



CASHMAN
Power Solutions

CAT[®]

CASHMAN EQUIPMENT POWER SOLUTIONS

MODULAR POWER SYSTEM

SYSTEM BENEFITS

SELF-CONTAINED INTEGRATED SOLUTION

Complete emergency/power quality solution in a standalone container
Reduces construction time and cost
Saves building interior floor space
Eliminates need for interior room for climate-sensitive equipment
Can be relocated easily and inexpensively
Scalable design allows for simple addition as needs grow

CONVENIENT

All major components networked with an Modbus TCP output

EFFICIENT

The Cashman Modular Power Systems operate at 98% or higher simple efficiency

LOWEST OVERALL COST OF OWNERSHIP

Consistent maintenance costs
All major components easily accessible to service technicians
Cat dealers worldwide provide all services, no need for multiple vendors
One warranty on entire* package
Extended service coverage as long as 10 years available

High efficiency Cat UPS reduces normal power consumption directly and indirectly via reduced heat rejection which reduces HVAC costs

CODE-COMPLIANT

Genset is UL2200 listed, ATS is UL1008 listed, and distribution panel is UL891 listed
Fuel tank is UL142 listed and of double-walled construction
NEC Compliant

RELIABLE

System is constructed of only the finest components available
Redundant starting power for genset via Genstart[®] Module
Proven microprocessor controls on all systems
Integral 3-breaker wraparound maintenance bypass

ENVIRONMENTALLY FRIENDLY

Genset is EPA/CARB certified for emergency standby use
No UPS lead acid batteries to dispose of
100% containment of all engine fluids
Internal dual wall fuel tank
Overall noise level of less than 72dB(A)
Reduced energy requirement in standby
System can operate in conditions from -10 deg F to 122 deg F

* Caterpillar Components only.

PRODUCT FEATURES

CATERPILLAR MODEL C27 750kW GENERATOR SET

EPA/CARB certified for emergency standby use
Electronic engine controls
277/480V Cat SR4B Generator
Cat EMCP 3.2 controls (3.3 option available)
100% rated main circuit breaker
UL2200 listed

ISOLATED GENERATOR SET COMPARTMENT

Sufficient airflow for operation up to 122 deg F
Acoustically insulated and baffled
Critical exhaust silencer
Fuel tank double-wall UL142 listed with 24 hours @ full load capacity
Jacket water heater with circulation pump
10A dual rate UL listed battery charger

ISOLATED ELECTRICAL/UPS COMPARTMENT

Thermally insulated
Interior temperature range of 60 deg F to 80 deg F
Rated for ambient temperatures from -10 deg F to 122 deg F

AUTOMATIC TRANSFER SWITCH

Caterpillar 1,000A 4 pole bypass isolation
Full redundant operation - ATS will still operate automatically if an outage occurs during repairs
Interchangeable switch contactor assemblies

CATERPILLAR 600kVA UPS

Rotary type UPS - no expensive batteries to maintain or replace
Low operating cost
Compact and efficient
Industry leading heat rejection reduces cooling costs
Corrects harmonics and power factor both
Internal static bypass

CATERPILLAR UPS GEN-START MODULE

Provides generator cranking power from UPS output if generator starting batteries fail

DISTRIBUTION PANEL

1000A 277/480V 3phase 4W Main
800A critical power branch circuit breaker
600A non-critical power branch circuit breaker
3-Breaker UPS maintenance bypass with Kirk Key Interlock
Transformer feeds 120/240V distribution to power internal loads
Integral TVSS
UL tested and certified
Camlock connectors and dedicated breaker for load bank testing

AIR CONDITIONER

ThermoKing Magnum Series HVAC Module
480V 3 phase fed from distribution panel
Programmable control for upper and lower temperature thresholds

40' ISO CONTAINER

Single-trip container - built for ocean, rail, and highway transport
Constructed of all heavy-duty materials for maximum durability
Cleaned, sandblasted, and painted
Diamond plate flooring installed
Interior power and lighting package
Prewired for all internal electrical accessories to transport, move, and set up over and over again
Provides for aesthetically consistent scalability

AVAILABLE OPTIONS

High ambient/altitude packages
Cold climate packages
Genset ratings
UPS ratings
Breaker configurations and ratings
Chassis-mounted
Mitsubishi double-conversion UPS with battery, flywheel, or combined energy storage options
Input and output voltages
Fuel tank capacity
Engine exhaust systems

Easy



SPECIFICATIONS

GENERATOR SET - Caterpillar model C27 - 750kW, 937.5kVA, 480V, 3ph, 60Hz, 1800rpm

Emissions - EPA/CARB certified for emergency standby
Speed/Engine Control ADEM A4 - Regulation +/- 0.2Hz steady state
Fuel System - #2 Diesel

