HiTek Power is acknowledged as a global leader in the design and manufacture of high quality, high voltage and high power supply solutions for several X-ray analysis, Industrial and Biotechnology applications.

With over 40 years of experience in this specialist field of high voltage electronics, HiTek Power’s pioneering design team develops products for a diverse range of industrial applications. HiTek Power offers high voltage power supplies from 100V to 500kV with output power rating ranges from 1W to 100kW and beyond, providing complete solutions for an ever-increasing spectrum of both standard and custom OEM applications.

HiTek has manufacturing and sales operations in the UK, Germany, USA and Japan, as well as affiliates in China and Taiwan. HiTek currently employs over 100 people, including a large staff of qualified design engineers and technology specialists committed to developing innovative high-quality power solutions.

HiTek Power’s primary expertise is in the design, development and manufacture of power supplies for the semiconductor, instrumentation, communication, computer networking, medical and scientific market sectors; as well as the specialised industrial segments of precision engineering and commercial/industrial printing.

Our specialised sales and engineering teams ensure we can successfully address an ever-increasing spectrum of customer applications with purpose-built products. The company’s power supplies are used in a very wide range of equipment, including scanning electron microscopes, spectroscopy systems, ion-beam systems, analytical X-ray, process control X-ray, industrial lasers, medical lasers, intense pulsed light systems, electron beam welding, ink-jet and thermal printers, process control, office automation, telecommunications, industrial computers and medical devices.

Quality and Environmental

Our on-going commitment to excellent standards of quality across all functions is demonstrated by our integrated quality and environmental management system.

This system meets the requirement of both ISO9001:2008 and ISO14001:2004 and is designed to support HiTek Power’s own quality and environmental policies. Quality is fundamental to the way we operate our business – cost effective products prompt service, excellent technical advice and efficient after-sales support are all key to our success.

Our products are compliant with the RoHS Directive where possible and to the WEEE Directive where necessary. All HiTek Power products meet the requirements of EC Directive 2006/95/EC

HiTek Power’s Mission Statement

To be the provider of choice for OEM companies requiring designed-in power electronic solutions, through our technical and application knowledge bringing added value to the customer’s product.
HiTek Power has many years experience in providing power for the generation of X-rays through the design of high voltage power supplies for industrial and scientific equipment.

The following pages only give an overview of our X-ray power supply capability. We offer a full custom design service or a design solution based on a standard product.

Can’t find anything to suit your requirements?
Please contact our sales team to discuss a custom-built power supply!
SERIES XR150
150W X-RAY POWER SUPPLY MODULE

The series XR150 is a modular X-ray power supply which has been specifically developed for high-performance X-ray applications.

The combination of surface mount, superior high voltage stress control and packaging techniques ensures a compact but highly reliable product. The XR150 is available with either an analogue or RS232 control interface.

We produce many custom versions of this product, so please contact our sales team if none of the models listed below suit your requirements.

### Features
- 150W high output power
- 17W floating filament
- Analogue or RS232 interface option
- Remote operation
- High accuracy and stability
- Negative polarity
- Exceptionally compact size
- RoHS compliant to EU Directive 2002/95/EC
- CE Marked (LVD)

### Applications
- X-ray analysis
- X-ray inspection

<table>
<thead>
<tr>
<th>Model</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Output Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>XR150-603-01</td>
<td>-60kV</td>
<td>2.5mA</td>
<td>150W</td>
</tr>
<tr>
<td></td>
<td>This is standard negative output power supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XR150-603-02</td>
<td>-60kV</td>
<td>2.5mA</td>
<td>150W</td>
</tr>
<tr>
<td></td>
<td>This unit has the addition of an RS232 control and separate ON/OFF switch</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The model **XRG70** is a modular X-Ray power supply which has been specifically developed for high performance compact X-ray applications.

The combination of surface mount, superior high voltage stress control and packaging techniques ensures a compact but highly reliable product. The XRG70 is from the grounded filament range of products designed for grounded cathode applications.

There are many other options for power control, interlock and enable signals, so please enquire about custom versions if none of the models listed below suit your requirements.

