Piller UB-V Series

MISSION CRITICAL HIGH PERFORMANCE UPS

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Piller UB-V Series protects healthcare systems and are engineered to handle multi-MW loads

Meeting today's industrial and commercial power protection challenges

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Technological advances in virtually every field of human endeavour are bringing unprecedented demands for clean, uninterrupted power and with it, the need for ever more dependable, powerful and flexible UPS solutions.

In every industrial application, new technology deployment poses corresponding UPS challenges and issues associated with load changes, harmonic isolation, ambient conditions and power wastage are more potentially damaging than ever. Piller's UB-V Series, built on the renowned reliability of UNIBLOCK™, represents a highly flexible and reliable electrically coupled rotary UPS system.

Now with an entirely new control platform, this next generation UNIBLOCK™ provides up to 3.24 MW of UPS protection in one single module. Unlike all other UPS technologies, the UB-V Series can compensate for voltage dips of up to -50% without recourse to stored energy or diesel generators and offers many other benefits.

- Battery or flywheel
- Co-generation
- Operational efficiency for capital efficiency
- Bi-directional power flow
- Dynamic ride-through

> The UB-V Series provides up to 3.24 MW of UPS protection in one single, powerful, flexible and dependable module

Piller UB-V: packed with advanced features

> UB-V Series is easily configured to work with renewable and alternative sustainable energy sources

Piller UB-V Series is packed with many advanced features including an extended power range, new architecture, control platform, self-diagnostics and the addition of Piller's predictive maintenance service.

The UB-V Series is easily configured to work efficiently with renewable and alternative sustainable energy sources. On-line mode efficiency is typically higher than for other UPS systems across most of the load operating range. This is how it is able to reduce energy costs with absolutely no compromise to the level and quality of protection.

Bi-directional power flow allows operators to feed energy back to the grid, or to transfer power from one energy source to another within a micro-grid. UB-V eliminates the need for multiple-module paralleling to achieve higher power ratings, with the added benefits of better reliability and higher availability.

Piller's UB-V UPS with power ratings ranging from 1.0MW / 1.10MVA to 3.24MW / 3.60MVA and paralleling up to 100MW / 115MVA provides efficiency of up to 98% at 100% load and an unbeatable 97% at 50% load.

Piller UB-V's unique power conditioning capability, correcting surges and dips of up to 50% before the need for battery, flywheel or diesel gensets, ensures robust, cost-effective UPS solutions in high-powered manufacturing environments.

Piller's UB-V UPS ensures the highest possible availability without compromise.

- Ideal for industrial applications
- Wide input voltage tolerance (up to -50%)
- High power density – single unit 1000kVA to 3600kVA
- Isolation of harmonics between the load and the mains
- Exceptional efficiencies up to 98% (IEC 62040-3)
- Wide leading and lagging load power factor range
- Handling of load steps up to 100%

Why choose Piller UB-V electrically coupled rotary UPS?

- Frequency stabilisation during transients or load changes
- Suitable for export of embedded power
- High reliability, high mean time between failure (MTBF)
- Kinetic or battery energy storage
- Low and medium voltage versions offer flexibility for facility expansion
- Bi-directional power for flow of energy back to grid or transfer of energy sources within micro-grid
- Reactive power compensation
- Stabilisation of gas/diesel genset or gas turbines
- Integration with renewable and sustainable energy sources
- Elimination of multi-module paralleling delivers improved reliability and higher availability
- Reduced space and capital infrastructure costs
- Quality German engineering and manufacturing

High Reliability

Exceptional Efficiencies

High Power Density

Lower Maintenance

Wide Power Factor Range

Bi-directional Power Flow

Integration With Renewables

Reduced Space

Piller UB-V Series protect the manufacture of microchips and semiconductors against damaging power outages and voltage fluctuations

Suited to a wealth of industrial applications

The expert design and operational flexibility of the UB-V series means it is able to meet the specific challenges presented by each of a wide range of industrial and commercial sectors.

