

SOLUTIONS

airports & aviation

commercial and military



Nothing protects quite like Piller

Airports and Aviation Technology



'with Piller there is the ultimate peace of mind, knowing that your critical aircraft and airport electrical and electronic systems are supported by the most reliable power sources available'

Since its formation by Anton Piller in 1909, Piller has been synonymous with electrical machines of the highest quality and reliability. Today, Piller Power Systems, from its headquarters in Germany and via its regional offices, representatives and distributors worldwide, continues that tradition into the 21st century.

Piller Power Systems is a wholly owned subsidiary of the multi-disciplined global UK engineering group, Langley Holdings plc. (www.langleyholdings.com)



Piller headquarters, Osterode, Germany



The efficient day-to-day operation of a modern airport totally relies upon the continuous availability of quality power. Whether it is 400Hz or 28VDC power for aircraft, runway lighting, terminals or maintenance hangars, instrument landing systems and electronic display boards, a sudden loss of power could cause untold damage to the workings of an airport and worse still could even affect human life itself. Which is why many of the world's airlines, airports and military establishments place their trust in Piller power protection systems guaranteeing the highest reliability possible.

It may only be a matter of seconds between power going down and standby generators kicking in - but that short delay could have catastrophic results. As one of the world's leading UPS (Uninterruptible Power Supply) and frequency conversion suppliers, Piller understands the need to maintain

power at all times, especially in times of utility outages or other crisis. With almost 100 years of experience, the Piller name is synonymous with utmost quality and reliability when it comes to protecting your operations, ensuring that power is always available to your aircraft at civil and military installations. Every organisation hopes they never have to call upon their UPS systems - but with Piller there is the ultimate peace of mind, knowing that your critical aircraft and airport electrical and electronic systems are supported by the most reliable power sources available. Likewise, the 400Hz power delivered to the aircraft is equally critical to safety and on-time take-offs.

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Piller Power Systems – Features



Piller ground support for passenger boarding bridge



360KVA rotary converter for Boeing (shown with open covers)



Piller UPS systems and ground support equipment are designed and built to the highest quality by the best people in the business. **Piller.**

Microprocessor control of all functions



Apojet 'T' System

Features

- Microprocessor control with voltage regulation and current limiting.
- Compact low noise construction
- Low output distortion factor
- Load dependent, phase-to-phase automatic compensation of voltage losses due to long cables using the unique patented I-Boost® system.
- Short circuit and overload protection
- User friendly mimic diagram with liquid crystal display
- Event recorder for 1200 events + memory.
- Input output data showing currents, voltages and loads
- Ground power equipment standard with E&F protection, 42V safety relay.
- EMI/RFI filtering standard on all units.
- Low harmonic distortion to utility power <5%.
- Constant output voltage for non-linear loads.
- Interface for remote control and centralised monitoring option.
- Plug head temperature monitoring on all ground power units, available as an option.



