

TO: BOARD OF DIRECTORS
FROM: BRUCE BUEL
DATE: SEPT. 23, 2009

**AGENDA ITEM
E-1
SEPT. 30, 2009**

AWARD QUOTE FOR PURCHASE OF STANDBY GENERATOR FOR SUNDALE WELL

ITEM

AWARD QUOTE FOR PURCHASE OF STANDBY GENERATOR FOR SUNDALE WELL
[AUTHORIZE EXECUTION OF AGREEMENT]

BACKGROUND

The water and Sewer Master Plan identifies the Sundale Well as the District's emergency backup well, satisfying our requirement for emergency storage by the capability of producing 3.71 MG over a three day period. Lengthy repairs of the natural gas engine over the years have left the District with no backup while this well was out of service. In October of last year the Board authorized replacement of the natural gas motor at Sundale Well with an electric motor, including the purchase of a diesel generator. The purchase of a standby generator will give the District the capability to power up not only the new electric motor serving Sundale well, but also the Eureka Well, if one or the other well is out of operation for a period of time.

The purchase of one diesel generator capable of powering any of the District larger wells was budgeted in the 2009-2010 Fiscal Budget. Staff requested quotes for trailer mounted diesel generators with the capability of 300 kW from the following vendors:

Quinn Power Systems

Caterpillar Model XQ300	\$123,672.00 delivered (dbler wall fuel tank)
Multiquip Model DCA400SSI	\$130,834.20 delivered (dbler wall fuel tank)

Titan Industrial and Safety Supply, Inc

Multiquip Model DCA400SSI	\$128,612.74 to Santa Maria(sngl wall fuel tank)
	\$144,650.00 to Santa Maria (dbler wall fuel tank)

Quinn Rental

Multiquip Model DCA400SSI	\$122,766.26 delivered(single wall fuel tank)
	\$136,544.66 delivered (dbler wall fuel tank)

All of the diesel generators operated by the Nipomo Community Services District are Caterpillar, with the exception of one natural gas powered generator manufactured by Onan. The District currently has a service contract with the Quinn Company to service all of the generators. The Quinn Company has local service and parts availability with 24 hour emergency service available. The MQ generator does not have the same parts availability as the Quinn/Caterpillar.

The quotes above include single wall and double wall fuel tanks. The Multiquip single wall fuel tank quote from Quinn Rental is \$906.00 lower than the quote from Caterpillar for the double

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walled fuel tank. A double walled fuel tank (UL 142) is required for secondary containment of diesel fuel unless the generator is stored in a concrete basin enclosure. The cost of building a concrete containment for the generator would bring the final price of the Multiquip single fuel cell generator higher than that of the Caterpillar. Purchasing a generator with a double walled fuel tank also gives the District the option of removing the generator from the trailer and bolting the generator to a concrete pad if the need for this piece of equipment changes.

FISCAL IMPACT

The amount of \$135,000.00 to purchase of the standby diesel generator was budgeted in the Fiscal Year 2009-2010 Budget.

RECOMMENDATION

Although it appears to be more expensive to purchase, the cost of building a concrete basin to contain a generator with a single wall fuel cell would result in the Caterpillar being the lowest price of the generators quoted. The Staff recommends that your Honorable Board approve the purchase of the Caterpillar XQ300 Diesel Standby Generator Set from Quinn Power Systems for \$123,672.00, and authorize staff to execute purchase agreement for same.

ATTACHMENTS –

Quinn Power Systems Caterpillar Quote
Quinn Power Systems Multiquip Quote
Titan Safety Multiquip Quote
Quinn Rental Multiquip Quote

Comparison:

	<u>Caterpillar</u>	<u>Multiquip</u>
Engine:	Cat C9 Diesel	Isuzu
Generator:	Permanent magnet	Automatic Voltage Regulator
Gauges:	Digital	Analog
Wire lugs:	Large, protected	Small, nuts
Voltage:	dual voltage	Single voltage
Wrap:	PMG wrap (high quality)	"A" wrap
Annunciator panel:	yes	no
Service:	24/7	limited
Accessory plugs	yes	no-extension cords
Amps:	1200	1000
Spill containment:	yes	N/A

Note: Both meet tier 3 air pollution regulations



801 DEL NORTE BLVD.
OXNARD, CA 93030

QUOTATION

AWA10400

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To: Nipomo Community Serves District
148 S. Wilson Street
Nipomo, CA 93444
Attention: Tina Grietens
Terms: Subject To Credit Approval

(1) New Caterpillar Model XQ300 Diesel Standby Generator Set
Rated 300 kW with fan, 60 Hz, 3 phase, 277/480 volt at 1800 RPM.
Generator includes standard equipment and accessories listed in the
attached bill of material.

Emissions: EPA Tier 3 and CARB Emissions Certified

Total Price Each : \$114,247.00 Plus Tax

NOTE: *Delivery is estimated at 17 to 19 weeks upon receipt of written order, acceptance, approval, and/or release of equipment.



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Bill of Material

Generator and Attachments

Permanent magnet generator

Engine Control System

Electronic governor

Control Panel and Instrumentation

EMCP 3.2 Auto-start control panel
NFPA99-110/CSA282 local annunciator panel
Dust proof enclosure (Control Panel)
Panel mounted voltage adjust potentiometer
Panel mounted audible alarm with mute
Contacts for common fault alarm signal
Panel lights
Contacts for generator set run signal

Protection System

Multi – Voltage Distribution panel
Dual voltage manual changeover board
Load door safety switch
Remote start and stop contacts

Exhaust System

Internal exhaust system
Manifold and turbo guards

Fuel System

Flex fuel lines
Heavy duty – Air cleaner
UL 142 certified dual wall fuel tank (440 gallons)

Mounting and Enclosures

Seismic vibration isolators, installed between generator set and base rails
Weather & sound attenuated enclosure

Starting System

Lead acid starting batteries - 24 volt

Charging System

45 Amp Charging Alternator
Battery Charger (AC to Dc)

Cooling System

Radiator
Engine heater (Block Heater)
Initial fill of coolant
Low coolant temperature alarm
Low coolant shutdown circuit

Lube System

Initial fill of lube oil



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Documentation

- EPA & CARB Non – Road Emission Certified
- Factory test reports
- Operation and maintenance manuals (2 sets)
- 1-year standard warranty
- Start Up Test (One trip) (Load bank test not included)
- Delivery to (Nipomo, CA)

CLARIFICATION

- The equipment offered in this proposal is in accordance with your verbal request. No written details, plans, specifications, or drawings have been provided.
- No special equipment provided such as: emissions control devices.
- Permitting costs by others.
- Special consideration should be taken concerning prime, portable application. Please confirm with local air district for further guidance.

VERY IMPORTANT NOTE: As a supplier of equipment, Quinn Power Systems (QPS) disclaims responsibility for any and all permits or licenses necessary to design, install and operate the equipment due to zoning, air quality, building or construction codes or use permits pertaining to buyers or buyers' client's, particular application of such equipment or any similar type of permit.

Special attention should be given to the requirements of the local Air Quality Management District (AQMD) rules, regulations and permit process. As an equipment supplier, QPS is proposing equipment to specifications as indicated herein. If additional equipment or engine modifications are required beyond the specifications as required by AQMD and Best Available Control Technology (BACT) guidelines, those items are not included. For example, South Coast AQMD Rule 1470 requires controls and limits on particulate matter, especially when the engine installation is within 100-meters from a school. Unless specifically indicated in this proposal, compliance to this rule is the responsibility of others.