> Protection from sudden load changes, harmonic isolation, ambient conditions and power wastage – UB-V does this and more

Semiconductor production

Driven by communications, consumer electronics, and automotive applications, the global semi-conductor industry is set for exponential growth far into the future. In plants where highly sensitive automated equipment manufactures multi-core chips and integrated circuits in clean room environments, voltage surges or sags can cause entire batches to be scrapped, with potentially severe financial consequences.

- Semiconductor foundries
- Wafer fabricators
- Photomask design

Manufacturing

In the increasingly advanced world of industrial automation, power fluctuations or failures in systems that are designed never to stop can lead to disastrous losses, with man-hours wasted on cleaning or repairing assembly lines, removing wastage and resetting complex manufacturing processes. Piller UPS systems are configured to precise manufacturing specifications, ensuring continuous clean power to keep systems running in any power-adverse conditions.

- Pharmaceuticals
- Food & Beverage
- Oil & Gas
- Automotive
- Aluminium
- Cement
- Petrochemicals
- Textiles

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UB-V Series UPS protects the operations of many of the world’s most respected brands

Applications

Healthcare

Power disruptions in healthcare environments can mean the difference between life and death. Where outages and system malfunctions in operating theatres and scanning rooms can bring life-threatening downtime, clean, continuous power is of utmost importance. Piller’s UPS power conditioning solutions are built on unrivalled knowledge of the intricate challenges presented by the healthcare sector and their design, location, configuration and internal structure always have patient safety and protection of data and vital equipment as foremost considerations.

- Pharmaceuticals, vaccine manufacture
- Power protection for hospitals
- Critical health system data infrastructure

Food & Beverage

In just a few short years, artificial intelligence and smart manufacturing systems have revolutionised food and beverage processing and packaging, driven not only by the need for improved productivity but also increasingly strict food security requirements. For manufacturers, processors and packagers of chilled, frozen and convenience foods, bakeries and ‘just in time’ manufacturing systems, power protection is a more crucial consideration than it has ever been.

- Food processing
- Beverage production
- Dairy products
- Food packaging
- Food storage and distribution

Critical equipment failure, process costs and downtime caused by sudden power outages or voltage disturbances can lead to batch contamination as well as large-scale wastage. Piller’s continuously evolving UPS systems continue to protect the operations of many of the world’s most respected food and beverage brands.

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Airports & Aviation

In the highly sophisticated, technological infra-structures of modern airports, consistent, quality power is critical for efficient day-to-day operation. Any sudden loss of power could result in costly flight delays, cancellations and even loss of life. Which is why international airlines, airports and military establishments place their trust in Piller. Securing runway lighting and power protection within terminals constitutes the majority of Piller installations although other airport and aircraft systems are supported by the most reliable UPS available, providing ultimate peace of mind.

- Runway lighting
- Operations centre
- Tower
- Ground service
- Passenger terminal
- Catering
- Maintenance
- Cargo

> Designed to protect everything from runway lighting, terminals and control towers, to instrument landing systems and display boards

> UB-V Series adapts to power fluctuations and changing stabilisation demands

Applications

Energy

As a world leader in kinetic energy storage, Piller understands clean power. Its UPS systems underpin public utility and private power company generation and distribution infrastructures in countries around the world. In line with the energy industry's drive to adopt renewable power sources and greater distribution efficiency, Piller's flexible UB-V UPS technology is designed to efficiently manage power fluctuations and adapt to changing stabilisation requirements, making it suitable for ride-through in micro- and smart grid applications as well as co-generation power conditioning.

- Renewable energy generation
- Co-generation
- On-site power improvement
- Micro grids
- Smart grids

Oil & Gas

Operating in harsh and remote conditions, with power grids that are often unreliable, the oil and gas industry must overcome extreme challenges to continue providing energy to the world. In environments where success hinges on uninterrupted power supplies free from over voltages, drops, interruptions, harmonics and frequency deviations, Piller's robust and containerised, plug-and-play flexibility – operating in ambient temperatures up to 40°C – presents itself as the ideal UPS solution.

