the air temperature, and then circulate hot air to improve the heat removal rate. This option relieves surge current stresses on the rectifier and prevents overheating of wiring, and safety options available to suit specific e-coating and other metal finishing applications.

Control and Monitoring
Standard digital metering and local controls on every “Series 50” Rectifier include:
- Output Voltage and Current Meters
- AC Power On and DC On Lights
- Output Current and Load Current Limits
- Digital Readout Controls
- DC Transfer Switch

Custom Rectifier Options
Optional local or remote controls are available to suit almost any application. See Page 4 for e-coating specific options.

Controlled Power Company’s “Series 50” Rectifier offers a choice of cooling methods to reduce the DC output at a user-adjustable time rate to effectively reduce the air temperature, and then circulate hot air to improve the heat removal rate. This option relieves surge current stresses on the rectifier and prevents overheating of wiring, and safety options available to suit specific e-coating and other metal finishing applications.

E-COAT RECTIFIER FEATURES AND BENEFITS

Our rectifiers’ durability and performance maximize end-user productivity and minimize downtime. If field service is necessary, Controlled Power Company will provide available parts and service for 25 years and in some cases as long as the original equipment manufacturer. In addition, installation, start-up, and service are available for indoor and outdoor enclosures. The “Series 50” Rectifier is designed and constructed to endure the harsh industrial environments associated with e-coating and other metal finishing applications.

Adjustable Voltage / Current Ramping
This option relieves surge current stresses on the rectifier and prevents overheating of wiring, while minimizing internal condensation.

Command Two-Level Control / Holding Voltage
Provides two standard voltage levels at which the rectifier will operate a customer programmed control. The DC output can be varied between two voltage levels. The voltage levels are adjustable to maintain properly controlled power distribution to the paint systems. Optional PLC interfaces can be utilized with a holding voltage. This option allows for a more sophisticated control system in continuous and/or intermixed systems to provide input to the event of an unplanned stop.

Automatic Average Current Density (AACD)
In both continuous conveyor and batch e-coat processes, larger parts require more voltage to achieve proper paint strokes. The “Series 50” Rectifier offers a choice of cooling methods to reduce the DC output at a user-adjustable time rate to effectively reduce the air temperature, and then circulate hot air to improve the heat removal rate. This option relieves surge current stresses on the rectifier and prevents overheating of wiring, and safety options available to suit specific e-coating and other metal finishing applications.

Ripple Meter
An ripple meter or digital meter which measures and displays the ripple percentage of current. The meter is programmed to sound an alarm when the ripple voltage exceeds a user-set limit, and also displays the ripple voltage rate. The “Series 50” Rectifier includes an alarm that will sound when the ripple voltage rate exceeds a user-set limit, and also displays the ripple voltage rate. This option allows for a more sophisticated control system in continuous and/or intermixed systems to provide input to the event of an unplanned stop.

Angi-Meter
An angi-meter or digital meter which measures and displays the percentage of current. The meter is programmed to sound an alarm when the ripple voltage exceeds a user-set limit, and also displays the ripple voltage rate. The “Series 50” Rectifier includes an alarm that will sound when the ripple voltage rate exceeds a user-set limit, and also displays the ripple voltage rate. This option allows for a more sophisticated control system in continuous and/or intermixed systems to provide input to the event of an unplanned stop.

Eco-Coating Specific Options
The “Series 50” Rectifier offers a choice of cooling methods to reduce the DC output at a user-adjustable time rate to effectively reduce the air temperature, and then circulate hot air to improve the heat removal rate. This option relieves surge current stresses on the rectifier and prevents overheating of wiring, while minimizing internal condensation.

Angi-Meter with 0-5 Volt Control
The Angi-Meter is a digital meter which measures and displays the ripple percentage of current. The meter is programmed to sound an alarm when the ripple voltage exceeds a user-set limit, and also displays the ripple voltage rate. The “Series 50” Rectifier includes an alarm that will sound when the ripple voltage rate exceeds a user-set limit, and also displays the ripple voltage rate. This option allows for a more sophisticated control system in continuous and/or intermixed systems to provide input to the event of an unplanned stop.

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Angi-Meter with 0-5 Volt Control
Controlled Power Company manufactures and distributes the industry’s highest quality industrial DC power supplies (rectifiers) capable of operating from 5 to 35 years of equipment life. Our high-performance designs, small-footprint units, and components — all engineered and manufactured under ISO 9001:2015 standards — result in a rugged, reliable system that will stand up to the rigors of 24x7 operation, even in harsh environmental conditions.

Our rectifiers’ durability and performance enable ecosystem productivity and minimize downtime. If in-field service is necessary, Controlled Power Company will provide available parts and service for the life of each rectifier we manufacture, which is often 20+ years!

Controlled Power Company is ISO 9001:2015 certified, assuring quality and customer satisfaction from order entry to system start-up and beyond.

**OEMs and System Integrators**
Controlled Power Company’s industrial rectifiers are designed and manufactured to fit a wide variety of applications. Select and configure your rectifier online and establish a quote directly through our website. We also bring our products to industry shows, trade shows, and seminars across the country. A Controlled Power representative will work with you to integrate the high voltage rectifier into the installation for optimum performance and minimal installation costs. Additionally, we can help you identify potential system enhancements.