Ultra low sulfur fuel is required for particulate filters plus will be the required fuel starting in 2006.

When indicated in the bill of materials, the proposed equipment may be SCAQMD pre-approved as certified equipment. This certification does not eliminate the permit process or responsibility of others to obtain a permit. Procurement of certified equipment assures permitability, reduces the permit processing fees and reduces the time necessary to obtain the permit.

Only those items listed are included. Not included is any exhaust or fuel piping, main fuel tank, fuel, duct work, special tools, insulation, wiring, cable, bus duct, concrete, anchor bolts, rigging or any material or labor incidental to the installation itself.

If delivery is delayed by customer (Buyer) beyond original shipment date, purchase price is due 30 days after original shipment date and a hold charge of 1% per month (12% per annum) of the purchase price is due each month until delivery. Service charge of 1.5% per month (18% per annum) is applicable on any delinquent balance.

When included, delivery, startup assistance, field testing, training or any other services required on site will be provided during the normal weekday working hours of 7:00 am to 4:30 pm. Delivery or services occurring at any other time, weekends or holidays is subject to additional charges.



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Terms and conditions of Caterpillar warranty apply. The Manufacturers' warranties are exclusive and in lieu of all other warranties either oral or written, express or implied, including but not limited to any warranty of merchantability or fitness for a particular purpose. QPSA is not a manufacturer and makes no warranty and shall not, under any circumstances, be liable for any indirect or special, incidental or consequential damages including but not limited to loss of production, loss of profit, loss of use or business interruption, or any other economic loss, whether arising from contract, tort, strict liability or any other theory of law.

If construction of the facility or other delays are experienced or expected, which prohibit the initial startup of the equipment beyond one year from delivery, additional costs should be anticipated. Additional costs might include, but not be limited to long term storage preparation, inspection charges, parts, service etc.

Terms of payment are net 30 days, no retentions; subject to credit approval. Per Company procedure, QPSA will file a California "Preliminary 20-day notice" applicable per Section 3097 of the California Civil Code.

Important conditions for export transactions. This transaction is for the sale of equipment only, as requested and as detailed in this proposal. Not included is any startup assistance, field-testing, training or any other services that might be required on site. Also not included is the responsibility of proper application and installation, installation audits, sea trials (if applicable), installation materials and the installation itself. To ensure proper application, installation, and warranty integrity, you are encouraged to contact the receiving Caterpillar Dealer for these services. The costs of these services are not included in the sale price nor will QPSA be responsible for any such related costs.

TERMS AND CONDITIONS

Acceptance of Order.

This Quotation is for Buyer's information only and is not a valid offer to sell unless signed by an officer of Seller in the place provided on the face of this Quotation. Prices, terms and conditions in an order from Buyer which are inconsistent with the prices, terms and conditions of this Quotation will be rejected by Seller, and are of no force and effect unless accepted in writing by Seller. Prices, delivery schedules and the scope of work on this Quotation are subject to change at Seller's discretion.

Liability.

Seller's liability on any claim of any kind, including claims for negligence, or for any loss or damage arising out of or connected with the manufacture, sale, delivery, resale or use of any products covered by or furnished under any order shall be limited to those claims arising solely from the acts of Seller and Seller shall in no way be liable for any special or consequential damages.

Any claims against Seller for shortages in shipments shall be made in writing to Seller within fifteen (15) days of receipt of shipment by Buyer. Unless otherwise provided for in writing, Seller's responsibility for shipment ceases upon delivery to carrier, and any claims for shortage, delays or damage occurring thereafter shall be made direct to carrier by Buyer.

Fulfillment of any order accepted by Seller is subject to strikes, labor disputes, lockouts, accidents, fires, delays in manufacture or in transportation, delays in delivery of component materials, floods, severe weather, or Acts of God, embargoes, governmental actions, or any other cause beyond the reasonable control of Seller.

Shipments.

Unless otherwise specified, shipment dates are approximate. Shipment of goods under any order accepted by Seller shall be subject to the approval by Seller of Buyer's financial condition at the time of shipment. Whether or not terms of payment are specified elsewhere, Seller may, at its option, condition shipments under any order accepted by Seller upon receipt of satisfactory security or of cash prior to shipment.

If, at Buyer's request, shipment of goods under any order accepted by Seller is delayed more than thirty (30) days after the shipment date specified in the order, or the date the goods are ready for shipment, whichever is later, Seller may require immediate payment in full and/or assess additional charges for the expenses incident to such delay.



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Termination.

In the absence of a written agreement between Buyer and Seller expressing different terms and conditions as to termination, any order accepted by Seller may be terminated prior to completion by Buyer only upon written notice to Seller and payment of Seller's termination charges. If notice of termination is received by Seller after Seller has committed to buy the principal components for any order, termination charges shall include the total profit anticipated by Seller. Additionally, Buyer's instruction to Seller to stop work for thirty (30) days during the time specified for performance in any order may be construed by Seller as the equivalent of written notice of termination from Buyer.

Taxes.

Unless expressly stated, Seller's prices do not include sales, use, excise or similar taxes, which Seller may be required to pay in filling Buyer's order. The amount of any applicable tax shall be paid by Buyer as an additional charge unless specifically included in any order accepted by Seller, or in lieu thereof, the Buyer shall provide Seller with a tax exemption certificate acceptable to the taxing authorities.

Patents.

Seller shall, at its own expense, defend and save Buyer harmless from the expenses and consequences of any suit or procedure brought against Buyer, based on a claim that the use or sale of goods specified in any order accepted by Seller constitutes an infringement of any United States letters of patent in existence on the date of any such order; provided Buyer promptly notifies Seller in writing and gives the necessary authorization, information and assistance for the defense of such a claim.

Changes.

Seller, and Seller's suppliers, may, at any time, without notice to Buyer, make changes (whether in design, materials, the addition of improvements, or otherwise) in any goods specified in any order accepted by Seller without incurring any obligation of any kind as a result thereof, but only to the extent that such change does not cause the goods specified to fail to meet Buyer's requirements. Buyer may, in its order, provide for changes in its requirements with provision for a corresponding equitable change in the price, if any; but in no instance shall Buyer make changes, which are substantially different from the scope of the original order accepted by Seller.

Export Sales.

In the event the goods and services specified in any order accepted by Seller are for export, the Buyer shall be responsible for securing export, import and other licenses or authorizations as may be required.



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The quotation provided herein is for information only, and is not a valid offer to sell unless signed by a Sales Representative of Quinn Power Systems and an officer of your Company in the space provided below. Any offer to sell or any offer accepted shall be subject to the Terms and Conditions page. Unless expressly stated on the face of this quotation, all prices, delivery schedules and product specifications are subject to change without notice. Quotation is good for 30 days, expires after that duration.