- Oil and gas field infrastructure
- Trans-continental gas pipelines

Containerised UPS

Piller can supply UB-V UPS as one containerised, high power-density unit. This transportable UPS system has all operational components integrated into a single container. It is ready for fast, temporary or permanent deployment in virtually any location and is fully operational on connection to mains, with no additional measures required for noise attenuation, ventilation or cabling – and no required outlays for plant-room construction.

- Small footprint for flexible deployment
- Harsh environments
- Dust-heavy environments such as cement factories
- Outside and location broadcasting
- Sporting events and venues

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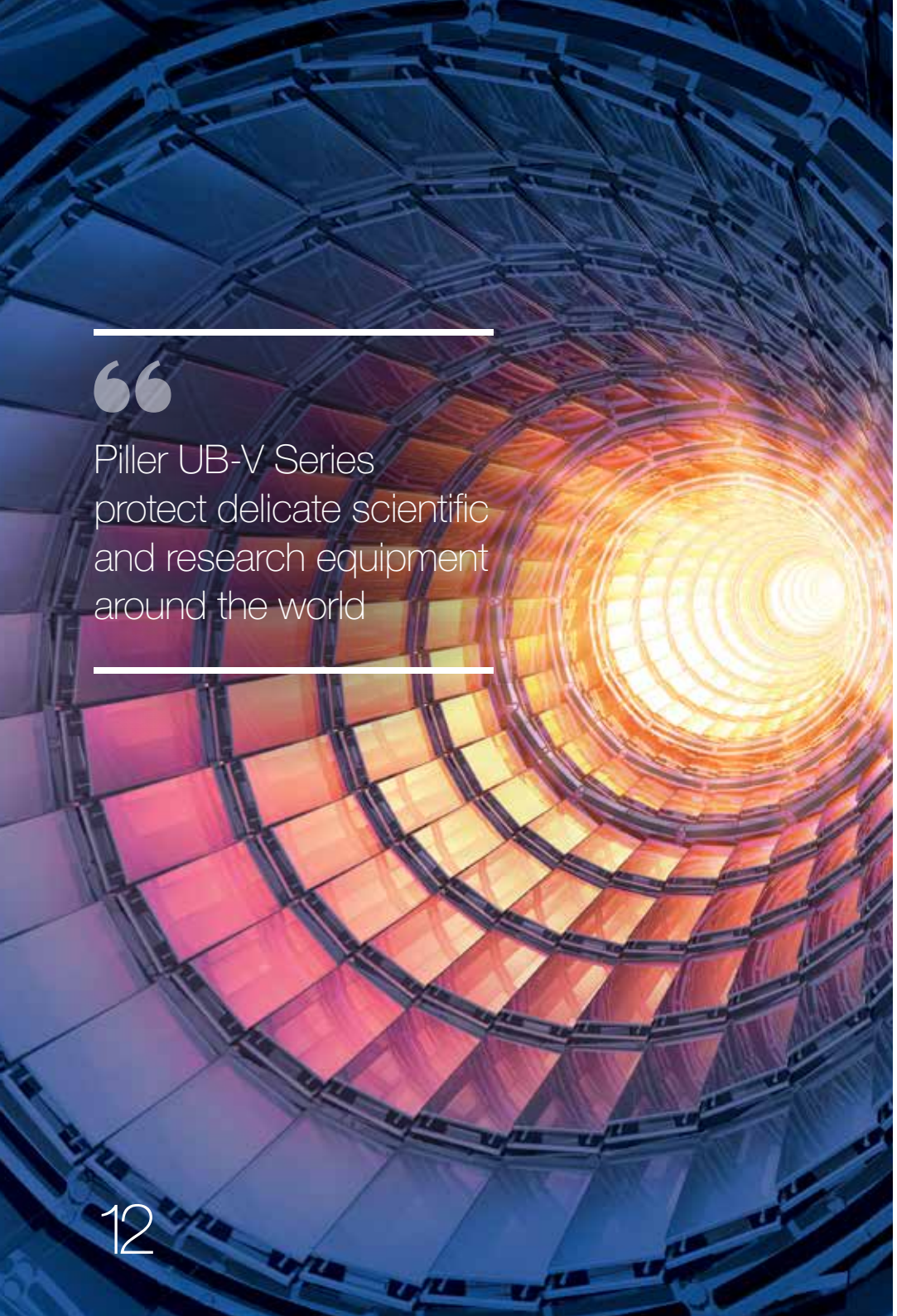
> A transportable UPS system designed for a wide array of operating environments