**Customer Support And Field Service**
Controlled Power Company is ISO 9001:2015 certified, assuring quality and customer satisfaction from order entry to system start-up, and beyond. We provide parts and service for the life of each rectifier we manufacture, which is often 20+ years! Controlled Power Company will provide parts and service for the life of each rectifier we manufacture, which is often 20+ years!

**Input Breaker Protection**
Standard mains AC input circuit is complete with a dual overload safety mechanism.

**Cabinet Design**

- In standard SE, 60, and 90 models, external and internal breakers, and panelboards for output, and one output only for 120/240 industrial applications.
- Standard main input AC circuit breaker, complete with a door-interlocked safety mechanism.

**Transformers**

- Designed for high efficiency, low input current, and durability.
- Each transformer is designed and manufactured to fit a wide variety of applications.
- Select and configure your transformer online and establish a quote directly through our website. We also bring our products to industry shows, trade shows, and seminars across the country. A Controlled Power representative will work with you to integrate the high voltage transformer into the installation for optimum performance and minimal installation costs. Additionally, we can help you identify potential system enhancements.

**Cooling**

*“Series 50” Rectifiers offer a choice of cooling methods to ensure the process temperature in hard environments.*

**Two-Level Control/ Holding Voltage**

Provides two (2) standard voltage levels at which the rectifier will operate: one for master control and one for holding voltage. When the contact returns to its open state, the rectifier will shift to the lower voltage. The AC input will be monitored. The main benefit is to determine the “rectifier health” and annunciate an alarm that the e-coat process may be damaged.

**DC Transfer Switch**

AvalonM*O N can be connected to the transfer switch to provide an additional safety mechanism. The AvalonM*O N is designed and manufactured to fit a wide variety of applications. Select and configure your AvalonM*O N online and establish a quote directly through our website. We also bring our products to industry shows, trade shows, and seminars across the country. A Controlled Power representative will work with you to integrate the AvalonM*O N into the installation for optimum performance and minimal installation costs. Additionally, we can help you identify potential system enhancements.

**E-COAT RECTIFIER FEATURES AND BENEFITS**

**E-Meter With 9-Pin Control**

- Available as an e-coat rectifier or as a separate enclosure. This switch is used in applications where both a primary and secondary thyristor demand is present. The AvalonM*O N is designed and manufactured to fit a wide variety of applications. Select and configure your AvalonM*O N online and establish a quote directly through our website. We also bring our products to industry shows, trade shows, and seminars across the country. A Controlled Power representative will work with you to integrate the AvalonM*O N into the installation for optimum performance and minimal installation costs. Additionally, we can help you identify potential system enhancements.

**Series 50 Rectifiers**

- E-Meter with 9-Pin control and 12V Digital rectifier
- Dual output current and voltage meters
- Modular design
- Input Breaker Protection
- Series 50 features

**AvalonM*O N**

- AvalonM*O N can be connected to the transfer switch to provide an additional safety mechanism. The AvalonM*O N is designed and manufactured to fit a wide variety of applications. Select and configure your AvalonM*O N online and establish a quote directly through our website. We also bring our products to industry shows, trade shows, and seminars across the country. A Controlled Power representative will work with you to integrate the AvalonM*O N into the installation for optimum performance and minimal installation costs. Additionally, we can help you identify potential system enhancements.

**Series 50 Rectifiers**

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Model 506
The Model 506 is a 6-pulse, secondary thyristor rectifier used in electro-coating and other metal finishing applications that require DC power > 100VDC. Available in output voltages ranging from 100V to 5000V and in current ratings ranging from 100A to 5000A, the Model 506 incorporates a single transformer design, with thyristor semiconductors for rectification and regulation of DC power. In electro-coating and other metal finishing applications where low ripple is required, the Model 506 incorporates an LC ripple filter to smooth the pulsating DC and to effectively reduce the AC RMS voltage ripple.

Model 5012
The Model 5012 is a 12-pulse, secondary thyristor rectifier used in “low ripple, high current” electro-coating and other metal finishing applications. Available with or without ripple filtering, the Model 5012 brings the output percent ripple to < 1% with filtering. The Model 5012 offers a significant advantage over the Model 506, in that it reduces input current harmonics, and delivers a smoother DC output. In large electro-coating applications where the voltage is > 300V and the current is >1500A, the Model 5012 is often the best solution.

Performance Specifications
- Input Voltage: Standard 208V, 240V, 480V or 600V, 3-phase. (Other voltages available - consult factory)
- Input Line Variation: ± 5% from nominal. (Optional wider ranges available - consult factory)
- Frequency: 60 Hz. Optional 50 Hz.
- Efficiency: 95% typical, size dependent.
- Power Factor: 90% typical at full output.
- Input Power Factor: 90% typical at full output.
- AC Output Ripple: Model 506 — 5% full voltage and current. Optional filter provides 5% when operating within 25% to 100% of full voltage and current. Model 5012 — 3% full voltage and current. Optional filter provides 1% when operating within 25% to 100% of full voltage and current.
- Reliability: 65,000+ hours MTBF
- Voltage Regulation: ± 0.5%
- Current Regulation: ± 0.5%
- Ambient Temperature: 0°C (32°F) to 40°C (104°F) maximum, 50°C optional.
- Elevation: Maximum elevation 1524 meters (5000 feet) without derating.
- Voltage: 0% to 5% (E to F) of 120V (180V)

Warranty: Controlled Power Company guarantees the unit to be free from defects in material and workmanship for a period of (1) year following shipment from the factory. Consult factory for details.