<table>
<thead>
<tr>
<th>Features</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 72W output power</td>
<td>• X-ray analysis</td>
</tr>
<tr>
<td>• 20W grounded filament</td>
<td>• X-ray inspection</td>
</tr>
<tr>
<td>• Exceptionally compact size</td>
<td></td>
</tr>
<tr>
<td>• Local and remote operation</td>
<td></td>
</tr>
<tr>
<td>• RoHS compliant to EU Directive 2002/95/EC</td>
<td></td>
</tr>
<tr>
<td>• CE Marked (LVD)</td>
<td></td>
</tr>
<tr>
<td>• Safety interlock</td>
<td></td>
</tr>
<tr>
<td>• High accuracy and stability</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Output Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>XRG70-253*</td>
<td>25kV</td>
<td>2mA</td>
<td>50W</td>
</tr>
<tr>
<td>XRG70-403*</td>
<td>40kV</td>
<td>1.5mA</td>
<td>60W</td>
</tr>
<tr>
<td>XRG70-503*</td>
<td>50kV</td>
<td>1.2mA</td>
<td>60W</td>
</tr>
<tr>
<td>XRG70-603*</td>
<td>60kV</td>
<td>1.2mA</td>
<td>72W</td>
</tr>
<tr>
<td>XRG70-653*</td>
<td>65kV</td>
<td>1mA</td>
<td>65W</td>
</tr>
<tr>
<td>XRG70-703*</td>
<td>70kV</td>
<td>1mA</td>
<td>70W</td>
</tr>
</tbody>
</table>

Please add the required suffix to the model number:

- **P** Positive polarity
- **F** If internal filament required
- **N** Negative polarity
- **X** If extended HV cable required
- **C** RS232 computer control (hard wired and fibre optic)

eg XRG70-603PFC
The model **XRG50-503** is a modular X-ray power supply for gridded tubes in industrial and scientific analytical applications.

Powered from 24VDC input, the model XRG50-503 provides a floating filament and the required floating grid circuit to enable fast control of a gridded tube. All setting and monitoring is carried out by a detailed RS232 command set.

We can produce many different custom variations of this model, so if none of the models listed below suit your requirements, please contact our sales team to discuss a custom version.

### Features
- 50W output power
- RS232 remote operation
- Floating DC filament
- Floating grid/bias
- Beam control
- Short circuit & flashover protection
- LED status indication
- RoHS compliant to EU Directive 2002/95/EC
- CE Marked (LVD)

### Applications
- X-ray analysis
- X-ray inspection

### Model Specifications

<table>
<thead>
<tr>
<th><strong>Model</strong></th>
<th><strong>Output Voltage</strong></th>
<th><strong>Output Current</strong></th>
<th><strong>Output Power</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>XRF50-503</td>
<td>-50kV</td>
<td>1mA</td>
<td>50W</td>
</tr>
</tbody>
</table>
SERIES MH60
60W VERSATILE HIGH VOLTAGE POWER SUPPLY MODULE

The Series MH60 is a range of versatile high voltage power supply modules suitable for specification in OEM equipment. Powered from 24VDC, the supply up to 60W output and allow full range control and monitoring of output voltage and current.

If none of the model listed below suit your requirements, please contact our sales team to discuss a custom version.

<table>
<thead>
<tr>
<th>Model</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Output Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH60/303*</td>
<td>30kV</td>
<td>2mA</td>
<td>60W</td>
</tr>
<tr>
<td>MH60/403*</td>
<td>40kV</td>
<td>1.5mA</td>
<td>60W</td>
</tr>
<tr>
<td>MH60/503*</td>
<td>50kV</td>
<td>1.2mA</td>
<td>60W</td>
</tr>
</tbody>
</table>

Please add the required suffix to the model number:
P Positive polarity
N Negative polarity

Features
- 60W output power
- High reliability
- Range of outputs available
- Positive or negative polarity models
- Remotely controllable
- V & I control
- V & I monitor
- Low ripple
- LED status indication
- Short circuit & flashover protection
- RoHS compliant to EU Directive
- CE Marked (LVD)

Applications
- Wide angle, high definition CRTs
- X-ray equipment
- Insulation and materials testing
- Projection
The Series **MHX** is a range of versatile high voltage power supply modules suitable for specification in OEM equipment.

Powered from 24VDC, the supply up to 60W output and allow full range control and monitoring of output voltage and current via 0-10V analogue signals. In addition, internal potentiometers are provided for voltage and current control.

If none of the models listed below suit your requirements, please contact our sales team to discuss a custom version.

### Features
- 100W max output power
- High reliability
- Positive or negative polarity models
- Short circuit & flashover protection
- Remote controllable
- V & I monitor
- V & I control
- Low ripple
- CE Marked (LVD)

### Applications
- X-ray equipment
- Insulation and materials testing
- Electron and ion beam acceleration
- Ion acceleration

### Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Output Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHX-603*</td>
<td>60kV</td>
<td>1.67mA</td>
<td>100W</td>
</tr>
<tr>
<td>MHX-803*</td>
<td>80kV</td>
<td>1mA</td>
<td>80W</td>
</tr>
</tbody>
</table>

Please add the required suffix to the model number:
- **P** Positive polarity
- **N** Negative polarity
### SERIES MH100
VERSATILE HIGH VOLTAGE POWER SUPPLY MODULES

The Series **MH100** is a range of versatile high voltage power supply models suitable for specification in OEM equipment. Powered from 24VDC, the supply up to 60W output and allow full range control and monitoring of output voltage and current via 0-10V analogue signals.

