



# JetPower® III Plus CX 400 Hz/270 VDC Combo Ground Power System

JBT - MISSION CAPABLE MISSION READY



# JetPower® III Plus CX 400 Hz/270 VDC Combo Technical Specifications

## Design Elements

As one of the world's leading suppliers of aircraft power products for the past years, JBT® offers a combined unit for powering your military aircraft; JetPower® III Plus CX 400 Hz/270 VDC combination system for hangar or fixed location applications. This combination unit has a 90 kVA 400 Hz and a 72 kW 270 VDC output. The JetPower® III Plus CX 400 Hz/270 VDC combination system incorporates the reliability and diagnostic capabilities of other JetPower® products. A 12-step input is standard. This combination ground power system is capable of servicing military aircraft that require 400 Hz or 270 VDC from a single unit. Today's ground power needs are demanding, therefore the JetPower® III Plus CX 400 Hz/270 VDC combination unit withstands extreme outdoor and indoor environments.

## Maximum Input Current

Input Volts	90 kVA/72 kW
380 V.	126 Amps
400 V.	120 Amps
415 V.	116 Amps
480 V.	100 Amps

## Dimensions

Width	36 in (914 mm)
Height	73 in (1854 mm)
Depth	32 in (813 mm)

## Weight (approximate)

2,000 lbs.  
(907 kg)

## Housing

NEMA 3R (IP23) steel enclosure painted with blue polyurethane paint and epoxy primer. Custom colors are available.

## Environmental Conditions

Capable of normal operation from -40°C to +55°C (-40°F to +131°F).

## Noise

Less than 70 dBA (1.5 m distance)

## Maintenance

No preventative maintenance required. Mean Time To Repair (MTTR) 30 minutes at module level. Reduced part count and increased circuit and component protection enhance reliability.

## Output Voltage, Frequency, and Phase

### 400 HZ

- Voltage Drift: Less than 1% at constant load [ambient temperature change 131°F (55°C) in 8 hours].
- Voltage Regulation: Better than 1%.
- Total Harmonic Distortion: Less than 3% (line-to-line/line-to-neutral). Individual harmonics less than 2%.
- DC Content: Less than 100 mV.
- Voltage modulation: Less than 0.5% as measured from the peak of one waveform to the peak of another adjacent waveform under steady rated load conditions.
- Transient Performance: Output voltage recovery less than 50ms at 100% load change.
- Voltage Operating Range: +/- 10% of rated voltage
- Output Frequency Regulation: 400 Hz +/- 0.1%
- Phase Displacement: 120° +/- 1.5°

### 270 VDC

- Voltage Drift: Less than 1% at constant load [ambient temperature change 131°F (55°C) in 8 hours]
- Voltage Regulations: Less than 1%
- Output Voltage Transient per MIL-STD-704F

## Input

- AC Power: 380-480 Volt, 3 phase, 50/60 Hertz, at -15% to +10% of nominal voltage rating. Unit is phase rotation independent.
- Starting Current: Starting inrush not to exceed 100% current required when operating at rated output.
- Power Factor: From 25% to 100% rated load, input power factor is greater than 0.95.
- Efficiency: Greater than 92% at any load above 50% of rated load.
- Input Current Distortion: 10% maximum input current distortion at 100% load.

## Overloads and System Protection

### 400 HZ

- Overload Capacity: 125% for 10 minutes, 150% for 30 seconds, 200% for 10 seconds.
- Protection: Input & Output Over or Under Voltage, Output Overload, Loss of E/F, E/F Over Voltage, Bus Discharge Fault, Heat Sink Over Temperature, Output Frequency Fault, and IGBT Fault.

### 270 VDC

- 200% for 5 seconds

## Internal Controls and Indicators

- Auto/Manual Switch–Voltage Control
- 28 Volt E/F Interlock Bypass Switch (400 Hz)
- Start/Stop Controls
- Line Drop Compensation
- DC Bus Voltage Adjustment
- LCD Display Contrast Adjustment
- Voltage Adjustment (+/- 10%)
- Hour Meter (99,999 hrs.)
- 270 VDC 28 Volt Interlock Output (15 Amp)

## External Front Panel Lights

- Solid Red–Internal or External Fault
- Solid Yellow–Input Power Applied
- Solid Green–400 Hz Power Present
- Solid Green– 270 VDC Power Present

## LCD Display Plain English Indicators

- Input Voltage Phase A, Phase B, and Phase C
- Input Voltage Average
- Input Current (Average of 3 Phases)
- Output Voltage Phase A, Phase B, and Phase C (400 Hz)
- Output Voltage Average (3 Phase Avg.) (400 Hz)
- Output Voltage (270 VDC)
- Phase A, Phase B, and Phase C Output Current (400 Hz)
- Output Current Average (400 Hz)
- Output Current (270 VDC)
- Output kVA (total)
- Accumulated Kilowatt hours
- Output Frequency
- +5 VDC
- +15 VDC
- +24 VDC
- Date and Time
- Event History
- Lamp Test

\*All current operating readings and event history are available on optional RS232, RS485 Data Port.

\*\*Meets or exceeds OEM power requirements for the F35 and other advanced fighter aircraft.

United Kingdom  
+44-208-831-2213

Hong Kong  
+852-9016-0194

This information is provided for reference only and should not be used as technical specification data. This information is subject to change without notice. Please contact a JBT sales office for formal technical information.

Rev. 1, July 2019

Brochure Reference # 206



1805 West 2550 South • Ogden, UT, 84401, United States • 801-627-6600

www.jbtc.com/aerotech