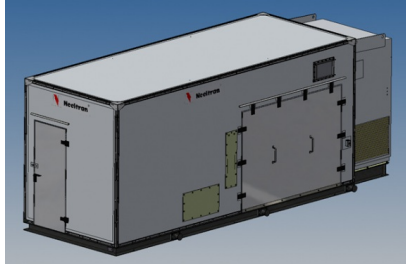


Hydrogen DC Power Supply



DC Power Supply for Hydrogen Production

Neeltran dc rectifiers are custom designed to meet your hydrogen needs. Whether an indoor or outdoor solution, an oil or water cooled transformer, a compact or walk in rectifier (E-House) we have the ability to meet all of your specifications. Our team builds / designs transformers and rectifiers in its Connecticut facility to provide you a dc power system solution that exceeds your requirements.

Our rectifiers can power Green Hydrogen electrolyser production that uses Proton Exchange Membrane (PEM) technology. Typical hydrogen applications are Fuel, Energy Storage, Energy Generation, and Industrial hydrogen.

Value to the Customer -

Reduced land footprint, ease of installation and lower install cost, no potential for environmental issues in many cases.

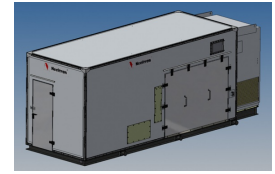
Range size from 1MW to 100 MW for electrochemical rectifiers.

Combined **Full Current and Full Voltage** factory testing of the transformer and rectifier *in their actual configuration prior to shipment means quick start ups and improved quality.*

PRODUCT DETAILS:

- Latest safety features
- Design to all types of environments
- Remote monitoring via PLC modem
- State-of-the-art Neeltran control boards with Micro-processor-based controller available
- All types of PLC's available for ease of interface to customers systems
- 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 |
| Frequency | Hz | 50 / 60 |
| NLTC or OLTC | | No Load and On Load Tap Changers |
| DC Current | A_{dc} | up to 130000 (Typical units 1MW to 30MW per set) |
| DC Voltage | V_{dc} | up to 1500 |
| 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 / Water to Water / Water to Air |
| Transformer Manufacturer | | Neeltran |
| Transformer Oil Type | | Mineral / FR3 / Silicon / Water |
| 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 |
| Redundancy | | N+X |
| Line Up Testing Available | | Combined Test at Neeltran Factory |

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