Piller UB-V Series protect delicate scientific and research equipment around the world

Applications

Research applications

Nowhere is the need for flexible, high reliability UPS systems more vital than in the world's highest-tech research installations. The successful operation of delicate scientific equipment and high-performance computing technology utilised by research institutions around the world relies on the clean, continuous, multi-megawatt power guaranteed by Piller systems.

- Synchrotron accelerators in Australia, Italy, Spain, India, China, Germany, USA and Sweden
- HPC (High Performance Computing)
- University research institutes
- Software development
- Space research (telescopes)

Broadcasting & communications

Powering TV studios, broadcast transmitters and vital outside sports broadcast equipment requires the highest level of power protection. For content production, management, transport or distribution, large national and commercial broadcasters around the world rely on Piller technology.

In the Telecommunications sector, mobile and fixed telephony service providers use Piller technology to help power their global networks. From inter-connected backbone networks across entire continents to end point delivery infrastructure for the newest 5G networks, Piller is a trusted partner.

- Television and radio stations
- Telecoms carriers
- Mobile network operators
- Cable network operators

Light-touch maintenance

The Piller Unity Service Pack is a brand-new services concept which provides up to 5 years of continuous UPS operation with full insight into machine behaviour and performance – without the need to take the UPS offline.

Piller Unity Service Pack – a new concept in UPS support

Avoiding shutdowns for maintenance is only possible with highest reliability systems, such as UB-V. The Unity Service Pack uses a combination of advanced UB-V UPS product features such as all-new electronics, self-diagnostics and monitoring with secure communications and cloud data storage – alongside local support office engineering expertise.

Designed directly in response to customer needs, changing market trends and requirements for the future proofing of industrial operations, the Unity Service Pack is Piller's commitment to provide customers with the assurance of years of continuous UPS uptime.

- Pillerlink™ connects UPS components
- Settings, configurations & operational data captured and stored on internal database
- Self-diagnostics enable predictive maintenance
- Predictive maintenance service
- Years of operation with minimal on-site maintenance visits
- In controlled environments system shut-downs can be further reduced to around once every 5 years
- No capacitors or fans means up to 5x fewer failures compared to static UPS

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> Advanced features and self-diagnostics for years of continuous uptime

Piller business and technology pedigree

> Global coverage with over 300 service personnel across more than 50 countries

Piller was founded in Hamburg, Germany in 1909 by engineer Anton Piller.

Employing around 1000 people worldwide, Piller is headquartered in Osterode, near Hanover, Germany, with subsidiaries across Europe, America, Asia and Australia.

Piller occupies a unique position, being the only company to produce both types of electrically coupled UPS technologies and with kinetic energy storage or battery options. The company also manufactures aircraft ground power units, 50/60Hz frequency converters, static transfer switches and specialist marine generators. With more than 7000 kinetic energy storage devices and over 6000 high power UPS units installed, Piller has more than 300 service personnel taking care of clients across more than 50 countries.

The Piller group is a wholly owned subsidiary of the multi-disciplined global UK engineering and industrial group, Langley Holdings Plc. In 2016, Piller acquired Active Power Inc., the flywheel energy storage specialist.

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Continuous process operations such as food manufacturing benefit from the protection offered by the UB-V Series

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ELECTRICALLY COUPLED ROTARY UPS

CONTAINERISED UPS

STABILISERS

STATIC TRANSFER SWITCHES

KINETIC ENERGY STORAGE

AIRCRAFT GROUND POWER SYSTEMS

FREQUENCY CONVERTERS

NAVAL POWER SUPPLIES

SYSTEM INTEGRATION

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