

High voltage – Simplified



Genvolt
high voltage power supplies

SPARKING OFF EXCELLENCE AND INNOVATING SOLUTIONS

Welcome to Genvolt UK

Genvolt have been designing, developing and manufacturing high voltage power supplies for more than 25 years and with combined design and manufacturing experience of more than seven decades Genvolt are sure to meet even the most demanding of high voltage requirements

We design, develop and manufacture a wide range of high voltage power supplies from 200V to over 300kV which conform to quality standard ISO9001/2008.



Genvolt
high voltage power supplies

We aim to provide a comprehensive solution to customers and clients of High Voltage Technology products in a variety of fields such as Defence, Industrial, Air Pollution control, Research, Education and NDT to name a few

Genvolt offer a range of 'off the shelf' products, which are suitable for the majority of Industrial, commercial and laboratory applications.

We also offer a bespoke design and build service for special projects and applications where our 'off the shelf' products don't meet requirements.

With offices in the UK, China and India Genvolt are able to provide high voltage power solutions throughout the World.

Most Demanding Applications:

- Laboratory research applications
 - Air cleaning equipment
 - Electrostatic liquid/oil cleaning
 - Electrostatic precipitators
 - Non-destructive testing X-ray
 - Electron beam welding machines
 - Capacitor Charging / testing
 - Electron beam printing / 3D printing
- Dielectric / Insulation testing equipment
 - Electro-spinning
 - Electro-spraying
 - Electrostatic applications
 - Particle accelerators
 - General high voltage applications
 - Bespoke high voltage applications

7xx30



Up to 30kV, 30 Watts, Low cost bench top laboratory unit

8000 Series



Up to 50kV, 120 Watts modular bench top laboratory supply

We have hundreds of customers representing countless products. Genvolt Products can be configured to fit into so many different designs across so many applications.

The Genvolt Engineers have decades of experience in the high voltage power supply industry. Through detailed market analysis, customer surveys and feedback we have been able to adapt a range of standard 'off the shelf' products covering a wide range of functions, features, voltage and power to suit most customer needs.

Genvolt standard products can be used in many ways; sometimes a simple external circuit or operational configuration is all that is required to solve a system problem. If you can't find a solution to meet your needs please feel free to contact us.

71520 Model



15kV, 20 Watts general purpose 24V DC input module

Pegasus P600



General purpose 600 watts 2U rack HV PSU with voltage up to 50kV

Electrostatic Air Cleaning:

Genvolt high frequency switched mode power supplies for electrostatic systems are an application specific product which are reliable and proven making them the first choice to many ESP OEMs.

Genvolt has expertise in designing and delivering products from the smallest ESP to the larger high power ESP for air cleaning.

With over 50 thousand installations worldwide, Genvolt's AF0 range of high voltage power supplies are reliable and proven for electrostatic air and oil cleaning applications. Our products are used around the world by many OEMs in the field of commercial kitchen exhaust systems, fume extraction, industrial air / oil cleaning and other electrostatic principal based applications.