Signature: 

Sales Representative: Allen Abramovitch

Cell: (805)431-3180 **Office** (805)278-8706

Submitted By: Allen Abramovitch



Quinn Power Systems
Allen Abramovitch
Sales Representative
Cell: 805-431-3180
Fax: 805-983-1643
Office: 805-485-2171 Ext. 8706
801 Del Norte Blvd. Oxnard, CA 93030
aabramovitch@quinnpower.com

ACCEPTED BY:

Company: _____

Signature: _____

Date: _____



Arrangement shown
with optional trailer

XQ300 SOUND ATTENUATED 50/60 Hz

FEATURES



EMISSIONS

- EPA Tier 3 and CARB Emissions Certified for non-road mobile applications at all 50 Hz and 60 Hz ratings



CAT C9 ATAAC DIESEL ENGINE

- Utilizes ACERT® Technology
- Reliable, rugged, durable design
- Field-proven in multiple applications worldwide
- Four-stroke-cycle diesel engine combines durability with minimum weight while providing dependability and economy
- 50/60 Hz convertibility



CAT SR4B GENERATOR

- Designed to match performance and output characteristics of Caterpillar diesel engines
- Permanent magnet excitation
- Segregated AC/DC, low voltage accessory box provides single point access to accessory connections



ENCLOSURE

- Made with 12-gauge steel
- Single point lifting eye
- Sound attenuated
- Convenient hand holds and steps for safe operation
- Two coat polyester powder-coated finish

ENVIRONMENTALLY FRIENDLY DESIGN

- Sound attenuated for low noise operation
- OSHA compliant safe design
- 110% spill containment for coolant and oil
- UL 142 certified dual wall fuel tank

MULTI-VOLTAGE DISTRIBUTION PANEL

- Dual voltage, manual changeover board
- Load door safety switch
- Rust-free hinges on rear opening door
- Adequate space for line and plug connection without interference
- Remote start and stop contacts

SINGLE-SOURCE SUPPLIER

- Complete systems designed at Caterpillar ISO 9001:2000 certified facilities
- **Certified Prototype Tested** with torsional analysis

WORLDWIDE PRODUCT SUPPORT

- Worldwide parts availability through the Caterpillar dealer network
- With over 1,875 dealer outlets operating in 200 countries, you're never far from the Caterpillar part you need.
- 99.7% of parts orders filled within 48 hours. The best product support record in the industry.
- Caterpillar dealer service technicians are trained to service every aspect of your electric power generation system.

FACTORY INSTALLED STANDARD AND OPTIONAL EQUIPMENT

STANDARD FEATURES	
Air Inlet System	Air cleaner, dual element Turbocharger
Charging System	Battery charger Heavy duty charging alternator
Control Panel	Generator controls and monitoring Fuel tank monitoring Engine controls and monitoring Digital displays
Cooling System	Fan and belt guards Base mounted radiator Air to air aftercooling
Distribution Panel	Lockable doors Load door safety switch (trips breaker upon door opening) Individual bus bar connections Circuit breaker with 24 VDC shunt trip Remote start/stop contacts Shore power connections
Enclosure	Sound attenuated 12-gauge steel Lockable doors Separate vented battery compartment Single point lifting Exterior oil and water drains with interior valves Hidden exterior fuel drain Hand holds and steps Powder-coated finish
Fuel System	Primary fuel filter/water separator UL142 dual wall fuel tank, 1667 L (440 g) Radiator-mounted fuel cooler
Generator	Brushless, permanent magnet Coastal corrosion protection Shock mounted VR6 voltage regulator Space heater UL approved Reconnectable 240-480 volt
Mounting System	Generator soft mounted to base Base contains integral fuel tank Skiddable structural steel design 110% oil and coolant spill containment
Starting System	Electric starting motor Battery set with disconnect switch Jacket water heater with thermostat, shut-off valves

OPTIONAL FEATURES	
Trailer	Full frame support Independent tandem axle trailer frame with tongue Electric actuated hydraulic brakes with rechargeable battery backup breakaway system Overcenter mechanical parking brake Full length fenders Non-skid surface on steps Heavy duty safety chains and grab hooks Reinforced 4540 kg (10,000 lb) top wind drop jack

SPECIFICATIONS



CAT SR4B GENERATOR

Frame size	449
Type.....	Permanent magnet brushless
Construction.....	Single bearing, close coupled
Three phase	12 lead reconnectable
Insulation	Class H with coastal insulation protection
IP rating.....	22
Alignment.....	Pilot shaft
Voltage regulator	3-phase sensing with Volts-per-Hertz
Voltage regulation.....	± ½% steady state/± ½% no load to full load
TIF	Less than 50
THD	Less than 5%



CAT ENGINE

C9 ATAAC, 4-stroke-cycle watercooled diesel	
Bore – mm (in).....	112 (4.41)
Stroke – mm (in).....	149 (5.87)
Displacement – L (cu in).....	8.8 (537)
Compression ratio.....	16.1:1
Aspiration.....	Turbocharged-ATAAC
Engine control.....	ADEM™ A4



CAT CONTROL PANEL – EMCP 3.2

24 Volt DC Control	
NEMA 1, IP22 enclosure	
Lockable hinged door	
Enclosure mounted	
Single location customer connector point	
16 light alarm module with alarm horn	
Electric fuel level gauge	

Consult your Caterpillar dealer for available voltages.



TECHNICAL DATA

		XQ300			
Power Rating		Standby	TMI Ref.	Prime	TMI Ref
60 Hz	ekW	300	DM8168	275	DM8500
50 Hz	kVA	310	DM8503		
Engine and Container Information					
Engine model		C9			
Container dimensions		see chart on page 6			
Shipping Weight (Dry)					
Unit with trailer	kg (lb)	6210 (13,690)			
Unit without trailer	kg (lb)	4980 (10,980)			
Maximum Fuel Capacity Weight					
Unit with trailer	kg (lb)	7506 (16,550)			
Unit without trailer	kg (lb)	6278 (13,840)			
Engine Lubricating Oil Capacity					
Engine Coolant Capacity with Radiator	L (qts)	40 (10.55)			
Fuel Tank Capacity	L (gal)	36 (9.5)			
	L (gal)	1516 (400)			
Fuel Consumption					
Fuel Consumption (75% Prime)	L/hr (gal/hr)	89.1 (23.5)	81.3 (21.5)		
Running Time @ 75% Prime	L/hr (gal/hr)	63.5 (16.8)			
Sound Level	hours	24			
Standby	dB(A)	74.72			
No load @ 7 m (23 ft)	dB(A)	70.20			
Prime	dB(A)	73.49			
Ambient Capability					
	Deg C (Deg F)	43 (109.4)			

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications:

- NEMA MG1-32, IEC 60034, CSA, 98/37/EEC, 72/23/EEC, UL 508, UL142, ISO3046/1, ISO8528, 89/336/EEC

Standby – Output available with varying load for the duration of the interruption of the normal source power. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514.

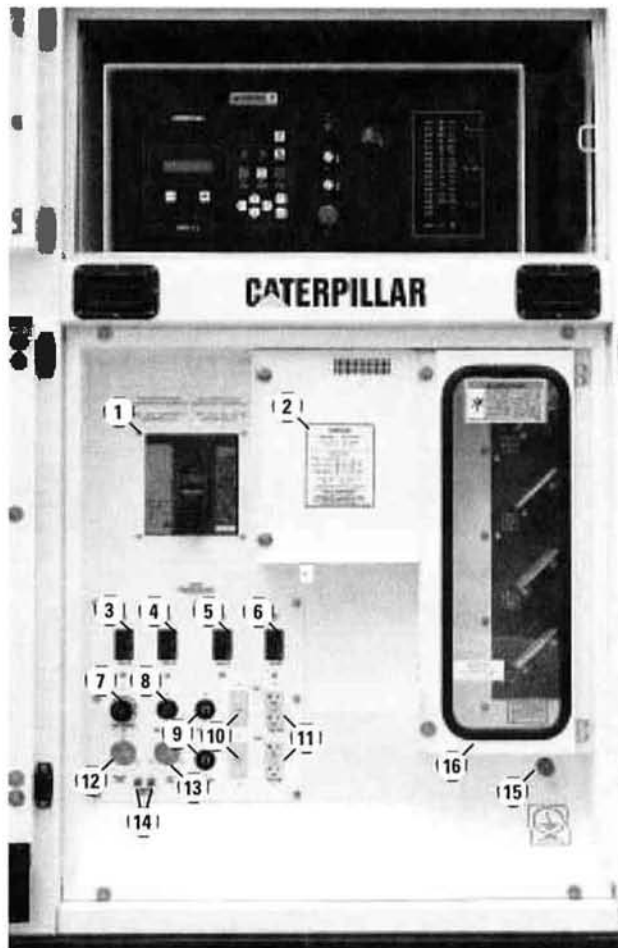
Prime – Output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10% overload power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514 available on request.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions.

