



Chemical

High Power Transformer Rectifier Systems For Electrochemical Applications

Added Benefits of Power Electronic Systems Supplied by Neeltran — Robust and Reliable Power to run your processes .

Neeltran, is uniquely positioned as one of the few companies in the world that designs and manufactures its own transformer rectifiers and rectifiers. This unique capability allows for combined **Full Current and Full Voltage** factory testing of the transformer and rectifier in their actual configuration prior to shipment.

This combined testing to eliminate integration problems at the site and to assure the shortest commissioning time, resulting in significant cost savings and the highest quality units. Our rectifiers for electrochemical plants will exceed your needs.

Neeltran possesses multi-industry, engineering, and manufacturing experience that helps us to be flexible and design products that meet your specific technical and safety requirements for your electrochemical needs. Neeltran offers oil cooled transformer with water cooled rectifier as well as water cooled transformer with water cooled rectifier which is the lowest cost solution (green solution). Whether a traditional Oil Transformer and water cooled rectifier or an all in one, E House style. Our rectifiers for chemical plants can serve your needs.

DC Power Supplies for Electrolysis

Markets served for electrochemical rectifiers and transformers are: Chlorate, Chlor alkali, Chlor-alkali, Chlorine, Hydrogen and all other gasses and chemicals that use electrolytic processes. Neeltran DC Power supplies are suitable for Alkaline, PEM, and Solid oxide electrolyzers in hydrogen production.

Product Details:

- Latest safety features
- Design to all types of environments
- Remote monitoring via PLC modem
- State-of-the-art Neeltran control boards with Microprocessor based controller available
- All types of PLC's available for ease of interface to customers systems Semiconductor Plasma Arc protection available
- Diode and SCR
- On Load Tap Changer available, in all cases including NLTC tap changer will have its own separate oil supply
- Multiple DC current measurement types available
- EMF, RFI and Magnetic studies available
- FEM analysis available System coordination study available
- Harmonic studies available
- Complete ANSI and/or IEC testing available
- E House style available
- Water cooled power supply



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General Specifications

| | | |
|---|-----------------|---|
| Three-phase supply voltage main by customer | V _{ac} | up to 69000 |
| Maximum power | kVA | up to 65000 |
| Three phase voltage on the secondary | V _{ac} | up to 1500 |
| Frequency | Hz | 50 / 60 |
| NLTC or OLTC | | No Load and On Load Tap Changers |
| DC Current | A _{dc} | up to 200000 |
| DC Voltage | V _{dc} | up to 1100 |
| Rectifier Connection | | Bridge or Star |
| Pulses | | 6 / 12 / 18 / 24 / 36 and more |
| Control card type | | Digital or Analog, hard wired or OPTO |
| Accuracy of the constant current control system | | ±0.5% |
| Transformer Cooling | | Oil to Water / Oil to Air |
| Transformer Manufacturer | | Neeltran |
| Transformer Oil Type | | Mineral / FR3 / Silicon |
| Metering | | Shunt / LEM / Primary CT |
| PLC | | Allen Bradley or Siemens, others available. Dial in Modem or Cellular modem for diagnostics |
| Rectifier Cooling | | Deionized Water to Water / Deionized Water to Air |
| Rectifier Enclosure Type | | Compact / Semi-walk in / Walk in |
| Rectifier Manufacturer | | Neeltran |
| Rectifier power section material | | Aluminum or Copper |
| Rectifying elements | | Thyristors / Diodes / IGBT |
| Redundancy | | N+X |
| Line Up Testing Available | | Combined Test at Neeltran Factory |

American Superconductor

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