



# Electro Extracción y Refinación de Metales

## Sistemas de Transmadores y Rectificadores de alta potencia para la electro extracción y refinación de metales.

### Added Benefits of Power Electronic Systems Supplied by Neeltran – Robust and Reliable Power to run your 24/7 processes.

At Neeltran, we design and manufacture our own transformer rectifiers and rectifiers in the same facility. Neeltran performs 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 for your mining or electrowinning rectifier. This results in significant cost savings and produces the highest quality units.

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. Neeltran offers oil cooled transformers with water cooled rectifiers as well as complete water cooled systems including the transformer which is a green solution as well as lower cost.

Markets served for electrowinning and metal refining dc power supply: Copper, Nickel, Zinc, Cobalt, Lithium and other non-ferrous metals that use electrolytic processes.

**Rectifier for mining product Range: 5 kA to 60 kA per 6 pulse unit, multi-pulse configurations with total process up to 270 kAdc available.**

### Detalles Del Producto:

- 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 customer systems
- Semiconductor Plasma Arc protection available Diode units available.
- On Load Tap Changer available, in all cases including NLTC tap changer will have its own separate oil supply.
- Design to local environment, altitude and cooling conditions with all cooling system types available Multiple DC current measurement types available.
- EMF, RFI and Magnetic studies available FEM analysis available.
- System coordination study available.
- Harmonic studies available.
- E House style available



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### Especificaciones Generales

Fuente principal de voltaje trifásica en la primaria	V	up to 69000
Máxima potencia	kVA	hasta 10000
Tres tensión de fase en el secundario	V	hasta 300
Frecuencia	Hz	50 / 60
NLTC u OLTC		No Carga y de cambiadores de tomas en carga
Corriente continua	A	hasta 60000
Voltaje de corriente continua	V	hasta 300
Conexión del rectificador	ANSI - IEC	Puente o individual
Pulsos		6 / 12 / 18 / 24 / 36 y más
Tipo de tarjeta de control		Digital o analógico, cableado o Opto.
Exactitud del Sistema de control de corriente constante		±0.5%
Enfriamiento del transformador		ONAN-ONAF-OFAF-OFWF-KNAN
Fabricante del transformador		Neeltran
Tipo de aceite del transformador		Mineral, FR3, Silicon
Clase de temperatura		105°C
Instalación		Indoor or Outdoor
Enfriamiento del rectificador		Deionized Water to Water / Deionized Water to Air
Tipo de gabinete del rectificador		Compacto / Semi / Walk in
Fabricante del rectificador		Neeltran
Material de la sección eléctrica del rectificador		Aluminio o cobre
Elementos de rectificación		Tiristores / Diodos / IGBT
Redundancia		N+X
Disponible línea de prueba		Prueba combinada en Neeltran fábrica

#### American Superconductor

+1 860.350.5964 Phone | +1 860.350.5024 Fax | 71 Pickett District Road | New Milford, CT 06776, USA  
Web: Neeltran.com | Email: sales@Neeltran.com