

# Oshkosh AeroTech Jetpower® III Plus 400Hz Ground Power System



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**JETWAY SYSTEMS®**  
For the Perfect Turn

# Jetpower® III Plus 400 Hz Technical Specifications

## Design Elements:

As one of the world's leading suppliers of solid state frequency converters for the past 30 years Oshkosh AeroTech Jetway Systems® now offers a redesigned Jetpower® III Plus 400 Hz unit for hangar applications available in sizes of 90 kVA to 180 kVA. These units include an optional feature for paralleling to increase the overall capacity of a central system. The Jetpower III Plus incorporates the industry leading reliability and diagnostic capabilities of other Jetpower products. As an option, a 12-step input can be included. Today's ground power needs are vast and complex therefore the Jetpower III Plus has been designed to withstand extreme outdoor and indoor environments.

## Maximum Input Current:

Input Volts	90 kVA	120 kVA	140 kVA	180 kVA
380 V.	126 Amps	168 Amps	196 Amps	252 Amps
400 V.	120 Amps	160 Amps	186 Amps	239 Amps
415 V.	116 Amps	155 Amps	179 Amps	232 Amps
480 V.	100 Amps	133 Amps	155 Amps	200 Amps

## Dimensions:

	90 kVA	120/140/180 kVA
Width	38 in (965 mm)	62 in (1575 mm)
Height	73 in (1854 mm)	73 in (1854 mm)
Depth	32 in (813 mm)	32 in (813 mm)

## Weight (approximate):

90 kVA	120 kVA	140 kVA	180 kVA
1,400 lbs. (635 kg)	1,800 lbs. (816 kg)	1,800 lbs. (816 kg)	2,300 lbs. (1,043 kg)

## Housing:

NEMA 4 (IP44) 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:

Not greater than 65 dBA at 1.5 m height, 1 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:

- **Voltage Drift:** Less than 1% at constant load (ambient temperature change 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°

## 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.
- 10% or less input current distortion from the mains with optional step rectifier
- **Efficiency:** Greater than 92% at any load above 50% of rated load

## Overloads and System Protection:

- **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, IGBT Fault, and a DC Link Capacitor Fault.

## Internal Controls and Indicators:

- Auto/Manual Switch—Voltage Control
- 28 Volt E/F Interlock Bypass Switch
- Start/Stop Control
- Line Drop Compensation
- DC Bus Voltage Adjustment
- LCD Display Contrast Adjustment
- Voltage Adjustment (+/- 10%)
- Hour Meter (99,999 hrs.)

## External Front Panel Lights:

- Solid Red – Internal or External Fault
- Solid Yellow – Input Power Applied
- Flashing Yellow – 28 Volt in Bypass
- Solid Green – 400 Hz Power Present
- Flashing Green – 28 Volt Not Available

## LCD Display Plain English Indicators:

- Input Voltage Phase A
- Input Voltage Phase B
- Input Voltage Phase C
- Input Voltage Average (3 Phase Avg.)
- Input Current (3 Phase Avg.)
- Output Voltage Phase A
- Output Voltage Phase B
- Output Voltage Phase C
- Output Voltage Average (3 Phase Avg.)
- Phase A Output Current
- Phase B Output Current
- Phase C Output Current
- Output Current Average (3 Phase Avg.)
- Output kVA (total)
- Accumulated Kilowatt hours
- Output Frequency
- +5 VDC
- +15 VDC
- +24 VDC
- Event History, 490 events [(start/stop) and (fault/reset)]

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



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