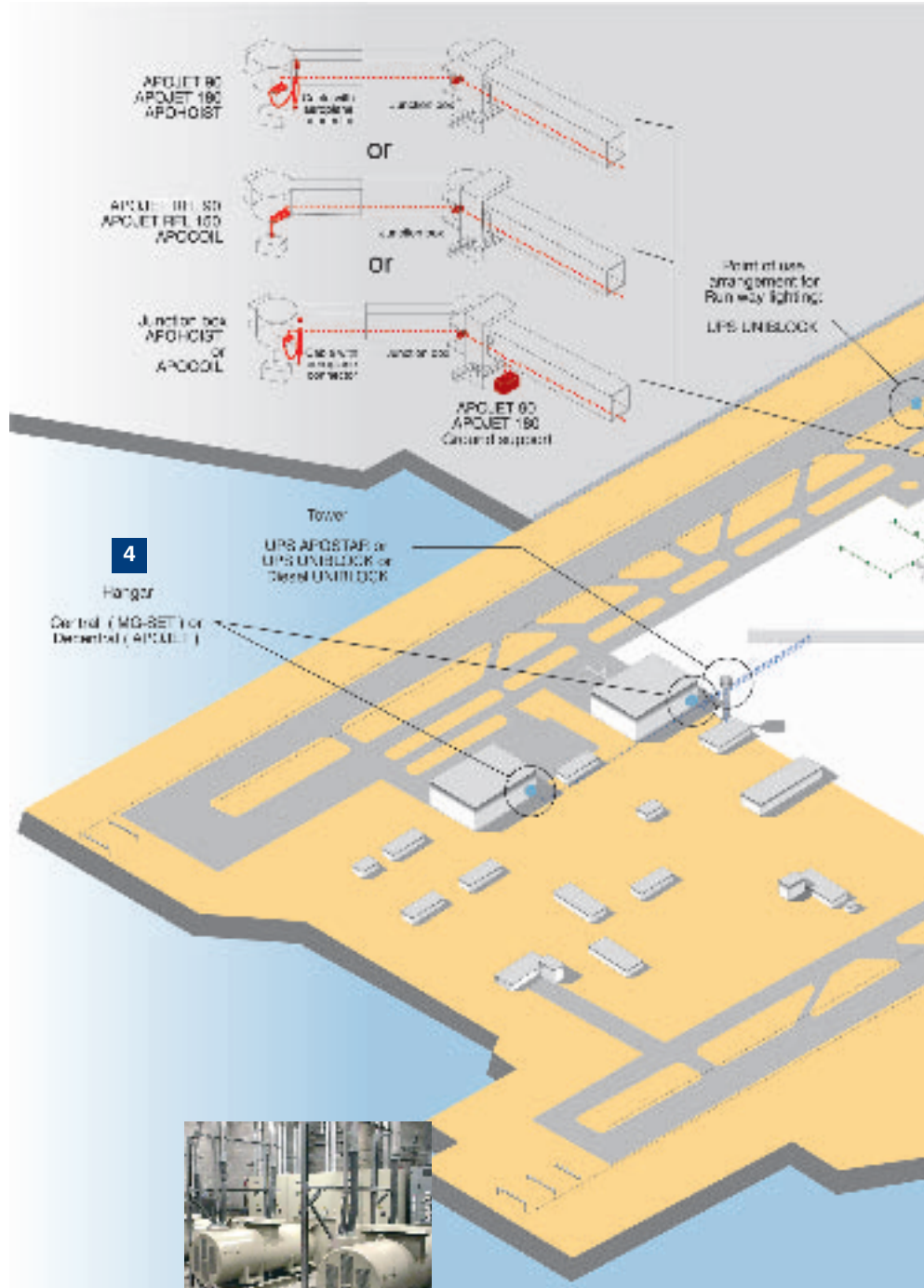
Piller equipment at AWACS bases worldwide

The Piller solution...

Piller provides its clients with a complete line of Rotary and Static Frequency Converters and UPS systems as well as Distribution Panels, Gate Boxes and accessory equipment such as cable hoists and retrievers.

Many varieties and configurations of special problem solving systems are also available, to ensure clients get the best technical solution and equipment for their particular application. Piller is dedicated to client satisfaction by providing total support during the design stage, installation and especially after commissioning. Piller has a team of many trained technicians strategically located around the world to support its many products.

The diagram illustrates typical applications using Piller equipment to protect critical airport systems and provide quality power to aircraft at the boarding gates and maintenance hangars. Our solutions the world over include:-