Fuel rates are based on fuel oil of 35° API [@ 16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lb/U.S. gal).

Additional ratings may be available for specific customer requirements. Consult your Caterpillar representative for details.

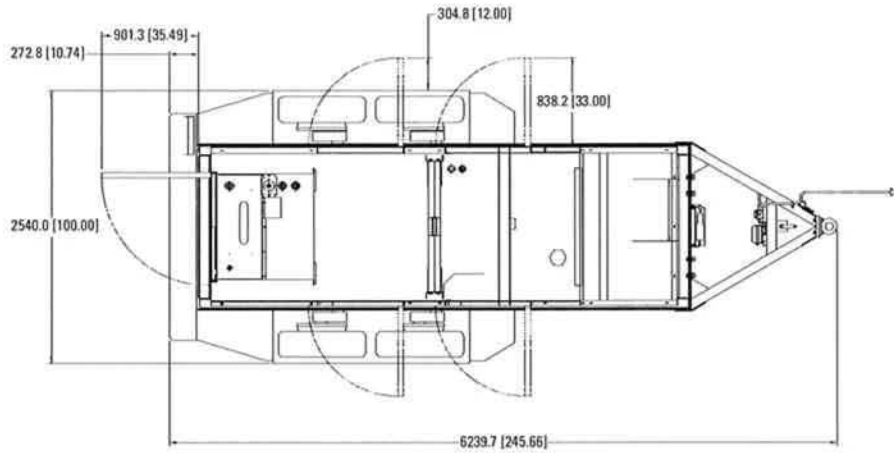
DISTRIBUTION PANEL



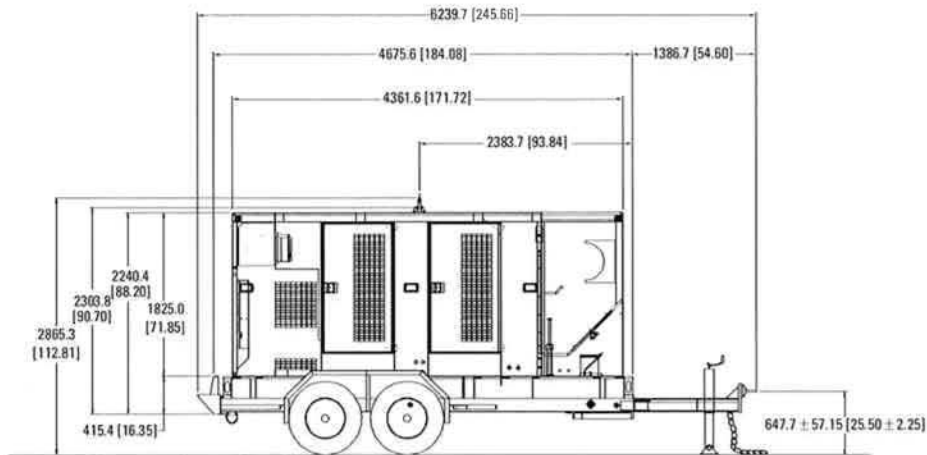
Wiring Descriptions

1. 1200A main breaker 240V/480V with adjustable trip and 24V DC shunt trip
2. Voltage change over board
3. 50 amp 240V branch breaker
4. 20 amp 240V branch breaker
5. 20 amp 120V branch breaker
6. 15 amp 120V branch breaker
7. 50 amp 240V twistlock receptacle
8. 20 amp 240V twistlock receptacle
9. 20 amp 120V twistlock receptacle (2x)
10. 20 amp 120V ground fault interrupter, (2x)
11. 15 amp 120V ground fault interrupter, duplex receptacle (2x)
12. 30 amp 120V battery charger/generator space heater receptacle
13. 30 amp 120V JWH receptacle
14. Remote start/stop contacts
15. 12.7 mm (1/2") ground stud
16. Load connection bus board [6.35 mm × 101.6 mm × 101.6 mm (1/4" × 4" × 4") bus bars]

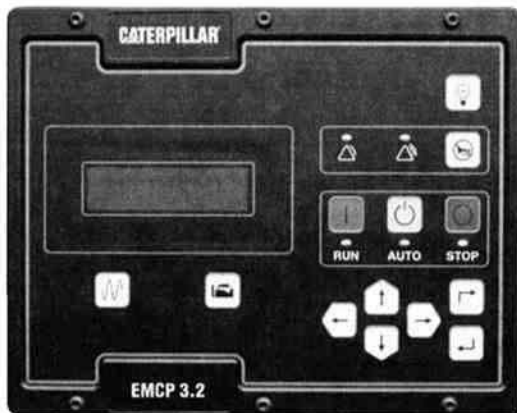
CONTAINER DIMENSIONS — TOP VIEW



CONTAINER DIMENSIONS — RIGHT SIDE VIEW



Overall Dimensions				
	Package		With Trailer	
Length	4597.4 mm	181 in	6248.3 mm	246 in
Width	1498.6 mm	59 in	2540.0 mm	100 in
Height	2387.6 mm	94 in	2882.8 mm	113.5 in



EMCP 3.2 GENERATOR SET CONTROLLER

GENERAL DESCRIPTION

The Cat® EMCP 3.2 places fully featured power metering, protective relaying, engine and generator control and monitoring, and expanded AC metering at your fingertips. Engine and generator controls, diagnostics, and operating information are accessible via the control panel keypads; diagnostics from EMCP 3 optional modules can be viewed and reset through the EMCP 3.2. The EMCP 3.2 features a graphical display with an adjustable backlight as well as an advanced engine monitoring system. These features add to the sense of value and dependability that comes with your purchase of Caterpillar products.

OPERATOR INTERFACE

- Graphical display with positive image, transfective LCD, adjustable backlight/contrast
- Two LED status indicators (1 red, 1 amber)
- Three Engine Control Keys & Status Indicators (Run/Auto/Stop)
- Lamp Test Key
- Alarm Acknowledgement Key
- Display Navigation Keys
- Two Shortcut Keys: Engine Operating Parameters & Generator Operating Parameters

FEATURES/BENEFITS

- A 33 x 132 pixel, 24 mm x 95 mm, backlit graphical display denotes text alarm/event descriptions.
- Textual display with multiple language capability, including character languages such as Arabic, Chinese and Japanese.
- Ability to view and reset diagnostics on EMCP 3 optional Network modules via the control panel removes the need for a separate service tool for troubleshooting.
- Fully featured power metering, protective relaying, engine and generator parameter viewing, and expanded AC metering are all integrated into this controller.
- Real-time clock allows for date and time stamping of diagnostics and events in the control's logs as well as service maintenance reminders based on engine operating hours or calendar days.
- Customer programmable protective relaying, available as alarm and shutdown, protects against undervoltage, overvoltage, underfrequency, overfrequency and overcurrent.
- Digital, 32-bit microprocessor-based system eliminates the need for multiple switches, meters, transducers, relays, and sending units, which translates to less wiring and fewer opportunities for mechanical failures.
- Expanded remote customer communications are supported by MODBUS RTU (½ duplex) protocol using RS-485, which easily interfaces with existing plant systems and equipment.
- Simultaneous viewing of AC L-L voltages and AC line currents or AC L-N voltages and AC line currents.
- User-friendly, convenient, customer programmability directs the customer to logical parameter groups (Ex. AC metering, protective relaying, engine monitoring) for quick keypad access.