AF01

Up to 50 Watts,
12kV/6kV dual output
robust air clean



AF02

8kV/4kV up to 40 Watts.
PCB with intelligent
controls



AF04

12kV/6kV up to 100
Watts. Available with
single or dual outputs



AF05/AF06

Up to 60kV, 1kW remote
controlled units with
optional remote display

AF Range selection sheet

MODEL	VOLTAGE (kV)	POWER (W)	Key Features
AF01	7, 8, 9, 10, 11, 12, 8/4, 10/5, 12/6	20, 30, 40, 50	Hiccup mode, fault indication, change over contacts
AF01B	15, 18, 20, 22, 24, 26, 15/7, 16/8, 18/9	20, 30, 40, 50	Hiccup mode, fault indication, change over contacts
AF02B	6, 7, 8, 7/3.5, 8/4	5, 10, 15, 20, 40	Compact PCB power supply
AF02C (PCB Type)	6, 7, 8, 7/3.5, 8/4	5, 10, 15, 20, 40	PCB power supply with intelligent controls
AF04	7, 8, 9, 10, 11, 12, 8/4, 10/5, 12/6	100	Hiccup mode, fault indication, change over contacts
AF04B	8, 10, 12, 14, 16, 18kV, Dual output also available	150, 200, 250, 300	Output voltage tune control
AF04F	8, 10, 12, 14, 16, 18kV, Dual output also available	150, 200, 250, 300	0-5VDC output voltage & current readouts
AF05	14, 16, 18, 20, 22, 14/7, 16/8, 20/10	350, 450, 500	Analog remote control
AF06	14, 16, 18, 20, 22, 14/7, 16/8, 20/10, 25, 30, 35, 45, 50, 55, 60	600, 800, 1000	Optional remote touch screen control unit

High Powered Electrostatic Precipitators:

Genvolt expertise in designing very high frequency SMP's resulted in development of high power ESP units. These units are reliable and efficient for air cleaning and well accepted by our customers globally. These power supplies operate on a higher power efficiency with guaranteed filtration performance, providing adjustable pulse width to effectively inhibit anti-corona. The robust design of Genvolt power supplies along with the extensive arc and short circuit protection allows operation in the most demanding environments.