Ground power equipment, Frankfurt Airport, Germany



Piller central systems, SeaTac Airport, USA



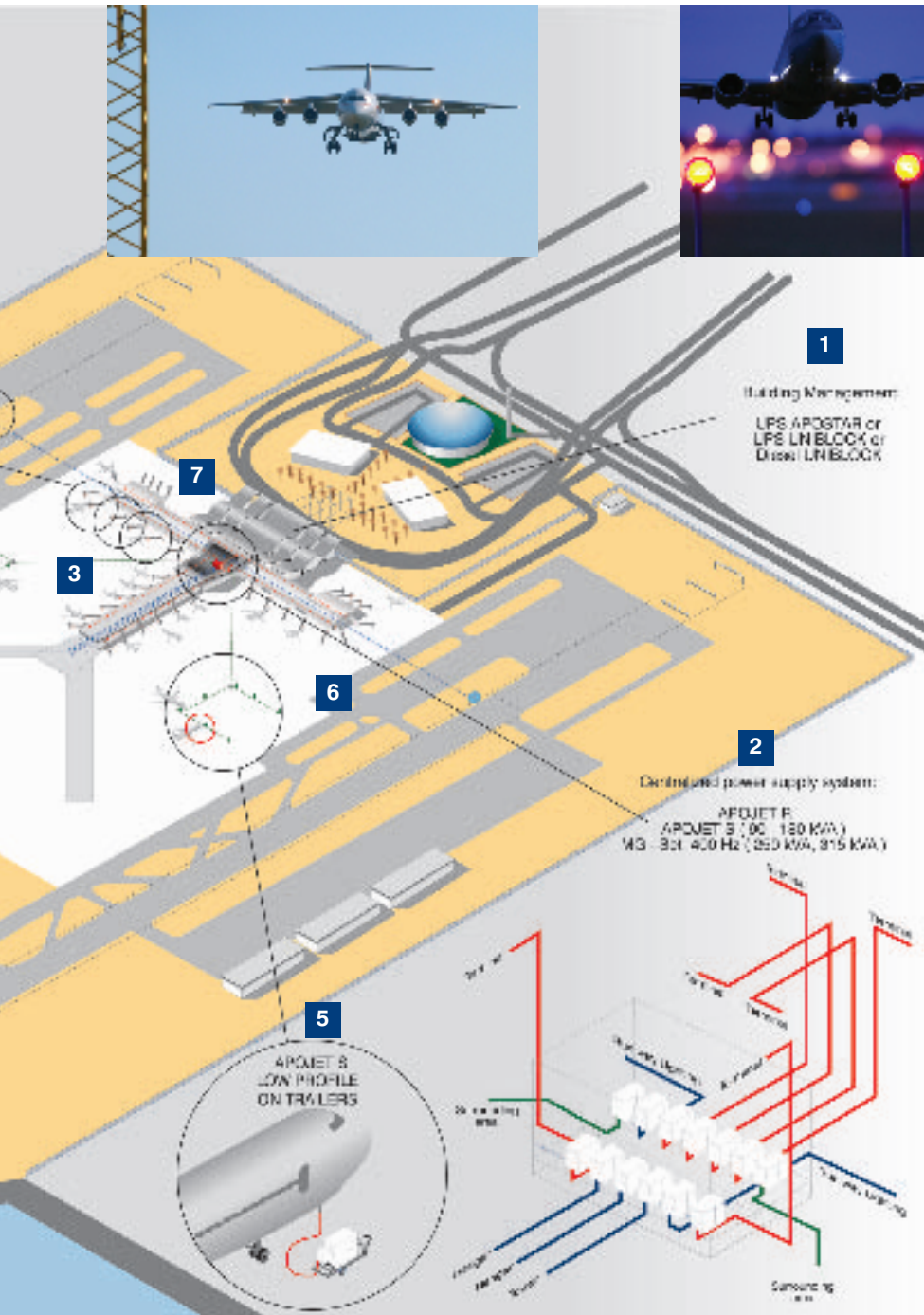
4 Apojet units, Malpensa Airport, Italy



Diesel UNIBLOCK Dynamic UPS systems, Orly Airport, France

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critical to safety and on-time takeoff



1 Orly Airport France - Two Piller Diesel Uniblock (UB-TD) dynamic UPS systems were installed to protect runway lighting and tracking systems.

2 Piller central systems are installed at several international airports - the latest was at Seattle's SeaTac Airport where Piller installed three 315KVA auto load sharing and paralleled Rotary Apojets with distribution switchgear and LDC gate boxes.

3 When Continental Airlines wanted to upgrade their Houston terminal, they selected Piller's LVR (line voltage regulators) to provide constant voltage without having to replace the existing cables from the central power system.

4 Piller equipment is supporting assembly and test facilities for the Airbus A380 at Hamburg Germany and the Airbus A340 at Toulouse France.

5 Piller builds low profile units in 28VDC as well as 20 to 315KVA units that can be at the point of use for individual aircraft.

6 Air Force One, the Airborne Command Post and all US and NATO AWACS aircraft are supported with Piller's multiple output 315KVA rotary units.

7 A Piller central system installed at Chek Lap Kok Airport in Hong Kong utilises 16 static 315KVA units in a ring system at 960v with step down gate boxes and cable retrievers. In addition 35 ramp parking spots are equipped with 90KVA APOJET S units.



Piller Gate Box



Piller rotary converters protect the power supply to Air Force One

The products...



Model/Type	Cabinet Styles	KVA ratings
	Static	
AJS 400Hz	Small Compact	20, 40, 60, 90
	Standard Compact	90, 120, 150, 180
	Flat Pack	90, 120, 150, 180,
	Central*	90, 120, 150, 180,
		*All units can be paralleled and load share
AJS 400Hz + 28VDC Combi	Standard Cabinet	60 or 90KVA 400Hz = 600A/2000 peak 28VDC
AJS 28VDC	Small Compact	400A/1600 peak, 600A/2000 peak
	Rotary	
AJR 400Hz	Standard Compact	20, 40, 60, 90, 120, 150
	Central*	150, 250, 315
	Military (AWACS)	315 with four 90KVA outputs
	Compact	315, 360 with four 90KVA outputs
		*All units can be paralleled and load share
	Automatic Voltage Regulators	
AJT 400Hz	Gate Boxes	90, 120, 150, 180 with Step-down transformer
	Low Profile Flight Line	90, 120, 150, 180 with Step-down transformer
	Distribution systems	90KVA modules two per cabinet
	Auxiliary equipment	
APOCOIL	Bridge or Ground	80 foot Single jacketed cable storage
APOHOIST	Bridge	Dual sling single or banded cable storage
Crocodile	Ground use	Cable protection with stand
Centipede	Ground	Full caster skates for moving heavy cable
Distribution	Panels	Multi outputs all KVA ratings
	Dynamic UPS	
UNIBLOCK R	Standard	150, 220, 330, 420, 500, 625, 800, 1100
UNIBLOCK TD	Standard	330, 420, 500, 625, 800, 1100, 1670
		All units can be paralleled and load share
Other units and equipment available on request		

