



Series 2500+
The Ultimate Ground Power Unit

GENERAL INFORMATION

Cavotec INET's Series 2500+ pulse-width modulated Static Frequency Converter is a 400Hz technology platform for supporting all types of aircraft power requirements and operations methods. The advanced design ensures airports can use it for all types of gate designs: PBB mounted, ground mounted, mobile, horizontally or vertically mounted.

Main design features:

- 500% overload
- 90KW power factor 1 continuous load at 60°C ambient as standard feature
- 3G Ready: Global design for Global clients in a Global market
- NGA Ready: New Generation Aircraft (A380, A350 & B787)
- 50/60Hz input
- Dual output
- Cavotec Skyway Interface: Expanding horizons & communications
- Provisioned interface (BMS, Gate Operator Terminal...)

Power conversion is all about performance. Cavotec Series 2500+ guarantees a clean 400Hz power for the aircraft and ensures the APU can be switched off.

Equipped with the unique Cavotec Skyway Interface, Cavotec Series 2500+ provides unprecedented communication solutions for airports and ground handling companies.



3G and NGA Ready

STANDARD FEATURES

- 500% overload and short-circuit capability
- 90KW power factor 1 continuous load at 60°C ambient as standard feature
- Cavotec Skyway Interface
- Network and Wi-Fi ready
- MTTR – 20min
- < 65dB (A) @ 1m
- Operating Temperature -40°C to +60°C
- 2% max THD in the output voltage
- 1.0 input power factor
- > 96% overall efficiency
- Lockable door
- Meets MIL STD 704F, DFS 400



Cavotec Skyway Interface

AVAILABLE STANDARD OPTIONS

- 28 VDC, 600 A output
- Additional output contactor
- Terminal extension for output distribution
- Remote HMI with Cavotec Skyway Interface
- Cover for instrumentation
- TCP/IP Modbus ready
- Military interlock
- GPU user enable
- Energy Management
- Leakage current supervision
- 90% switch interlock
- Cavotec Skyway service tool
- BMS integration
- Apron mounting kit
- Portable trailer/cable kit
- Installation, startup, training



Cavotec 2500+ Series

TECHNICAL INFORMATION - 2500+ SERIES

Input Power

Voltage range:	3 x 400-480V \pm 15%
Frequency:	50/60 Hz \pm 5 Hz
Rectification:	Active PFC
Rated current:	90A / 113A at 480V and load PF 1.0 / 0.8
Rated current:	108A / 135A at 400V and load PF 1.0 / 0.8
Line current distortion:	<2% @ full load*
Power factor:	1 @ any load*
Inrush current:	None

Output Power

Rated Power:	90kVA/90kW
Voltage:	3 x 115/200 V
Frequency:	400 Hz \pm 0.001 Hz
Power factor:	0.5 lagging to 0.8 leading*
Voltage regulation:	<0.5% for balanced load & up to 40% 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 \pm 3%
Voltage modulation:	<1.0%
Phase angle symmetry:	120° \pm 1° for balanced load 120° \pm 2° for 30% unbal. load
Voltage Drop Compensation:	>20V phase to neutral
Efficiency:	
Overall efficiency:	>96% at 35-90 kVA load PF 0.8 >94% at 25 kVA load PF 0.8
Stand by losses:	<50W
No load losses:	<1.5 kW

Overload Capacity:	125% for 600 seconds 150% for 90 seconds 250% for 30 seconds 300% for 15 seconds 400% for 3 seconds 500% for 1.5 seconds* Follows I2t curve
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Environmental:

Operating temperature:	-40°C to +60°C for all load conditions
Relative humidity:	10 to 100%
Noise level:	<65 dB(A)@1m

Protection:

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

Miscellaneous:

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

Weight:

Fixed & PBB units: 570 kg
Mobile units: 770 kg

Dimensions:

48x30x30 in /
1220x760x760 mm

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

INSTALLATION DATA

Cavotec Series	Continuous Rating (kVA) / (kW)	Input Amps with full load (90 kVA) 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	108 A / 135 A	90 A / 113 A	48 x 30 x 30	1220 x 760 x 760	1257	570

MODEL NUMBERS

Input Power	Output	Continuous Rating (kVA) / (kW)	Series 2500+ model number			
			Bridge mounted (Horizontal)	Ground mounted (Vertical)	Ground mounted (Horizontal)	Mobile (Horizontal)
50Hz	Single	90/90	509S-HB	509S-VG	509S-HG	509S-HM
	Dual*	90/90	509D-HB	509D-VG	509D-HG	509D-HM
60Hz	Single	90/90	609S-HB	609S-VG	609S-HG	609S-HM
	Dual*	90/90	609D-HB	609D-VG	609D-HG	609D-HM

* For various output voltage applications



Series 2500+
Horizontal position for PBB



Series 2500+
Vertical ground mounted



PowerPack I-Connect

For further information please visit www.cavotec.com

Disclaimer: specifications are subject to change without notice