In addition, internal potentiometers are provided for voltage and current control.

If none of the models listed below suit your requirements, please contact our sales team to discuss custom version.

#### Features

- 100W max output power
- High reliability
- Positive or negative polarity models
- Short circuit & flashover protection
- Remote controllable
- V & I monitor
- V & I control
- Low ripple
- CE Marked (LVD)
- LED status indication

#### Applications

- Wide angle, high definition CRTs
- X-ray equipment
- Insulation and material testing
- Electron and ion beam accelerating

<table>
<thead>
<tr>
<th>Model</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Output Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH100/502*</td>
<td>5kV</td>
<td>20mA</td>
<td>100W</td>
</tr>
<tr>
<td>MH100/103*</td>
<td>10kV</td>
<td>10mA</td>
<td>100W</td>
</tr>
<tr>
<td>MH100/253*</td>
<td>25kV</td>
<td>4mA</td>
<td>100W</td>
</tr>
<tr>
<td>MH100/303*</td>
<td>30kV</td>
<td>3.3mA</td>
<td>100W</td>
</tr>
<tr>
<td>MH100/403*</td>
<td>40kV</td>
<td>2.5mA</td>
<td>100W</td>
</tr>
<tr>
<td>MH100/503*</td>
<td>50kV</td>
<td>2mA</td>
<td>100W</td>
</tr>
</tbody>
</table>

Please add the required suffix to the model number:

- **P** Positive polarity
- **S** Screened HV cable
- **N** Negative polarity
- **A** Front HV cable exit
- **B** Rear HV cable exit (not available on MH100/503)
SERIES XR1000
1kW X-RAY POWER SUPPLY

The Series XR1000 is intended as a component power supply for use in industrial and analytical X-ray systems.

The Series XR1000 incorporates a floating filament supply which is automatically controlled by the integral beam loop. Design is based around HiTek Power’s proven IBGT converter, ensuring high efficiency and reliable operation. The XR1000 is available with either an analogue or RS232 control interface.

If none of the models listed below suit your requirements, please contact our sales team to discuss custom version.

<table>
<thead>
<tr>
<th>Features</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1kW output power</td>
<td>• Industrial X-ray systems</td>
</tr>
<tr>
<td>• Extensive tube protection facilities</td>
<td>• X-ray analysis</td>
</tr>
<tr>
<td>• Robust IGBT converter design</td>
<td>• X-ray diffraction spectrometers</td>
</tr>
<tr>
<td>• Short circuit &amp; overload protection</td>
<td>• Material process monitoring</td>
</tr>
<tr>
<td>• High stability</td>
<td></td>
</tr>
<tr>
<td>• High accuracy filament control</td>
<td></td>
</tr>
<tr>
<td>• Low ripple</td>
<td></td>
</tr>
<tr>
<td>• Analogue or RS232 interface option</td>
<td></td>
</tr>
<tr>
<td>• CE Marked (LVD)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Maximum Output Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>XR1000/603</td>
<td>-60kV</td>
<td>-16mA</td>
<td>1kW</td>
</tr>
<tr>
<td>XR1000/903</td>
<td>-90kV</td>
<td>-11mA</td>
<td>1kW</td>
</tr>
</tbody>
</table>
The Series XR2000 is intended as a component power supply for use in industrial and analytical X-ray systems.

The Series XR2000 incorporates a switching floating filament supply, allowing use of both large and small focus filament connections within a X-ray tube. Design is based around HiTek Power’s proven IGBT converter, ensuring high efficiency and reliable operation. The XR2000 has an RS232 control interface.

If none of the models listed below suit your requirements, please contact our sales team to discuss custom version.

### Features
- 2kW output power
- Extensive tube protection facilities
- Robust IGBT converter design
- Short circuit & overload protection
- Constant power operation
- High accuracy filament control
- Low ripple
- High stability
- Analogue or RS232 interface option
- CE Marked (LVD)

### Applications
- Industrial X-ray systems
- X-ray analysis
- X-ray diffraction spectrometers
- Material process monitoring

### Table of Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Maximum Output Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>XR2000/603</td>
<td>-60kV</td>
<td>-45mA</td>
<td>2kW</td>
</tr>
<tr>
<td>XR2000/903</td>
<td>-90kV</td>
<td>-33mA</td>
<td>2kW</td>
</tr>
</tbody>
</table>