

PILLER

Power Systems



A Division of Piller Power Systems Inc.

Profile

Nothing protects quite like Piller

piller.com

Who We Are

Piller was founded in Hamburg 1909 by German engineer Anton Piller.

Piller occupies a unique position, being the only company to produce a range of rotary UPS and static UPS technologies, encompassing kinetic energy storage systems or batteries, ground power units and 50/60Hz frequency converters.

Employing around 1000 people worldwide, Piller is headquartered in Osterode, near Hanover, Germany, with subsidiaries across Europe, the Americas and Australasia.

In 2016, Piller acquired the business and assets of Active Power Inc., the flywheel energy storage specialist.

The Piller group is a wholly owned subsidiary of the multi-disciplined global UK engineering and industrial group, Langley Holdings PLC.

Piller is headquartered in Osterode, near Hannover, on a 14-hectare manufacturing site with assembly and testing facilities in Germany and the USA.

Piller Headquarters,
Osterode, Germany.



No.1 in High End Power Protection



Built on more than 100 years of German engineering excellence, Piller continues to pioneer the field of uninterruptible power technology, developing industry-leading, state-of-the-art products for a complete range of UPS solutions.

The company's superior technology stands behind many of the world's major financial institutions, data centres, airports, manufacturing and process industries, defence facilities, telecommunications and healthcare providers, ensuring continuity of power supply to mission-critical systems where even the smallest power disruption is unacceptable.

Piller offers its clients a premium level of support, with a global network of experienced Piller service engineers providing a comprehensive package of services to ensure Piller products operate at their optimum, 24/7.

Piller also conducts periodic preventative maintenance to minimise malfunctions and extend the useable life of UPS systems to at least 20 years. These services are fully supported by a network of stocked parts held at service centres and at strategic locations around the world.

With over 7000 kinetic energy storage devices and more than 6000 rotary UPS units up to 3000kVA installed, Piller has around 300 technicians taking care of clients in more than 40 countries.



Active Power,
Austin, Texas.

Piller Testing Facility,
Bilshausen, Germany.

The custom-designed centralised ground power equipment supplied by Piller to King Abdulaziz International Airport, Jeddah, enables remote parking at stands up to 450m from the converter room.



Airports and Naval



For over 40 years, Piller has been protecting military and civil applications, providing power systems to airports as well as shore-to-ship and on-board power systems for both submarine and surface vessels.



Piller gate boxes provide ground power at many international airports.

The safety and smooth operation of these installations and vessels depends on the supply of reliable quality power. Exacting standards of manufacture are vital to ensure life safety and continuous operations even in the most extreme of conditions.

Piller continues to ensure that many world airlines, airports and military assets receive the highest level of protection at all times, with electrical and electronic systems supported by the most reliable power sources available.

Piller's UPS and ground support systems cover the entire scale of airport operations, from runway lighting, terminals and maintenance hangars to instrument landing systems, display boards and aircraft ground power.



Data Hosting and IT

World first – using Piller IP-Bus technology, the Uptime Institute awards Asia Pacific's first Tier IV Certification of Constructed Facility to NEXTDC for their Brisbane B2 data centre.

With the ever-increasing significance of IT systems, many of the world's data hosting, search engine and cloud-based IT organisations rely on Piller technology to protect their servers and prevent service interruption in the event of an outage.

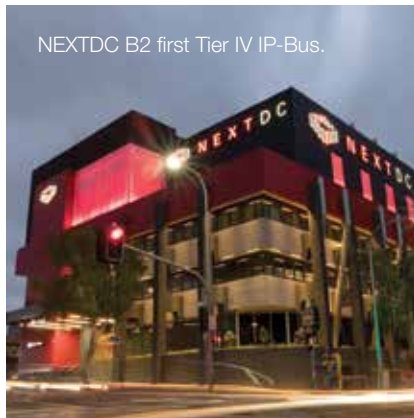
Data centre developers and operators in IT Hosting/Colocation services provide independent, high availability, facilities where cost effective, trustworthy UPS systems are an essential part of the critical infrastructure.

Piller UPS systems can be scaled to suit changing lease commitments, operating at highly efficient levels with optimised capital investment for each stage of the organisation's development.

Space-saving, reduced maintenance battery-free solutions or battery based options can be accommodated within the same facility, providing a solution to meet every demand.

Piller solutions are far less likely to fail than other systems, lowering total cost of ownership by up to 40%, minimising environmental impact and saving on build costs.

NEXTDC B2 first Tier IV IP-Bus.





Piller delivered the UPS systems that protect the European Central Bank's new headquarters' data centre as well as other critical building applications.

Banking and Finance



With billions of dollars being moved around the world every minute of every day, the banking and financial sector has come to depend on a continuous and uninterrupted power.