ESP01 Series

4-12 kW High Voltage unit for electrostatic air cleaning



ESP Range

Up to 120kV, 240 kW robust unit for cement and coal based power plants



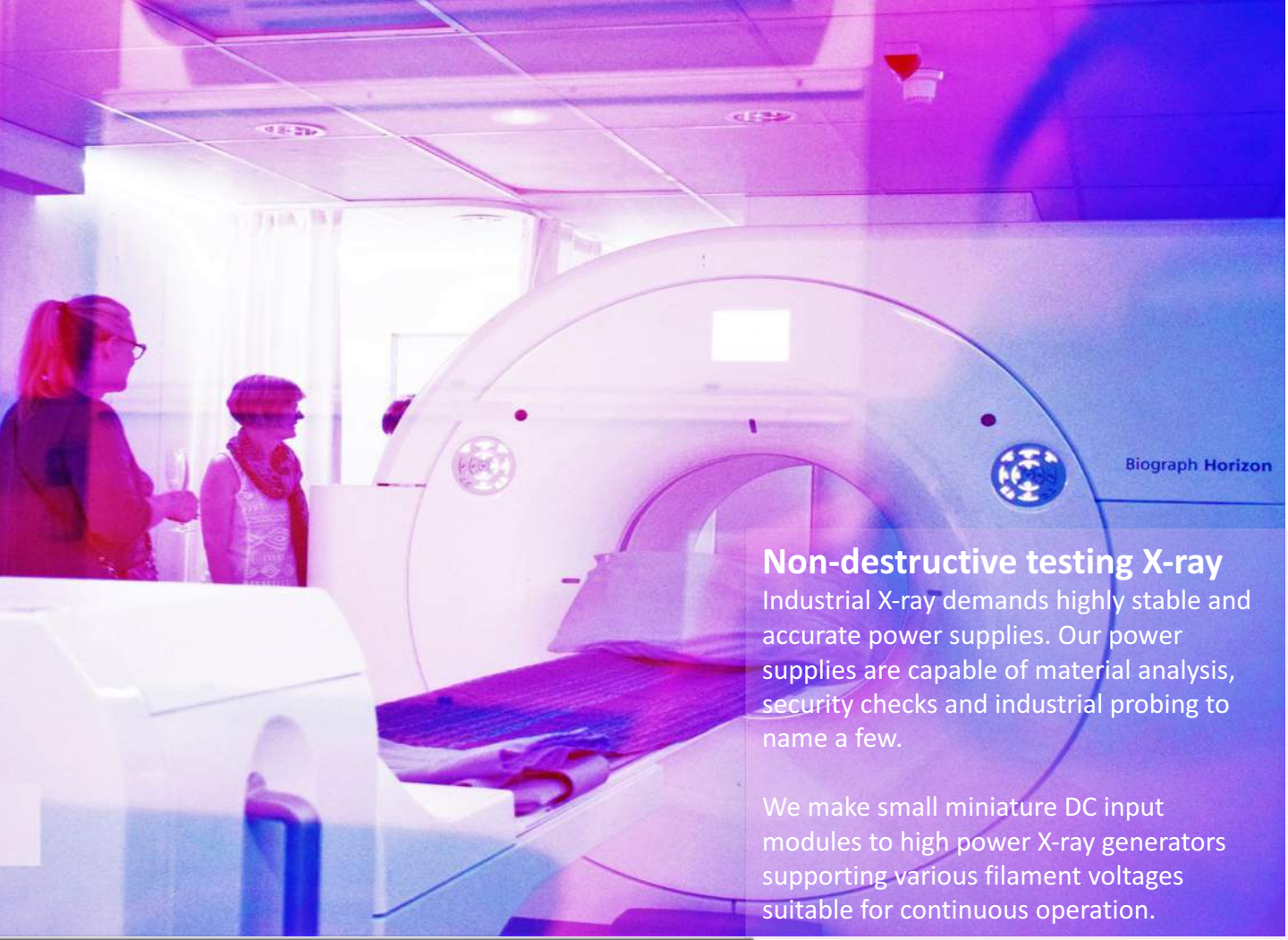
Mercury Series

80-150kV, 150W – 1kW. Versatile unit for specific needs



Technical Lead over traditional T-R sets

- Very compact size compared to the equivalent rating line frequency transformer-rectifier sets.
- SMPS based sophisticated Genvolt products offer less output ripple, resulting in high efficient cleaning results.
- Our products are packed with tight regulation control giving stable output even in the most adverse industrial conditions.
- These products are available in multiple mounting options as they are comparatively light weight and do not require as much dedicated floor space.
- Offering advanced control and monitoring features alongside customized smart interfacing solutions.
- For more information on our custom options please contact us at info@genvolt.co.uk



Biograph Horizon

Non-destructive testing X-ray

Industrial X-ray demands highly stable and accurate power supplies. Our power supplies are capable of material analysis, security checks and industrial probing to name a few.

We make small miniature DC input modules to high power X-ray generators supporting various filament voltages suitable for continuous operation.

What is NDT?
 Non-destructive testing (NDT) is the process of inspecting, testing or evaluating materials, components or assemblies for discontinuities or differences in characteristics without destroying the serviceability of the part of system. In other words, it is the process of detecting and evaluating flaws in materials.

Genvolt Products
 We offer a range of X-ray power supplies compatible to various industrial X-ray needs. The Genvolt products illustrate our capability to produce innovative designs in response to challenging specifications. Please contact us for special application requirements at info@genvolt.co.uk

Key Features:

- Power packed compact units
- Excellent rigid and reliable
- High efficiency and superior output quality
- Very high voltage and power options available
- Optional integrated bias and filament supply outputs
- Wide controls and monitoring options
- Various remote control and interfacing solutions
- Optional external remote control
- Operating temperature management by air or water