Unrivalled after sales service

'Piller upholds the very best standards of customer care'



Across the globe the Piller network is committed to delivering world-class service resources and Piller clients can always be confident that a highly qualified team of service and support technicians are there to uphold the very best standards of customer care. Services range from installation and commissioning to predictive analysis,

emergency calls, spare parts, planned maintenance and training. A direct link to Piller engineers and technicians through Piller's advanced digital control technology is available on every unit (rotary and static) offering 24/7 Remote Monitoring and Support with total diagnostics and 1,200 event memory.

- Maintenance
- Battery maintenance
- Technical support
- Operator training
- 24 hour call-out
- Temporary UPS systems
- Comprehensive spares
- Remote monitoring
- Worldwide service organisation
- Over 40 Piller service centres across the US and Canada

References

Airports

Airport Authority of India
Airport Authority of Thailand
Casablanca Airport, Morocco
Chek Lap Kok Airport Hong Kong
Charles de Gaulle & Orly Airports, France
Damascus Airport, Syria
Dubai Airport, UAE
All Major Airports, Germany
Heathrow & Manchester Airports, UK
Johannesburg Int'l Airport, RSA
Kuala Lumpur Int'l Airport, Malaysia
Madrid Airport, Spain
Milan Airport, Italy
Prague Airport, Czech Republic
Schiphol Airport, Netherlands
Seattle Airport, USA
Stockholm Airport, Sweden
Warsaw Airport, Poland

Aviation (Commercial)

Airbus
British Airways
Boeing
Cathy Pacific Airways
Continental Airlines
Delta Airlines
Eurocopter
Hapag Lloyd
Indian Airlines Ltd
Lockheed Martin Corp.
Lufthansa
Quantas Airlines
SAS Airlines
United Airlines
Xiamen Airlines

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Eurocopter
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French Navy
MoD Cyprus, Germany, Singapore, Turkey, UK
Royal Air Force UK
US Navy
US Marine Corps
US Air Force
US Army - Patriot Missile Training School



Piller Power Systems GmbH

Abgunst 24
37520 Osterode,
Germany

T +49 (0) 5522 311 0
F +49 (0) 5522 311 414
E info@piller.com

DYNAMIC UPS SYSTEMS
STATIC UPS SYSTEMS
STATIC TRANSFER SWITCHES
KINETIC ENERGY STORAGE
AIRCRAFT GROUND POWER SYSTEMS
FREQUENCY CONVERTERS
NAVAL POWER SUPPLIES
SYSTEM INTEGRATION

Piller Inc.

45 Turner Road, Middletown
New York 10941-2047
USA

T +1 800 597 6937
F +1 845 692 0295
E usmail@piller.com

Piller (UK) Limited

91 Chesterton Lane, Cirencester
Gloucestershire GL7 1YE
England, UK

T +44 (0)1285 657 721
F +44 (0)1285 654 823
E ukmail@piller.com

Piller (France) SAS

107-111 Av, Georges Clémenceau
B.P. 908, F-92009 Nanterre Cedex
France

T +33 (0) 1 47 21 22 55
F +33 (0) 1 47 24 05 15
E francemail@piller.com

Piller (Australia) Pty. Ltd.

Unit 2/3 Salisbury Road
Castle Hill, NSW 2154
Sydney, Australia

T +61 2 9894 1888
F +61 2 9894 2333
E australiamail@piller.com

Piller (Iberica) S.I.

Paseo de la Habana, 202 Bis
E-28036 Madrid
Spain

T +34 91 345 86 58
F +34 91 350 16 33
E ibericamail@piller.com

Piller (Italia) S.r.l.

Piazza Pertini n. 19
I-20067 Paullo, Milan
Italy

T +39 02 9063 3780
F +39 02 9063 3788
E italiamail@piller.com

Representatives and Distributors in:

ARGENTINA . AUSTRIA . BELGIUM . CANADA . CHILE . CHINA . DENMARK
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PPS Sol-Airports 0001/02/06/1

Printed in England



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Power Systems

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