Financial organisations with extensive data centre operations simply cannot afford to compromise, which is why so many of the world's leading banks and financial institutions use custom designed Piller UPS solutions to ensure complete continuity.

When Hana Bank, one of the largest banks in South Korea and the Pacific Rim, was looking to power-protect its new next-generation data centre in Cheongna, South Korea, they chose Piller's innovative Isolated Parallel Bus (IP-Bus) system protecting servers in the seven-storey 30,194m² (325,000ft²) data centre.

In 2016 the company secured a cornerstone project to install its UPS technology at the Shanghai Stock Exchange.



Piller DRUPS and unique Isolated Parallel Bus solution, Hana Bank.

Piller provides a state-of-the-art power conditioning system for the ALMA Observation Centre, Chile.



Communications



Containerised UPS solutions provide peace of mind at global sporting events.

Broadcasting and electronic communications are more a part of everyday life than ever before. As a result, power interruptions have more serious consequences than ever before.

A mobile or social media network going 'down' brings severe financial and reputational repercussions for its operator, as does power outage for a broadcaster, with resultant loss of audiences and advertising revenue.

Piller is uniquely able to offer 'turnkey' solutions for any broadcasting or electronic communications scenario. Organisers of major sporting events use Piller UNIBLOCK™ UPS and Active Power Powerhouse containerised systems to safeguard power supplies for broadcasters, journalists, competitors and spectators.



Piller protects some of the world's major television broadcasters.

Industry

The face of industry is changing faster than ever. Rapid growth in demand for industrial power as the cost of energy rises, presents a challenge to manufacturing competitiveness and productivity where continuous output is vital.

Stratasys, leaders in 3D printing and additive manufacturing, use Active Power CLEANSOURCE® UPS to power protect the production of flight certified components for aircraft through proprietary 3D printing processes.

Industry needs UPS solutions that are highly reliable, efficient, adaptable and able to cope with any load profile, system configuration or ride through requirement. Piller provides solutions that meet every conceivable industrial scenario.

Throughout the world, manufacturers actively seeking to conserve the environment through greater energy efficiency have naturally adopted Piller solutions for its renowned reliability, efficiency and flexibility.



Piller rotary UPS protects the manufacture of semi-conductors against voltage fluctuations; SK Hynix, Asia.



Healthcare



Parkland Hospital, Texas utilises
Active Power **CLEANSOURCE®** technology.



Seven Active Power
CLEANSOURCE® UPS systems
provide conditioning and
bridging power to help
Parkland Hospital in Texas
achieve its environmental
sustainability goals.

The modern healthcare facility mixes life safety apparatus with complex diagnostic and patient monitoring equipment. Medical records are computerised and instantly accessible across hospital and doctor networks. Secure, dependable power is essential.

Piller UNIBLOCK™ and Active Power **CLEANSOURCE®** UPS can be custom designed for individual healthcare facilities and engineered to handle 100kW to multi-MW loads.

These solutions are highly reliable and energy efficient.

For fault tolerance in large-scale medical applications, Piller's Isolated Parallel (IP-Bus) technology offers an alternative to a standalone UPS, providing a safe, compact and environmentally friendly solution.

Piller designed and installed central UPS systems for the Karolinska University Hospital in Solna Stockholm, Sweden. Ten rotary UPS systems now guarantee a central power supply over 20MW for the hospital.



Energy

As economies around the world look for better ways to make use of energy sources for base power and peak reserve, the need for stabilisation and energy ride-through is becoming more prevalent.

Kinetic energy storage offers an excellent solution for the bi-directional energy transfer necessary to compensate certain renewable energy sources. Pillar rotary stabilisers can be used to manage the fluctuations of renewable energy such as wind and solar power, minimising perturbations on the electricity grid in the process.

With energy storage of up to 60MWs per unit, not only is stabilisation possible on a commercial level, so too is high power ride-through, making the use of embedded standby generation a real possibility for peak reserve and fast frequency response in utility networks.

The steadily increasing number of industrial facilities and data centres opting to generate their power requirements on-site depend on solutions that are stabilised when operating in island mode and can be seamlessly connected and disconnected from the utility supply.



Pillar offers a range of optimised solutions that are currently used for stable island generation and micro-grids.

Global Presence



Piller is a truly global organisation with its own subsidiaries and an extensive network of independent sales and service partners.

- Headquarters
- Subsidiaries
- Distributors / Representative Offices

What We Do

As the only company in the world manufacturing rotary and static UPS technologies with both kinetic energy storage and battery storage options, Piller has the unique flexibility to configure a vast range of power protection, switching and conversion products into solutions that match the precise requirements of clients.