Fuel Consumption - 53.5gph @ 100% load, 30.6gph @ 50% load

Cooling System - 50 deg C radiator

Motor Starting (std 130 deg C rise alternator end) - 2034sKVA @ 30% voltage dip

EMCP 4.2 Control Panel - programmable auto start/stop controller

CCVR Digital Voltage Regulator - Regulation +/- 1% steady state, +/- 0.25% no load to full load

GENERATOR START MODULE - Rated for 10 crank cycles

Input Voltages - 380V, 400V, 415V, 480V, 3ph, 50/60Hz

BYPASS AND DISTRIBUTION PANEL - 1,000A, 480V Rated,

UPS Bypass - Kirk-key Interlock with SKRU box and alarm

Critical and Non-Critical Feeders - 800A Critical and 600A Non-Critical standard

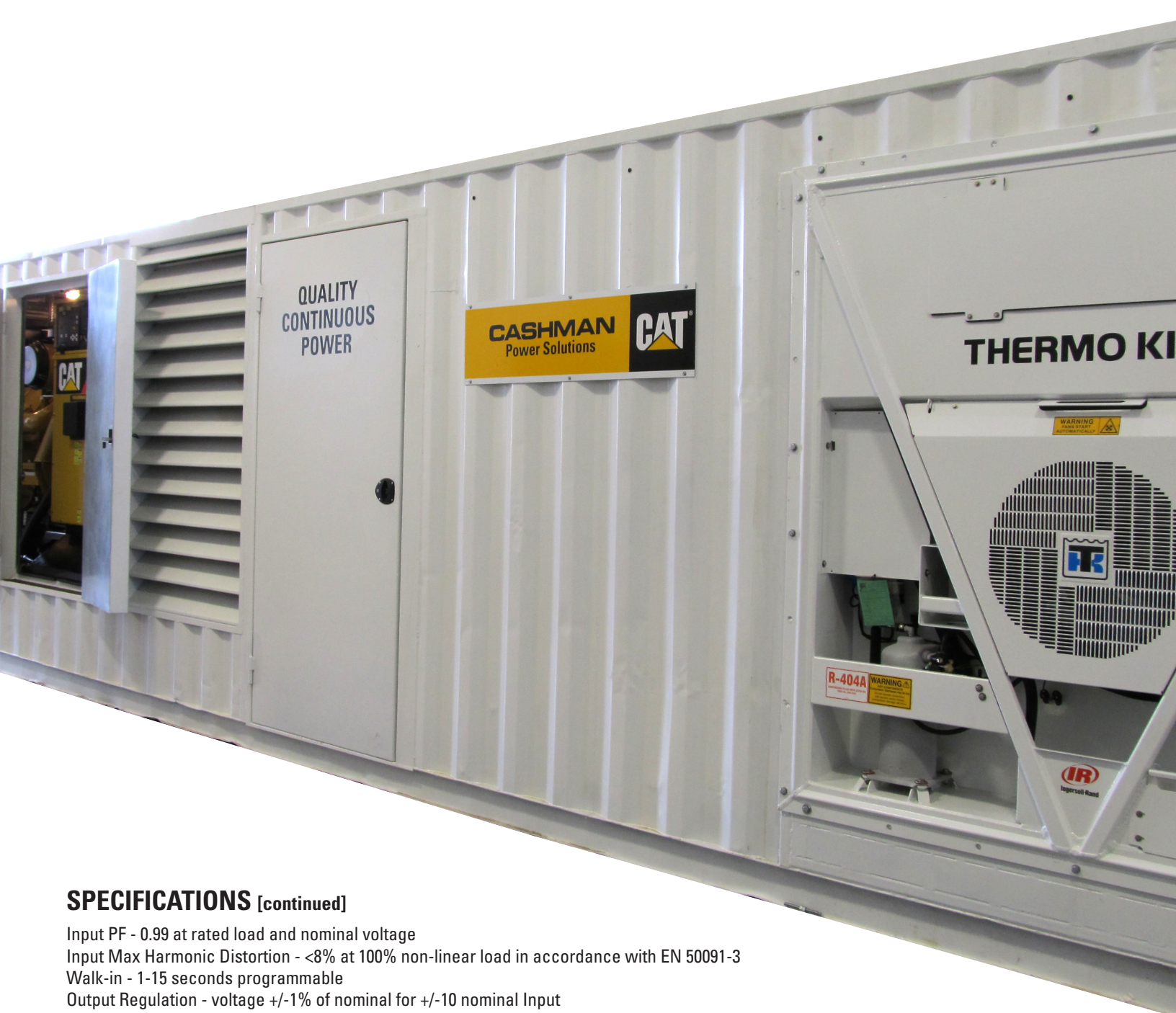
Load Bank Testing Output - 1000A breaker feeding color-coded Bulkhead Camlock Connectors

