



Series 2500+

The ultimate ground power unit



400Hz Mobile 90kVA Converter



400Hz Converter 2500+C

Airports are an integral part of national and global transport infrastructure. The aviation industry needs to plan for its future development in this context. Key issues facing the sector include improving turnaround times, reducing emissions, operational expenditures, and enhancing safety.

With the Dabico 400 Hz Ground Power Units Series 2500+, we offer to the industry the ultimate 400Hz solid state frequency converter integrating the highest electrical and communication performances.



Going beyond the horizon

with Dabico Series 2500+ GPU

The 2500+ meets the needs of today's and tomorrow's demanding aviation industry.

- » NGA Ready: New Generation Aircraft (A380, B787, A350), 5 G, max 400% overload.
- » 90 kW (PF 0,8 – 1): continuous load at +56°C ambient temperature.
- » 28 VDC: Integrated transformer unit for regional aircraft and helicopters power supply.

Enhanced with Dabico Skyway, Dabico Series 2500+ combines increased reliability, optimizes ground handling operations and maximizes profitability.

- » At the forefront of the energy savings with > 94 % overall efficiency.
- » Dabico Skyway Interface: visualization of diagnostics, connections, and operations remotely.
- » Interconnected digital technologies with data collection for preventive maintenance for a reduced OPEX.
- » Durable design for maximizing gate utilization and Return Of Investment.

Series 2500+ is offered with the several configurations:

- » 2500+: 400 Hz power
- » 2500+C: 400 Hz Power
- » 2500+ DC Combi: 400 Hz + 28 VDC Power
- » 2500+ PowerPack I-Connect: 400 Hz power with an integrated 400 Hz coiler

Clean, reliable, and sustainable 400Hz power.



Series 2500+C
Verical ground mounted



Series 2500+
PowerPack I-Connect



Dabico
Skyway Interface



Clean, reliable, sustainable, and secured 400 Hz electricity delivery

Dabico Series 2500+ GPU offers with its pulse-width modulation PWM proven technology an advanced 400 Hz power solution ensuring the unique 400 Hz power will be delivered reliably without unforeseen changes in quality.

Designed for all ambient conditions and aircraft types including New Generation

Aircraft (NGA), the Series 2500+ delivers 90 kW PF 0,8 – 1 continuous at +56 °C and can go up to 400% Overload.

When configured with Series 2500+ DC Combi unit, we offer an integrated solution for powering both commercial and regional aircraft with either 400 Hz or 28 VDC.

> 94%



Allocating the right investment for reducing operating expenses and maximizing the revenue streams

We value the importance of providing a sustainable solution where the lower energy associated with a reduced consumption (overall efficiency of > 94% and PF 1 input rectifier to reduce the current stress to the

mains), maintenance and downtime bring considerable savings and an unprecedented reduced Total Cost of Ownership to the industry.

Dabico, world's leading

Ground Support System provider



**Series 2500+
Vertical ground mounted**



**Series 2500+ DC Combi
Horizontal PBB mounted**



**Series 2500+
PowerPack I-Connect**



400 Hz Centralized MGs



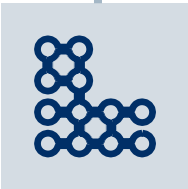
5G ready: Global design for Global clients in a Global market

Dabico 2500+ solid state frequency converter can service all types of aircraft (up to A380, including B787 & A350) under the most severe operating conditions (-40 °C to +56 °C) with any worldwide voltage and frequency input (45–65 Hz and 320–580 V). Continuous 90 kVA and dual output.

The unit complies to the highest industry standards of which DFS-400, MIL-STD-704F & exceeds the ISO-6858. This is 3rd party certified.

ONE technology providing ALL solutions to ALL types of airport designs and configurations.

**90 kW
PF1**



Technology integration

Dabico Series 2500+ has been engineered and pre-programmed for all types of 400 Hz power distribution systems such as 400 Hz coilers and pit systems.

The embedded functions in the system logic enable a fast site deployment and wiring for trouble free 400 Hz system start-up.

The world's largest in-house 400 Hz versatile system offer



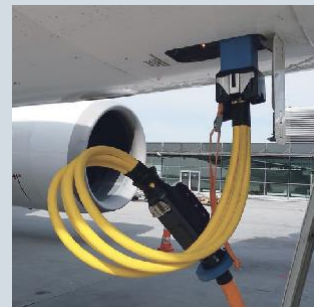
400 Hz Pop-up Pit



400 Hz Coiler



400 Hz Power Converter Caddy



400 Hz Aircraft Plugs

Technical Information – 2500+ Series

Input Power	
Voltage range:	3 x 400–480V ± 15 %
Frequency:	50/60 Hz ± 5 Hz
Rectification:	Active PFC
Rated current:	115A @ 480 VAC And 90 kW (1.0PF) 138A @ 400 VAC And 90kW (1.0PF) 92A @ 480 VAC And 90kVA (0.8PF) 111A @ 400VAC And 90kVA (0.8PF)
Line current distortion:	<2% @ full load*
Power factor:	1 @ any load*
Inrush current:	None

Output Power 400Hz	
Rated power:	90 kVA / 90 kW
Voltage:	3 x 115/200 V
Frequency:	400 Hz ± 0.01 %
Power factor:	0.5 lagging to 0.8 leading*
Voltage regulation:	<0.5% for balanced load & up to 30% unbalanced load
Voltage recovery:	U <2% and rec. time <10 ms at 100% load* change
Total harmonic content:	<2% at linear load (typ. 1.5%) <2% at non linear load according to ISO1540
Crest factor:	1.414 ± 3%
Voltage modulation:	<0,5 %
Phase angle symmetry:	120° ± 1° for balanced load 120° ± 2° for 30% unbal. load
Voltage drop compensation:	>20 V phase to neutral