XR250

DC input 125kV, 250 Watt X-ray unit for steel strip rolling mill



Pegasus Range

Up to 120kV, 2400 Watts power supply with optional multiple interfacing options



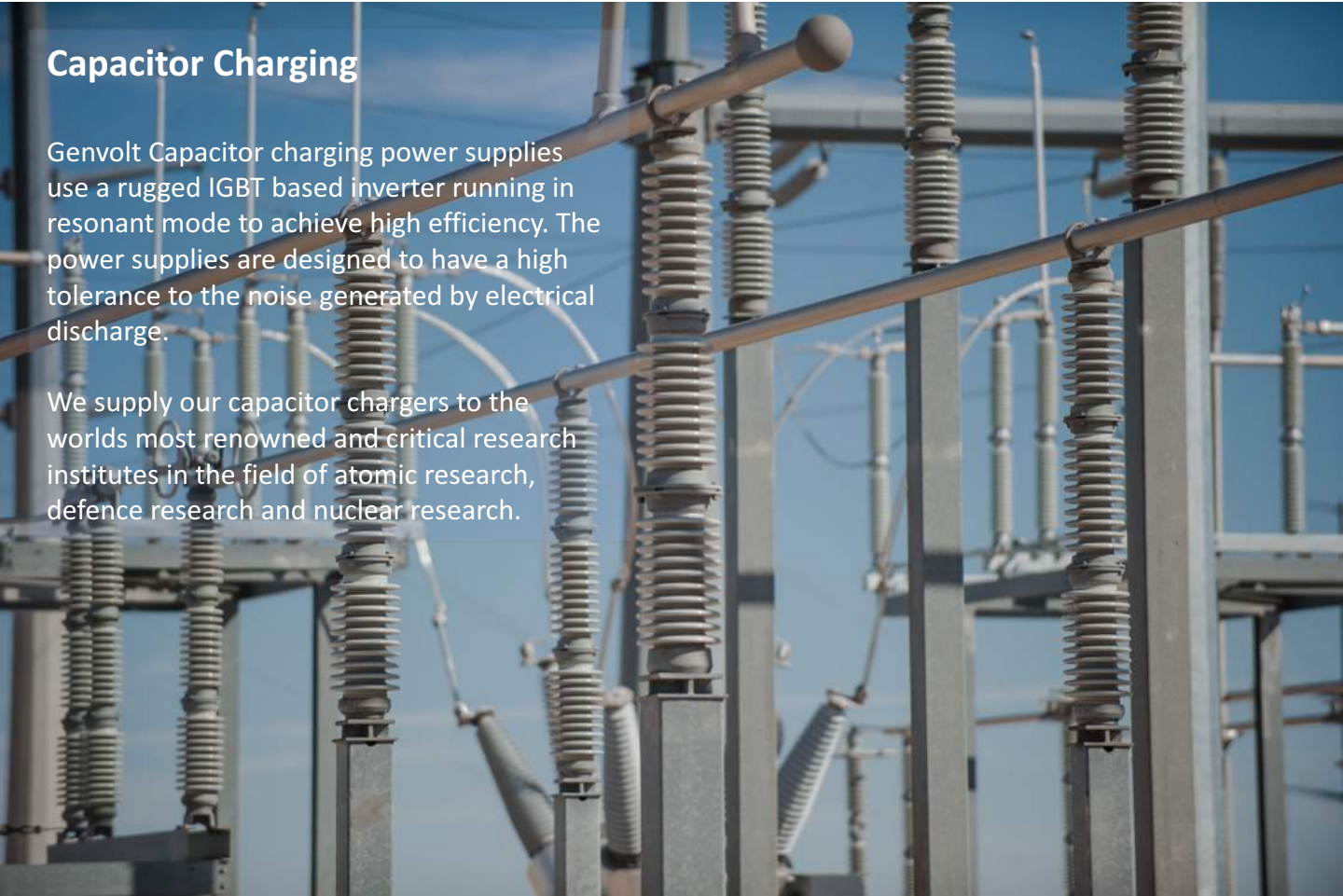
Orion Range

Up to 60kV, 3kW high powered water cooled unit for sophisticated X-ray needs

Capacitor Charging

Genvolt Capacitor charging power supplies use a rugged IGBT based inverter running in resonant mode to achieve high efficiency. The power supplies are designed to have a high tolerance to the noise generated by electrical discharge.

We supply our capacitor chargers to the worlds most renowned and critical research institutes in the field of atomic research, defence research and nuclear research.