FEATURES/BENEFITS (CONT'D)

- Set points & software are stored in nonvolatile memory, preventing loss during a power outage.
- Compatibility with both mechanical and electronic engines makes it versatile.
- True RMS sensing ensures AC metering accuracy to within $\pm 1\%$ of rated AC voltage (L-L and L-N) and current.
- kW and kVA metering to within $\pm 5\%$ of rating.
- Three levels of security allow for configurable operator privileges.
- Single, standard 70-pin connector

COMMUNICATION

- J1939 (Primary Data Link)
- J1939 #2 (Accessory Data Link)
- MODBUS RTU (1/2 duplex); RS-485 (Customer Communication)

ENVIRONMENTAL SPECIFICATIONS

- Environmentally sealed front face rated for IP56. Resistant to chemical splash, including: diesel fuel, engine oil and machine oil.
- Protection level IP22 for rear of controller
- Resistant to salt spray
- Vibration: withstands 4.3G @ 24-1000 Hz
- Shock: withstands 15G
- Monitoring Functionality & Controls Operational from -40°C to 70°C (-40°F to 158°F)
- Display Operational from -20°C to 70°C (-4°F to 158°F)
- Storable from -40°C to 85°C (-40°F to 185°F)
- 0 to 95% Humidity, non-condensing from 30°C to 60°C (86°F to 140°F)

STANDARDS

- UL Recognized
- CSA C22.2 No.100,14, 94
- Complies with all necessary standards for CE Certification
 - 98/37/EC Machinery Directive
 - BS EN 60204-1 Safety of Machinery
 - 89/336/EEC EMC Directive
 - BS EN 50081-1 Emissions Standard
 - BS EN 50082-2 Immunity Standard
 - 73/23/EEC Low Voltage Directive
 - EN 50178 LVD Standard
- ISO3046, ISO8528
- IEC529, IEC60034-5, IEC61131-3
- MIL STND 461

STANDARD FEATURES

CONTROLS

- Auto/Start/Stop
- Engine Cool-Down timer
- Emergency Stop
- Engine Cycle Cranking
- Lamp Test
- Generator Voltage
- Engine Speed/Generator Frequency

DIGITAL (LCD) INDICATION

- Generator AC Voltage – 3 phase (L-L & L-N)
- Generator AC Current (per phase & average)
- Generator Power kW (total & per phase)
- Generator kVAR (total & per phase)
- Generator kVAR-hr (total)
- Generator % of rated power (total) (kW, kVA, kVAR)
- Generator kVA (total & per phase)
- Generator kW-hr (total)
- Generator Power Factor (PF) (average & per phase)
- Generator Frequency
- Engine RPM
- Battery Voltage
- Engine Hours
- Engine Successful Start Counter
- Engine Oil Pressure
- Engine Coolant Temperature
- Engine Crank Attempt Counter
- Service Maintenance Interval (Engine Operating Hours or Calendar Days)
- Real Time Clock
- Twenty (20) Event Fault Log

Notes:

1. Temperature indications are viewable in either $^{\circ}\text{C}$ or $^{\circ}\text{F}$ (operator selectable)
2. Pressure indications are viewable in psi, kPa, or bar
3. Fuel Consumption viewable in US/Imperial gal/hr or Liters/hr

STANDARD FEATURES (CONT'D)

WARNING/SHUTDOWN INDICATION

- Overcrank
- Low Coolant Temperature Warning
- High Coolant Temperature Warning/Shutdown
- Low Oil Pressure Warning/Shutdown
- Overspeed
- Control Switch Not In Auto
- High/Low Battery Voltage
- Emergency Stop Activated

Notes:

- Warning condition activates common alarm output signal and common flashing yellow indicating lamp.
- Shutdown condition activates common shutdown output signal and common flashing red indicating lamp.
- Warning/Shutdown conditions result in text message in EMCP 3 display event log.

DIGITAL INPUTS (8 TOTAL)

- Emergency Stop
- Remote Start
- 6 Programmable

Digital inputs can be programmed for various alarm, shutdown, and status conditions including:

- Low Fuel Level
- High Fuel Level
- Fuel Leak Detected
- High Exhaust Temperature
- Air Damper Closed
- Circuit Breaker Open/Closed
- Low Engine Oil Level
- Low Coolant Level
- Low Starting Air Pressure
- Low/High Ambient Air Temperature
- Spare Fault #1-6.

Inputs can be programmed for either high or low activation using programmable Normally Open or Normally Closed contacts.

Note: The number of programmable Digital Inputs may vary based on specific package configuration. Refer to Engine Installation Guide for specific engine application.

PROTECTIVE RELAYING

- Generator Over/Under Voltage
- Generator Over/Under Frequency
- Generator Overcurrent

RELAY OUTPUTS (8 TOTAL)

- Starter Motor
- Fuel Control
- 6 Programmable

Relay outputs can be programmed for various operating conditions including: Air shut-off, or pre-lube, Common Alarm, Common Shutdown, Common Warning, Engine Running, Crank Alert, & Idle/Rated.

Relays are rated for 2A @ 30 VDC and consist of 6 Form A (Normally Open) contacts. Two of the programmable outputs are Form C (Normally Open & Normally Closed) contacts.

Note: These are only rated for DC.

Note: The number of programmable Relay Outputs may vary based on specific package configuration. Refer to Engine Installation Guide for specific engine application.

DISCRETE OUTPUTS

- 1 Programmable

Discrete output can be programmed for various operating conditions including: Air shut-off, pre-lube, Common Alarm, Common Shutdown, Common Warning, Engine Running, Crank Alert, & Idle/Rated.

Discrete output can sink up to 300mA and is suitable for driving relay coils or incandescent lamps.

SENSOR INPUTS

- Engine Speed (Magnetic Pick-up)
- Engine Oil Pressure (0-2 k Ω resistive sender, 1 or 2-wire) – MUI Engines only
- Engine Coolant Temperature (0-2 k Ω resistive sender, 1 or 2-wire) – MUI Engines only
- Configurable Input (0-2 k Ω resistive sender) (for engine oil temperature, etc)

AVAILABLE LOCAL DISPLAY LANGUAGES

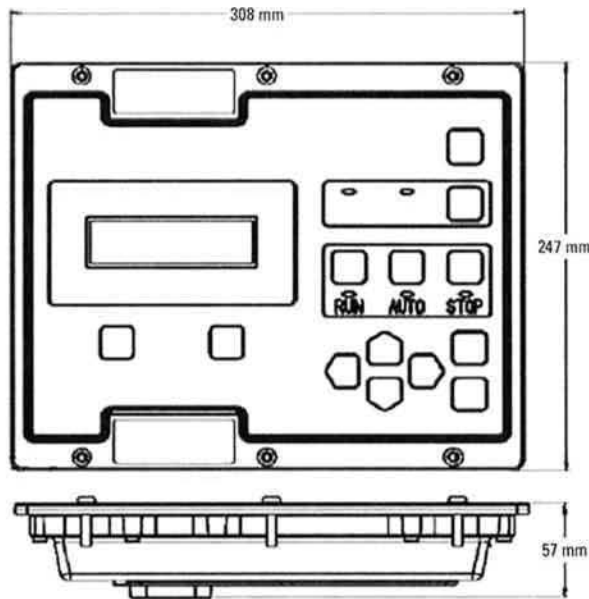
• Arabic	• Italian
• Czech	• Latvian
• Danish	• Lithuanian
• Dutch	• Norwegian
• Estonian	• Polish
• Finnish	• Portuguese
• French	• Russian
• German	• Spanish
• Greek	• Slovak
• Hungarian	• Slovene
• Icelandic	• Swedish
	• Turkish