Integral TVSS - Strikesorb 80-277 200kA up to 250 hits

Shore Power - 240V internal power requirements fed via a 25kVA transformer

UNINTERRUPTIBLE POWER SUPPLY - Caterpillar model UPS600

600kVA/480kW 480V in and out, 60HZ, 3W (4W optional) input tolerance - voltage +10%/-15%, frequency +/-10% both programmable



SPECIFICATIONS [continued]

Input PF - 0.99 at rated load and nominal voltage

Input Max Harmonic Distortion - <8% at 100% non-linear load in accordance with EN 50091-3

Walk-in - 1-15 seconds programmable

Output Regulation - voltage +/-1% of nominal for +/-10 nominal Input

Bypass Trigger - programmable up to +/-10%

Overload Capability - 125% for 10 minutes, 200% for 30 seconds, 500% for 1 second

Flywheel energy storage ride through times - 14 seconds @ 100% load, 28 seconds at 50% load

Efficiency - 98% nominal

OPERATING CONDITIONS - Nominal Operation at -20 deg F to 122 deg F up to 3,000ft Elevation

INSTALLATION

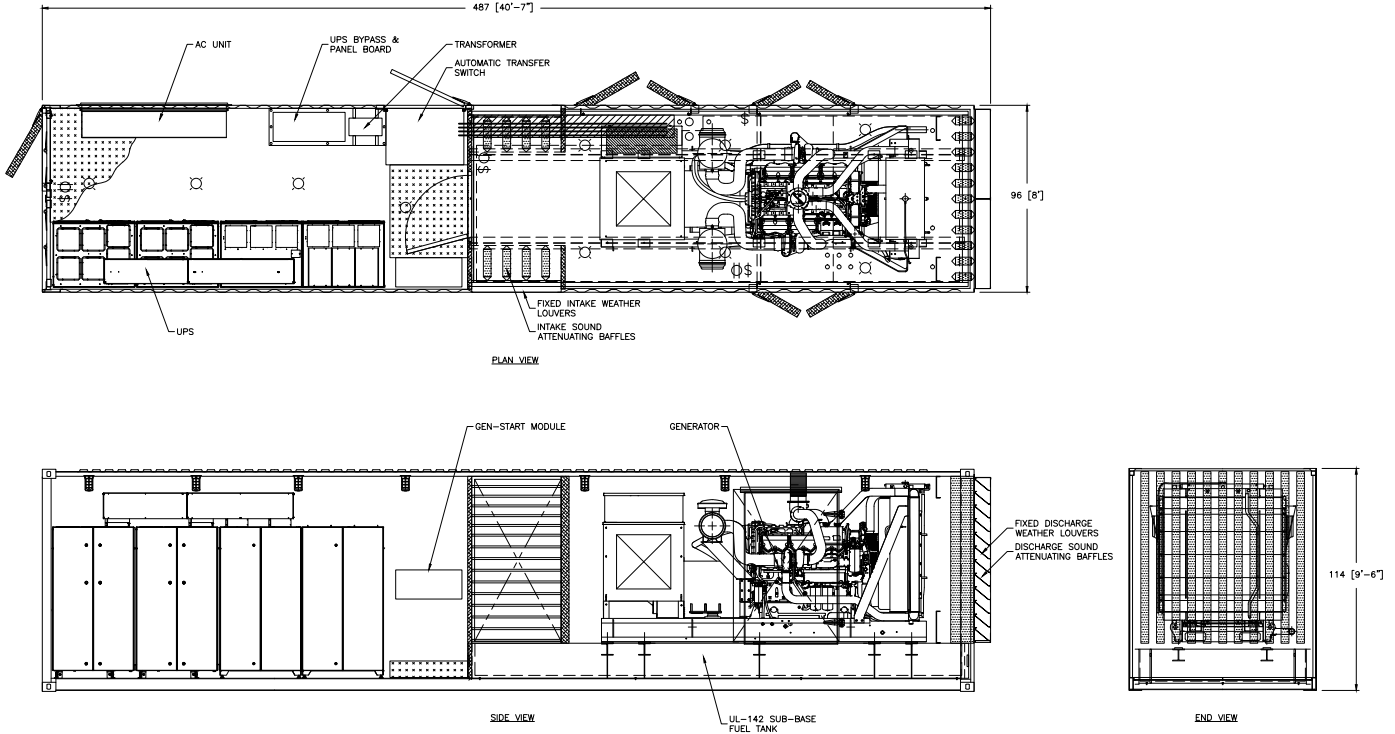
Recommended Clearance - Minimum 6ft between units

Mounting - concrete pad per local code requirements - 12in of apron surrounding

Mobile Mounting - can be provided and left on chassis

Cable Entry - bottom entry standard

TYPICAL LAYOUT



(NOT FOR CONSTRUCTION)

Length	40ft	12192mm
Width	8ft	2438mm
Height	9.5ft	2895mm
Dry Weight (est)	53000lb	24040kg
Wet Weight (est)	65000lb	29484kg



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