CABINET OUTLINES

MODEL 506 CABINET DIMENSIONS

<table>
<thead>
<tr>
<th>Standard DC Voltages: 100 – 600</th>
<th>DC Output Current</th>
<th>Cabinet Number</th>
<th>Weights</th>
<th>Dimensions (In Inches And Centimeters) –––</th>
<th>W x D x H</th>
</tr>
</thead>
<tbody>
<tr>
<td>100A</td>
<td>4W</td>
<td>1750 lbs (794 kg)</td>
<td>39” x 48” x 60”</td>
<td>(99 cm x 122 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>200A</td>
<td>4W</td>
<td>1850 lbs (839 kg)</td>
<td>39” x 48” x 60”</td>
<td>(99 cm x 122 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>300A</td>
<td>4W</td>
<td>2000 lbs (907 kg)</td>
<td>39” x 48” x 60”</td>
<td>(99 cm x 122 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>400A</td>
<td>8W</td>
<td>2800 lbs (1270 kg)</td>
<td>39” x 78” x 60”</td>
<td>(99 cm x 198 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>500A</td>
<td>8W</td>
<td>3100 lbs (1406 kg)</td>
<td>39” x 78” x 60”</td>
<td>(99 cm x 198 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>600A</td>
<td>8W</td>
<td>3400 lbs (1542 kg)</td>
<td>39” x 78” x 60”</td>
<td>(99 cm x 198 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>700A</td>
<td>8W</td>
<td>3800 lbs (1723 kg)</td>
<td>39” x 78” x 60”</td>
<td>(99 cm x 198 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>800A</td>
<td>8W</td>
<td>4400 lbs (1996 kg)</td>
<td>39” x 78” x 60”</td>
<td>(99 cm x 198 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>900A</td>
<td>8W</td>
<td>4600 lbs (2087 kg)</td>
<td>39” x 78” x 60”</td>
<td>(99 cm x 198 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>1000A</td>
<td>8W</td>
<td>4800 lbs (2177 kg)</td>
<td>39” x 78” x 60”</td>
<td>(99 cm x 198 cm x 153 cm)</td>
<td></td>
</tr>
<tr>
<td>1100A</td>
<td>8W</td>
<td>5000 lbs (2268 kg)</td>
<td>39” x 78” x 60”</td>
<td>(99 cm x 198 cm x 153 cm)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Consult factory for dimensions and weights of sizes not listed above.
Model 506

The Model 506 is a 6-pulse, secondary thyristor rectifier used in electrocoating and other metal finishing applications that require DC power. Available in output voltages ranging from 100V to 600V, and in current ratings ranging from 100A to 5000A, the Model 506 incorporates a single transformer design, with thyristor semiconductors for rectification and regulation of DC power. In electrocoating and other metal finishing applications where low ripple is required, the Model 506 incorporates an L/C ripple filter to smooth the pulsating DC and to effectively reduce the AC RMS voltage ripple.

Model 5012

The Model 5012 is a 12-pulse, secondary thyristor rectifier used in “low ripple, high current” electrocoating and other metal finishing applications. Available with or without ripple filtering, the Model 5012 brings the output percent ripple to < 1% with filtering. The Model 5012 offers a significant advantage over the Model 506, in that it reduces input current harmonics, and delivers a smoother DC output. In large electrocoating applications where the voltage is > 300V and the current is >1500A, the Model 5012 is often the best solution.

Performance Specifications

- Input Voltage: Standard 208V, 240V, 480V, or 600V; 3-phase. (Other voltages available; consult factory.)
- Input Line Variation: ± ± 5% from nominal. (Optional wider ranges available; consult factory.)
- Frequency: 60 Hz. Optional 50 Hz.
- Efficiency: 95% typical, size dependent.
- Power Factor: 90% typical at full output.
- Voltage Regulation: ± 0.5%
- Current Regulation: ± 0.5%
- Ambient Temperature: 0º C (32º F) to 40º C (104º F) maximum, 50º C optional.
- Humidity: 95% non-condensing.
- Elevation: Maximum elevation 1524 meters (5000 feet) without de-rating.
- Storage: -20º C (-4º F) to 50º C (122º F)

Warranty: Controlled Power Company guarantees the unit to be free from defects in material and workmanship for a period of (1) year following shipment from the factory. Consult factory for details.

Cabinet Outlines

Consult factory for the dimensions and cabinet outlines of the higher-current Model 506s, water cooled models, the 12-pulse Model 5012, and 1000 VDC power supplies.

Cabinet Specifications

Consult factory for (2) distinct product models: Model 506 and Model 5012.