Rotary UPS

Piller rotary UPS solutions are built around the renowned UNIBLOCK™ system, delivering outputs from 150kVA to 50MVA in both independent and diesel-coupled configurations. The UNIBLOCK UBT+ offers up to 97% efficiency and highest reliability with state-of-the-art technology, unique design and versatile options in either conventional UPS or DeRUPS™ configurations, whilst the equally reliable UBTD+ diesel-coupled unit produces the most space-efficient power supply possible.

Battery-Free Solutions

Piller is a market leader of kinetic energy storage ranging from 3.6MJ up to 60MJ+ per unit. The Piller POWERBRIDGE™ and Active Power CLEANSOURCE® storage systems have unique design techniques employed to provide high energy content with low losses. These energy stores can be configured singularly or in parallel with a variety of Piller UPS units to facilitate a wide range of power-time combinations.

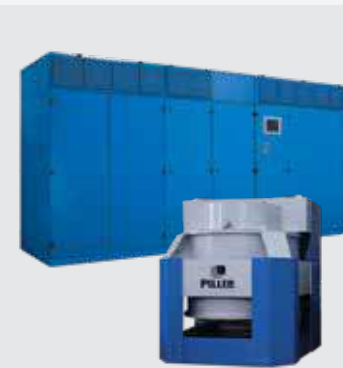
Piller's Critical Power Module (CPM) has been designed with the needs of the modern data centre in mind, allowing designers maximum creativity for modular solutions where the need for space-saving and minimised service intervention is paramount.

The Active Power CLEANSOURCE® UPS system exhibits efficiencies up to 98% and is available in both single module and unique modular systems.

Piller's latest innovation, the POWERBRIDGE™ PB60+, is the World's largest, commercially available kinetic energy store, delivering from 3MJ to over 60MJ of power and can even provide 1MW of ride-through power for over 60 seconds.

Static UPS

Piller's Static UPS solutions offer economical ways to ensure secure, continuous power supply. The APOSTAR Static UPS ranges from 3kVA to 400kVA, engineered to deliver greater real power protection to the most demanding applications.



Static Transfer Switches

Piller's APOTRANS Static Transfer Switch, from 25A up to 1600A, takes care of critical loads by providing a power source automatically whenever the preferred power source becomes deficient. This changeover occurs within a few milliseconds, assuring that the load will always be fed by the optimum power supply. The switches are available as standalone units or chassis based for integration directly into switchgear.

Ground Power

In the field of 400Hz frequency converters, Piller's APOJET AJS, the APOJET AJR and the APOJET AJT ground power equipment can be found in operation at major airports throughout the world. Piller has also supplied numerous 50/60Hz ground power systems for shipping and military applications.

INNOVATIVE CONFIGURATIONS

IP-Bus

The isolated-parallel (IP) system combines the advantages of isolated-redundant and parallel redundant UPS configurations, resulting in outstanding maintainability and fault tolerance characteristics where high operational efficiencies and a smaller footprint are paramount. By reducing redundant UPS units to a minimum and avoiding systems which run in the standby mode, the IP system is an excellent way to optimise redundancy, resilience and total ownership costs.

DeRUPS™

Unique to Piller, the DeRUPS™ application is an alternative to the conventional diesel UPS (DRUPS). A diesel generator combines with UPS either upstream or downstream and is integrated with the control system of a UNIBLOCK™ UBT+ Rotary UPS to build a powerful, engine-backed UPS solution acting as one.

DeRUPS™ allows complete flexibility in the critical power system; Installed UPS can be built out at a different rate to the standby generation, mixed voltages can be used within the same 'combined' UPS-generator system and maintainability is improved. Furthermore, batteries can be eliminated with confidence while still offering the many advantages arising from the physical separation of UPS and generator. Batteries can be employed in a DeRUPS™ system but their elimination from the configuration removes one of the greatest risks of failure in a UPS arrangement.

As a totally integrated system, the DeRUPS™ configuration optimises efficiency, maintainability and flexibility whilst using the benefits of kinetic energy storage to guarantee seamless operation between the generator and UPS.

The coveted Intertek ETL Mark and SATELLITE™ programme guarantees Piller UPS as the best in quality and safety.





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ROTARY UPS SYSTEMS

HYBRID ROTARY UPS SYSTEMS

DIESEL ROTARY UPS SYSTEMS

STATIC UPS SYSTEMS

CONTAINERISED UPS

STABILISERS

STATIC TRANSFER SWITCHES

KINETIC ENERGY STORAGE

AIRCRAFT GROUND POWER SYSTEMS

FREQUENCY CONVERTERS

NAVAL POWER SUPPLIES

SYSTEM INTEGRATION



A Langley Holdings Company



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