Note: Displays contain 2 languages (English and Local)

EMCP 3.2 GENERATOR SET CONTROLLER



EMCP 3.2 GENSET CONTROLLER

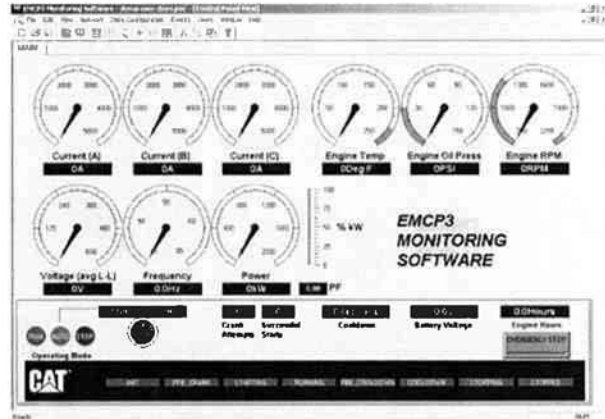


OPTIONS



ANNUNCIATOR

The EMCP 3 Annunciator serves to display Genset system alarm conditions and status indications. The Annunciator has been designed for use on the EMCP 3 Communication Network and may be used in either Local (package mounted) or Remote (up to 800 feet) application. A maximum of three (3) Annunciators may be used with a single EMCP 3.2.



REMOTE MONITORING SOFTWARE

The EMCP 3 Remote Monitoring Software Package is a PC based program which allows the user to monitor and control a generator set, and is capable of running on a Windows based operating system. The Remote Monitoring software allows the user to configure data monitoring and data acquisition processes for monitoring, graphing, and logging of genset data.



DISCRETE INPUT/OUTPUT MODULE

The Discrete Input/Output (DI/O) module serves to provide expandable Input and Output capability of the EMCP 3 and is capable of reading 12 discrete inputs and setting 8 relay outputs. The DI/O Module has been designed for use on the EMCP 3 Communication Network and may be used in either Local (package mounted) or Remote (up to 800 feet) application. A maximum of four (4) DI/O Modules may be used with a single EMCP 3.2.

Information contained in this publication may be considered confidential. Discretion is recommended when distributing.

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www.cat-electricpower.com

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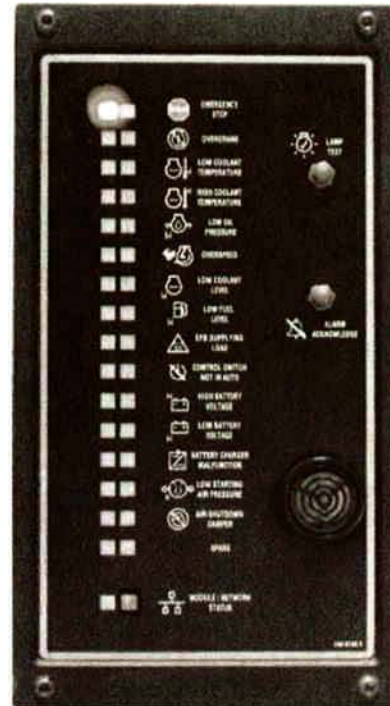
EMCP 3 ANNUNCIATOR

The EMCP 3 Annunciator serves to display generator set system alarm conditions and status indications. The Annunciator has been designed for use on the EMCP 3 J1939 Communication Network and may be used in either local or remote applications, providing customers with enhanced site flexibility.

In local applications, the Annunciator may be mounted on the package generator set with the EMCP 3 Controller to provide a complete package-mounted monitoring solution.

The Annunciator may also be mounted separate from the generator set to provide remote indication of system operating and alarm conditions.

The EMCP 3 Annunciator is configurable to the standards of NFPA 99/110 for emergency standby generator systems.



FEATURES

- The EMCP 3 Annunciator provides sixteen (16) individual points of annunciation, with two (2) LED's included for each point.
- An additional pair of LED's provides status indication of the J1939 data link connection.
- Includes alarm horn with lamp test and alarm acknowledge pushbuttons.
- Configurable using standard Caterpillar® Service Tool
- Configurable to NFPA 99/110 requirements for local and remote annunciation on emergency standby generator systems.
- Provides custom label kit including software for customer's specific alarms and arrangement
- Designed and tested to meet stringent impulse shock and operating vibration requirements
- Uses high quality shielded twisted-pair cable for robust remote communications
- Graphic symbols are provided next to each pair to indicate various alarms and events
- The Annunciator can be mounted either locally, on the package generator set, or remotely (up to 800 feet)
- Provides superior visibility of the LED's in direct sunlight

SPECIFICATIONS

Technical Data

Electrical

Battery Voltage Functional Range: 9 to 32 VDC

Power Consumption

Maximum: ≈ 12 watt at 24 VDC

Standby: ≈ 5 watt at 24 VDC

Control Power: 12-24 VDC

Communication: J1939 (Accessory Data Link)

Single, 6-pin Connector

Alarm

Sound Level 80 db

PHYSICAL

Weight

4 lb or ≈ 1.8 kg

ENVIRONMENTAL

Operating Temperature

-40° C to 70° C

-40° F to 158° F

Storage Temperature

-50° C to 70° C

-58° F to 158° F

Relative Humidity

90%

CERTIFICATIONS

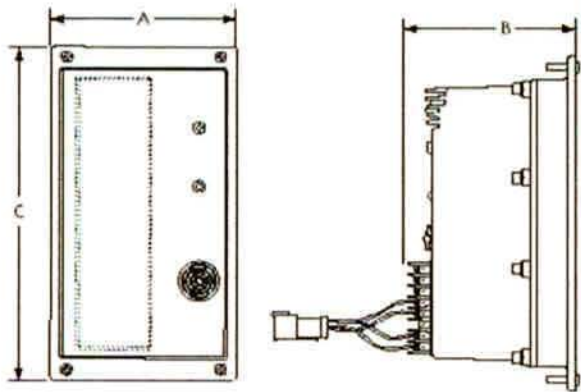


UL Recognized

EMCP 3 ANNUNCIATOR



Row	LED 1	LED 2
1	Red	Yellow
2	Red	Yellow
3	Red	Yellow
4	Red	Yellow
5	Red	Yellow
6	Red	Yellow
7	Red	Yellow
8	Red	Yellow
9	Red	Yellow
10	Red	Yellow
11	Red	Yellow
12	Red	Yellow
13	Green	Yellow
14	Green	Yellow
15	Red	Green
16	Red	Green