5040 Range

1kJ/sec capacitor charging module available in voltages up to 150kV



Titan Range

120kV, 45kJ/sec high speed, high power supply with PRF's as high as 250Hz

Features:

- Genvolt products are designed and developed to handle capacitor charging applications
- High charge and discharge rates help them to be applied on low to high PRF
- Safety interlocks to suit capacitor loads
- Robust and reliable
- External controlling features are provided to allow operation in remote conditions
- In high power chargers optical interfacing solutions provided



Bantam

Up to 32kV, 150J/sec, DC input, remote controlled module



CCM400 Range

300 Watts, up to 30kV front panel controlled modular series



Aquila Range
Compact power supply unit,
available up to 50kV, 30 Watts



7xx30
Available up to 30kV, 30
Watts. Low cost bench top
laboratory power supply



8000 Series
Voltages available up to 50kV. This
is a step up from the 7xx30 range
offering the same compact design
at higher voltages



We have low cost laboratory units to highly sophisticated power supply units for educational institutes and universities.

Genvolt has a long history of working with the world's most reputed universities and supporting them for their new era research activities.

We have extended our reach in the world wide research laboratories. Our products have been adapted widely within many research organizations as well as within the science and technology sector. Genvolt laboratory power supplies have been used in the following fields of interest:

- Applied Mechanics
- Applied science and engineering
- Bio-technology
- Bio-chemical
- Polymer and process engineering
- Particle physics
- And many more...



Europa Range
The Europa is a classic high voltage laboratory power supply. Available up to 100kV and up to 210 Watts. The Europa is available with interchangeable polarity heads so that both polarities can be achieved



LAB300-60KP
Up to 60kV, 30 Watts
general purpose high
voltage power supply



Pegasus Range
Up to 120kV, 2400 Watts
power supply with optional
multiple interfacing options



EB Series

Ranges up to 150kV, 60kW Electron Beam power supply. Suitable for electron beam welding