Output Power 28 VDC	
Voltage:	28 VDC
Current:	400-600-800A; selectable
Start up over current in compliance with ISO 6858 and MIL-704F	
Voltage regulation:	<0.5 %
Voltage ripple:	<1.5 %
Voltage transient recovery:	In compliance with ISO 6858 and MIL-704F

Efficiency	
Overall efficiency:	>94 % 90kVA at 0.8 PF

Overload Capability	
125% for 600sec	300% for 10sec
150% for 90sec	400% for 1 sec
200% for 60sec	

Overload Capability 28VDC	
750 A for 600 seconds	2400 A for 10 seconds
1500 A for 90 seconds	3000 A for 2 seconds
1800A for 20 seconds	

Environmental	
Operating temperature:	-40°C to +56°C for all load conditions
Relative humidity:	10 to 100% non-condensing
Noise level:	<65 dB(A)@1m

Norms and Standards	
2006/42/EC Machinery Directive	
2014/30/EU EMC	
MIL-STD-704F:	Aircraft Electrical Power Characteristics
DFS-400:	400Hz aircraft ground power
ISO-6858:	Aircraft Ground Power Supplies
ATA-101:	Ground equipment technical data
BS 2G 219:	General Requirements for Ground Support Equipment
EN-62040 1.1:	Uninterruptible power systems (UPS) —Part 1-1: General and safety requirements for UPS used in operator access areas.
IEEE STD 127:	Aerospace Equipment and Frequency Rating
ISO-461:	Connectors for Ground Electrical Supplies
ISO-1540:	Aerospace. Characteristics of Aircraft Electrical Systems.
SAE-ARP-5015:	Ground Equipment 400 Hz Ground Power Performance Requirements
EN-1915-1:	Aircraft ground support equipment. General requirements. Basic safety requirements.
EN-12312-20:	Aircraft ground support equipment. Specific Requirements. Part 20. Ground Power Equipment.
IEC 60529	
Third party certificates available for:	
MIL STD 704	
DFS 400	
ISO 6856	
The unit is UL listed (2500+) and CE compliant (2500+c)	

Others:	
MIL-S-19500 – IEC-60146 – ST-20-1972(R-1978) – IEC-60310	
EN-50124 EN-61000 – IEC-60529 – BS-EN-61558 – IEEE STD 500 – UL508A	

Protection	
Protection class: IP55	Control voltage error
No break power transfer	Short circuit at output
Over/under voltage at in/output	Neutral voltage supervision
Input/output overload	
Internal high temperature	

Miscellaneous	
MTTR:	max. 20 minutes
Colour:	RAL 9010 (standard)

Weight	
Fixed & PBB units:	570 kg / 1,257 lbs
Mobile units:	770 kg / 1,698 lbs
2500+ DC Combi:	762 kg / 1,680 lbs
2500+ PowerPack:	940 kg / 1,985 lbs

Warranty	
Standard 12 months warranty	

*All characteristics are valid for an altitude up to 3000m (10000 ft)

Optional Features

- » Dual 400 Hz output
- » Terminal extension for output distribution
- » Remote HMI with Dabico Skyway Interface
- » Cover for instrumentation
- » Military interlock
- » GPU user enable
- » Energy Management
- » Leakage current supervision
- » BMS integration
- » Towable/mobile trailer/cable kit
- » 28 VDC TRU (Combi)
- » Beacon indicator
- » Low usage power saving mode

Dabico Skyway

Dabico Skyway is a modern and easy system visualization which has been developed with the aim of offering extensive connectivity, easy-to-read displays, and remote connectivity via Ethernet/Internet Remote Connectivity.

We bring you the information in real time wherever you are and on various interfaces (Smartphones, Tablets...) for ensuring an instant system information.

The 5.7" TFT Graphical Touch Screen will allow you to communicate with your 2500+ 400 Hz Solid State Frequency Converter and offers our customers extensive, built-in, time-saving features that help customers develop fast and consistent GSE in operation. Extend the system to other Dabico GSE (i.e. Dabico PCA) and you will complete the winning combination with a unique Gate Vision System.

Installation Data

Dabico Series	Continuous Rating (kVA) / (kW) / (kW 28VDC)	Input Amps with full load (90kVA) at the output 0.8 PF / 1.0 PF		Dimensions W x D x H		Installed Weight		
		@ 400V input	@ 480V input	(inches)	(millimeters)	(lbs)	(kg)	
2500+	90/90	138A @ 400 VAC and 90 kW (1.0PF) 111A @ 400 VAC and 90 kVA (0.8PF)	115A @ 480 VAC and 90 kW (1.0PF) 92A @ 480 VAC and 90 kVA (0.8PF)	48 x 30 x 30	1220 x 760 x 760	1257	570	
2500+C					950 x 870 x 950		520	
2500+ Power-Pack I-Connect				71.2 x 50.9 x 40.2	1809 x 1292 x 1022	1985	940	
2500+ DC Combi (90kVA/28VDC)	90/90/17				73 x 30 x 30	1854 x 760 x 760	1680	762
2500+ C mobile	90/90				86.7 x 58.1 x 50.9	2201 x 1475 x 1294	1698	770

We are present in:

- » Australia
- » China
- » Denmark
- » France
- » Germany
- » Hong Kong
- » India
- » Italy
- » The Netherlands
- » Singapore
- » Spain
- » Sweden
- » Turkey
- » UAE
- » UK
- » USA