Annunciator Dimensions		
A	158 mm	6.22 in
B	139 mm	5.12 in
C	288 mm	11.34 in



801 DEL NORTE BLVD.
OXNARD, CA 93030
P.O. BOX 5227
OXNARD, CA 93031

DATE: 09-11-09
PAGE 1 of 1

TINA GRIETENS
NIPOMO COMMUNITY SERVICES DISTRICT
148 S. WILSON STREET
NIPOMO, CA 93444

QUOTATION NUMBER: AWA10399

PRICING ON NEW MULTIQUIP GENERATOR SET**\$120,863.00 PLUS TAX**
(STANDARD SPECIFICATIONS)
MODEL: DCA400SSI
352 KW STANDBY RATING / 320 KW PRIME RATING

INCLUDES THE FOLLOWING OPTIONS:

- A. TRAILER & TOOL BOX, PINTEL HITCH & ELECTRIC BRAKES
- B. BATTERY CHARGER
- C. ENGINE HEATER
- D. DELIVERY TO JOB SITE (NIPOMO, CA)
- E. START UP TEST (ONE TRIP) (LOAD BANK TEST NOT INCLUDED)
- F. SUBBASE FUEL CELL (DOUBLE WALL) 24 HOUR

PLEASE NOTE: INSTALLATION BY OTHERS

SINCERELY,

ALLEN ABRAMOVITCH



Quinn Power Systems
Allen Abramovitch
Sales Representative
Cell: 805-431-3180
Fax: 805-983-1643
Office: 805-485-2171 Ext. 8706
801 Del Norte Blvd. Oxnard, CA 93030
aabramovitch@quinnpower.com



DCA400SSI

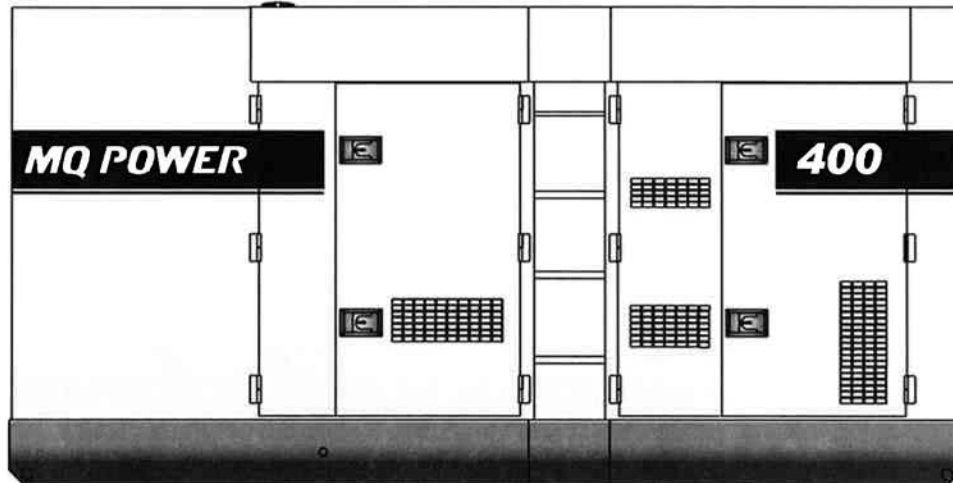
WhisperWatt™ Generator

WhisperWatt™ 400

Prime Rating: 320 kW (400 kVA)

Standby Rating: 352 kW (440 kVA)

60 Hertz



Standard Features

- **Heavy duty, turbocharged, direct injection, air to air intercooled diesel engine** provides maximum reliability.
- **Brushless alternator** reduces service and maintenance requirements and meets temperature rise standards for Class F insulation systems.
- **Open delta alternator design** provides virtually unlimited excitation for maximum motor starting capability.
- **Automatic voltage regulator (AVR)** provides precise regulation.
- **Electronic governor system** maintains frequency to $\pm 0.25\%$.
- **Full load acceptance** of standby nameplate rating in one step (NFPA 110, para 5-13.2.6).
- **Sound attenuated, weather resistant, steel housing** provides operation at 74 dB(A) at 23 feet. Fully lockable enclosure allows safe unattended operation.
- **Internal fuel tank** with direct reading fuel gauges are standard.
- **Fuel / water separator** removes condensation from fuel for extended engine life.
- **E-Coat primer** with polyurethane enamel finish coat.
- **Simultaneous single and three phase power.**
- **EPA emissions certified.** - Tier 3 emissions compliant.
- **Complete engine analog instrumentation** includes DC ammeter, oil pressure gauge, water temp. gauge, fuel level gauge, tachometer/hour meter, preheat indicator, manual engine speed control, emergency shutdown monitors, and emergency stop button.
- **Complete generator analog instrumentation** includes voltage regulator control, ammeter phase selector switch, voltmeter phase selector switch, AC voltmeter, AC ammeter, frequency meter, panel light, and circuit breaker.
- **Automatic safety shutdown system** monitors the water temperature, engine oil pressure, overspeed, and overcrank. Warning lights indicate abnormal conditions.
- **Low coolant level shutdown system** provides protection from critically low coolant levels. Includes control panel warning light.
- **Auto start/stop control** allows generator to start automatically in the event of a commercial power failure.
- **Complete power panel.** Fully covered; three-phase terminals and single phase receptacles allow fast and convenient hookup for most applications including temporary power boxes, tools and lighting equipment. All are NEMA standard.
- **Emergency stop switch.**
- **Battery switch.**
- **Voltage change over board** allows easy to change voltages as your applications require. 240/480 Buss Bar.



DCA400SSI

WhisperWatt™ Generator

Specifications

Generator Specifications	
Design	Revolving field, Self-ventilated Drip-proof, Single bearing
No. of Poles	4-pole
Excitation	Brushless with AVR
Standby Output	352 KW (440 kVA)
Prime Output	320 KW (400 kVA)
Generator RPM	1800
Voltage — 3Ø	208, 220, 240, 415, 440, 480V Reconnectable
Voltage — 1Ø	120, 127, 139, 240, 254, 277V Adjustable
Armature Connection	Star with neutral
Voltage Regulation (No load to full load)	±0.5%
Power Factor	0.8
Frequency	60 Hz
Frequency Regulation: No Load to Full Load	Isochronous under varying loads from no load to 100% rated load
Frequency Regulation: Steady State	±0.25% of mean value for constant loads from no load to full load
Insulation	Class F
Sound Level dB(A) Full load at 23 feet	74

Engine Specifications	
Make / Model	Isuzu / 6WG1X
Emissions	EPA Tier 3 Certified
Starting System	Electric
Design	4-cycle, water cooled, direct Injection, turbocharged, air to air Intercooled
Displacement	15681 cc
No. Cylinders	6
Bore x Stroke (mm)	147 x 154
Gross Engine Power Output	532 hp (402.7 kWm)
BMEP	236 psi (1970 kPa)
Piston Speed	1819 ft/min (9.24 m/s)
Compression Ratio	16.0 : 1
Engine Speed	1800 rpm
Overspeed Limit	2040 rpm
Oil Capacity Gallons (liters)	14.4 gal. (55 L)
Battery	12V 190Ah x 2 (24V System)

Fuel System		
Recommended Fuel	ASTM-D975-No.1 & No. 2-D	
Maximum Fuel Flow (per hour)	98.8 gal (374 L)	
Maximum Inlet Restriction (Hg)	8.86 in. (225 mm)	
Fuel Tank Capacity	129 gallons (490 L)	
Fuel Consumption	gph	lph
At full load	23.4	89.0
At 3/4 load	18.5	70.2
At 1/2 load	13.3	50.6
At 1/4 load	8.2	31.2