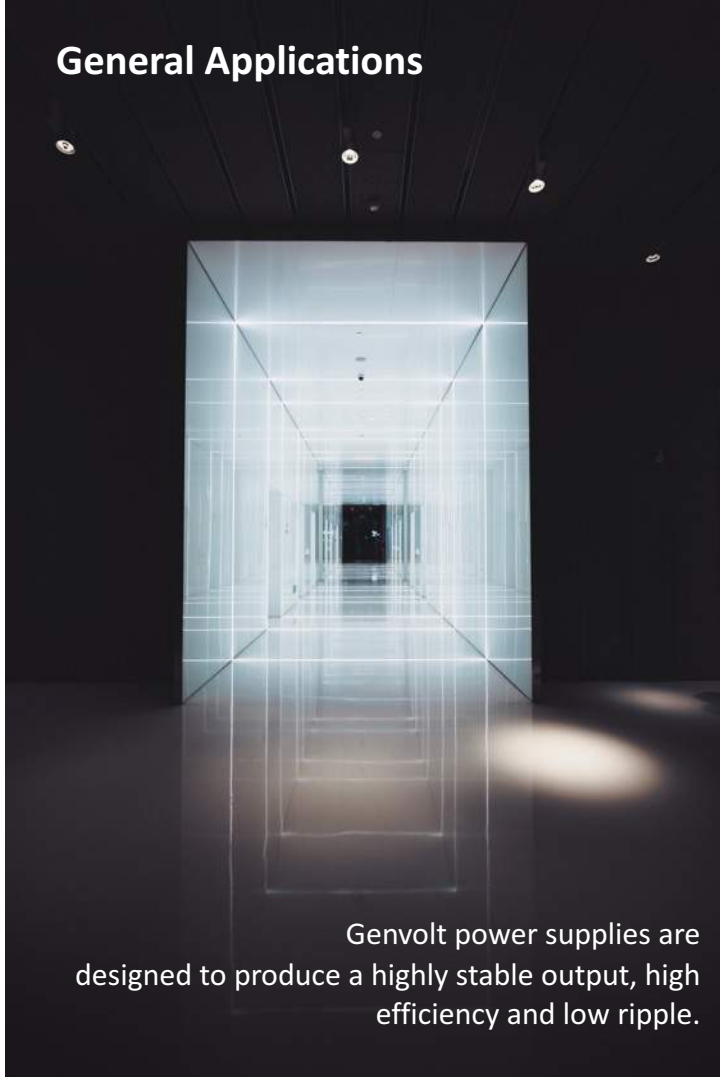


Callisto Range

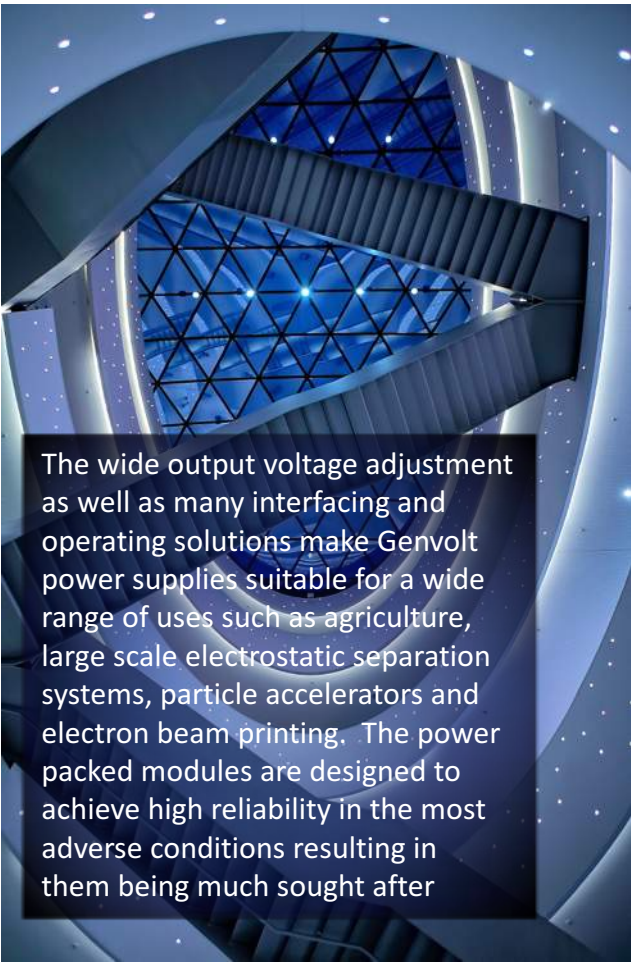
Up to 60kV, 15kW general high voltage power supply



General Applications



Genvolt power supplies are designed to produce a highly stable output, high efficiency and low ripple.



The wide output voltage adjustment as well as many interfacing and operating solutions make Genvolt power supplies suitable for a wide range of uses such as agriculture, large scale electrostatic separation systems, particle accelerators and electron beam printing. The power packed modules are designed to achieve high reliability in the most adverse conditions resulting in them being much sought after

Features:

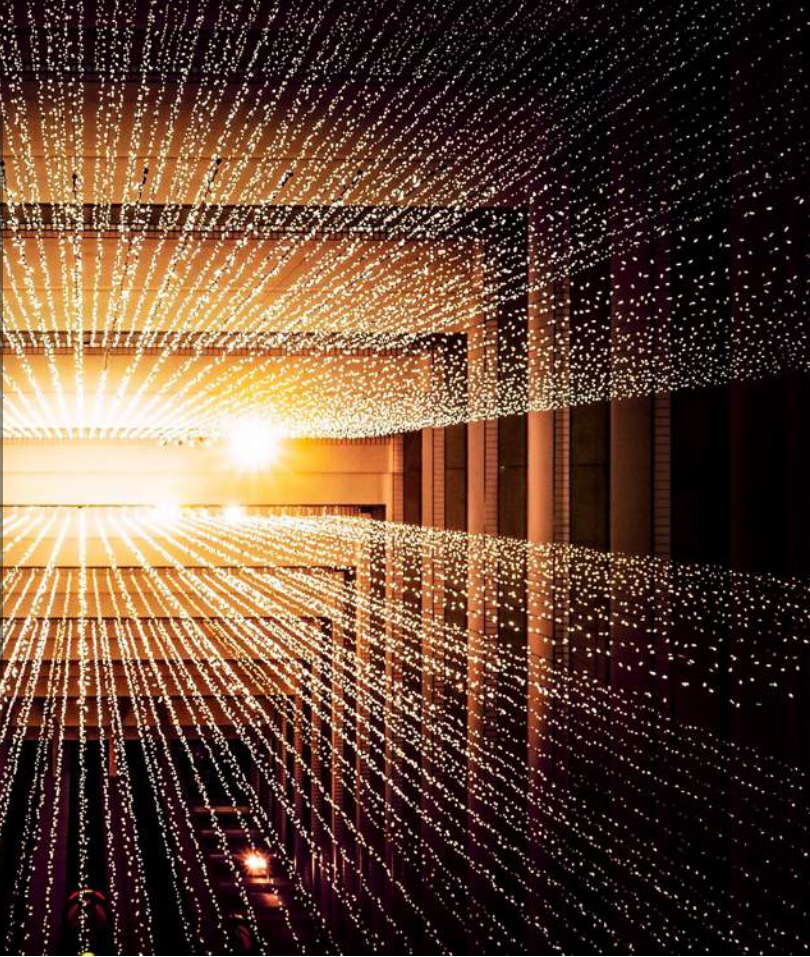
- High Stability
- High Accuracy
- Low Ripple
- Highly Regulated
- Low Temperature drift
- Smart interfacing solutions
- Remote control using multiple options
- Protections against over voltage, over current, arcs, short circuits and more...

Applications:

- Electrospinning
- Mass spectrometry
- Electron beam printing
- Electrostatic sputtering
- Electrostatic sprayers
- Electron beam welding / melting
- Corona treaters
- Electrostatic separation
- And many more...

High Voltage Components

Genvolts high voltage components include capacitors, resistors and connectors, which are designed to withstand the test of time. Their robust design, economical viability and super quality are common factors to all of them. They are highly stable and are used in a variety of applications including voltage dividers, test equipment, medical equipment, measuring equipment, oscillators and coupling circuits to name a few. Needless to say, these components can all be tailor-made to suit individual requirements.



DXU Range

High Voltage ceramic capacitors up to 8000pF, 10kV to 50kV



RES100

High voltage resistors ranging from 50Ω to 100GΩ, 30 Watts to 1000 Watts



CGG81 Range

High frequency power capacitors ranging up to 2200pF, 120kV



XLCG Range

30kV high voltage connector set, supplied with or without high voltage cable



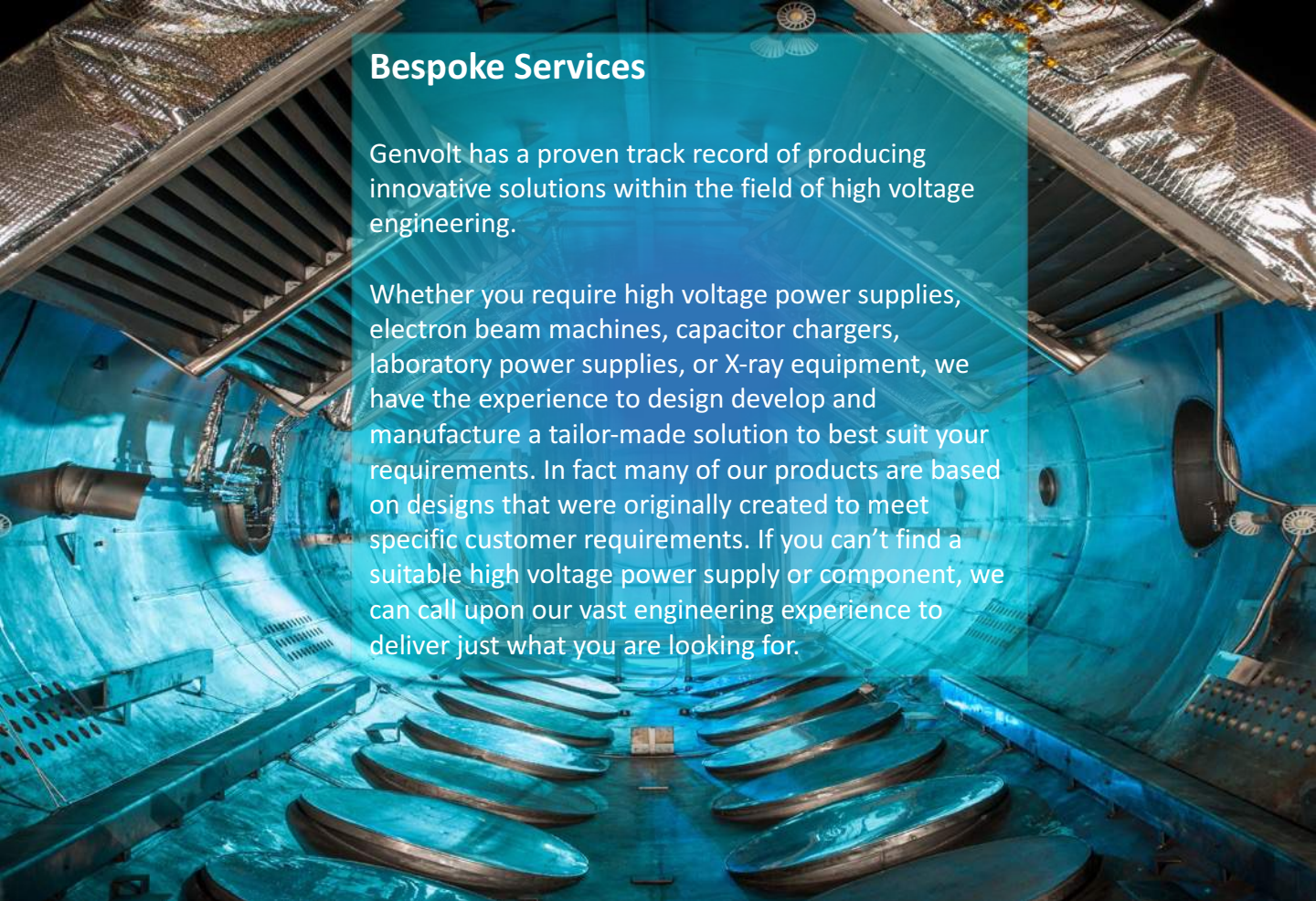
High Voltage Connectors

60kV PTFE high voltage connector set with or without high voltage cable.

Bespoke Services

Genvolt has a proven track record of producing innovative solutions within the field of high voltage engineering.

Whether you require high voltage power supplies, electron beam machines, capacitor chargers, laboratory power supplies, or X-ray equipment, we have the experience to design develop and manufacture a tailor-made solution to best suit your requirements. In fact many of our products are based on designs that were originally created to meet specific customer requirements. If you can't find a suitable high voltage power supply or component, we can call upon our vast engineering experience to deliver just what you are looking for.



Vulcan Series

Up to 200kV, 24kW
specially designed
electron beam /
capacitor charging units



HV Transformer / Rectifier

High Voltage units
outputting 10kV – 50kV
DC



Cygnus

Designed as a general
purpose 'work horse'
source of high voltage.
800 Watts, Up to
160kV

Features:

- Completely customized solutions suitable for specific requirements
- Very high voltage outputs can be achieved
- Higher power requirements can be met
- Single or dual polarity options
- Reversible polarity feature with easy access
- Multiple outputs when required
- Forced air / water cooled provision
- Traditional oil sealed transformer-rectifier sets with high operating frequency
- Various remote control options using analog or digital interfacing
- Different smart interface solutions to meet specific requirements



Global Presence



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