Cooling System	
Fan Load	21.5 hp (16kW)
Coolant Capacity (with radiator)	15.85 gallons (60 liters)
Coolant Flow Rate (per minute)	111 gal (420 L)
Heat Rejection to Coolant (per minute)	11850 Btu (12.5 MJ)
Heat Rejection from Engine (per minute)	3034 Btu (3.2 MJ)
Maximum Coolant Friction Head	20.3 psi (140 kPa)
Maximum Coolant Static Head	29.5 ft (9.0 m)
Ambient Temperature Rating	104°F (40°C)

Air	
Combustion Air	957 cfm (27.1 m³/min)
Maximum Air Cleaner Restriction	30 in. H ₂ O (7.5 kPa)
Alternator Cooling Air	2797 cfm (79.0 m³/min)
Radiator Cooling Air	12360 cfm (350 m³/min)

Exhaust System	
Gas Flow (full load)	2306 cfm (65.3 m³/min)
Gas Temperature	959°F (515°C)
Maximum Back Pressure	53.2 in H ₂ O (13.3 kPa)

Amperage	
Rated Voltage	Maximum Amps
1Ø 120 Volt	888.9 Amps (4 wire)
1Ø 240 Volt	444.4 Amps (4 wire)
3Ø 240 Volt	962.3 Amps
3Ø 480 Volt	481.1 Amps
Main Line Circuit Breaker Rating	1000 Amps
Over Current Relay Trip Set Point	480 Amps

Warranty*

Isuzu Engine

12 months from date of purchase with unlimited hours or 24 months from date of purchase with 2000 hours (whichever comes first).

Generator

24 months from date of purchase or 2000 hours (whichever occurs first).

Trailer

12 months excluding normal wear items.

*Refer to the express written, one-year limited warranty sheet for additional information.

Generator is not intended for use in enclosed areas or where free flow of air is restricted. Backfeed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device.

Specifications are subject to change without notice.



DCA400SSI WhisperWatt™ Generator

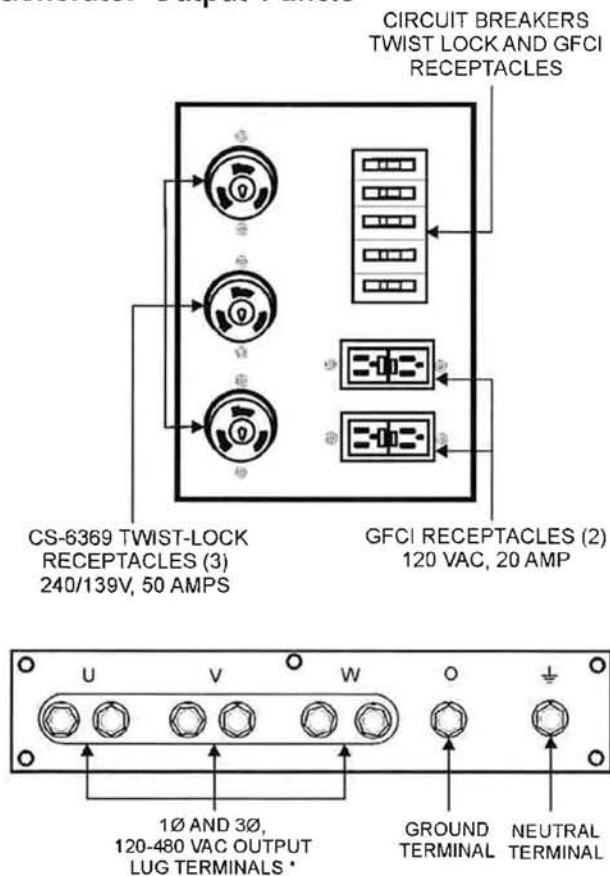
MQ POWER DECIBEL LEVELS

Our soundproof housing allows substantially lower operating noise levels than competitive designs. WhisperWatts are at home on construction sites, in residential neighborhoods, and at hospitals — just about anywhere.

- 90 — Subway / truck traffic
- 80 — Average city traffic
- 74.0 — WhisperWatt at 23 feet
- 70 — Inside car at 60 mph
- 60 — Air conditioner at 20 feet
- 50 — Normal conversation

74.0
DECIBELS

Generator Output Panels



Optional Generator Features

- Battery charger** — provides fully automatic and self-adjusting charging to the generator's battery system.
- Jacket water heater** — for easy starting in cold weather climates.
- Special batteries** — long life batteries provide extra engine cranking power.
- Spring Isolaters** — provides extra vibration protection for standby applications.
- Trailer mounted package** — highway legal trailer with electronic or surge brakes with single, double, or triple axle configuration. Extra capacity fuel tanks are also available.

Optional Output Connections

- Cam-Loks** — provides quick disconnect alternative to bolt-on connectors.
- Pin and Sleeve Connectors** — provides industry standard connectors for all voltage requirements.
- Output cable** — available in any custom length and size configuration.

Optional Fuel Cell Features

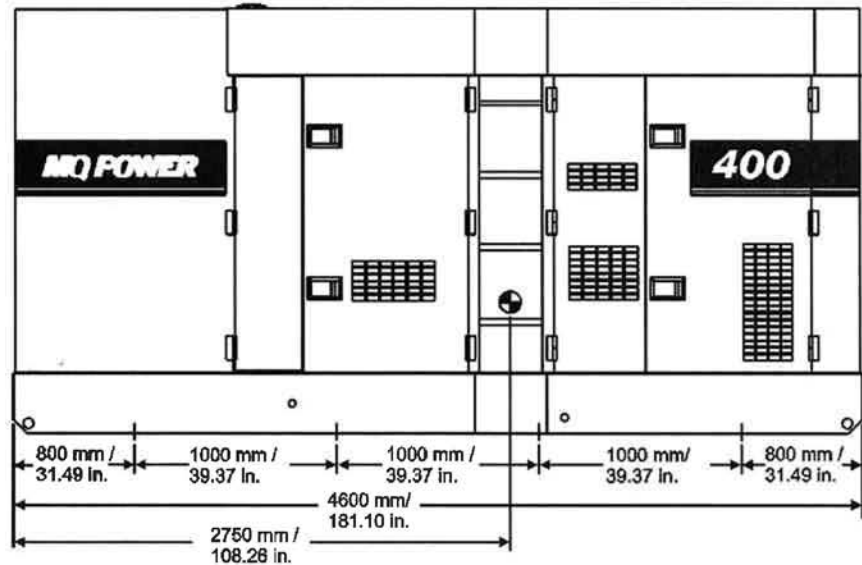
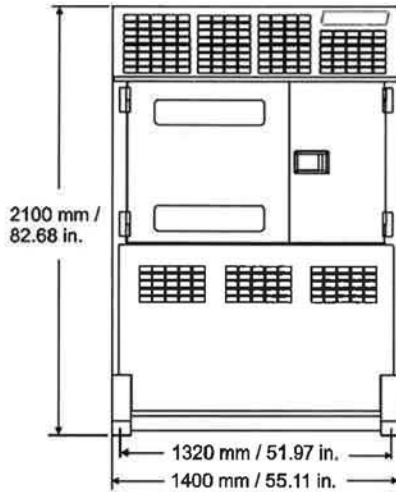
- Trailer fuel tank** — a second fuel cell located in the trailer allows for extended run time.
- Subbase fuel cells (double wall)** — Additional fuel cell for extended runtime operation. Contains a leak sensor, low fuel level switch, and a secondary containment tank. UL142 listed.
 - 12 hours of minimum run time.
 - 24 hours of minimum run time.



DCA400SSI

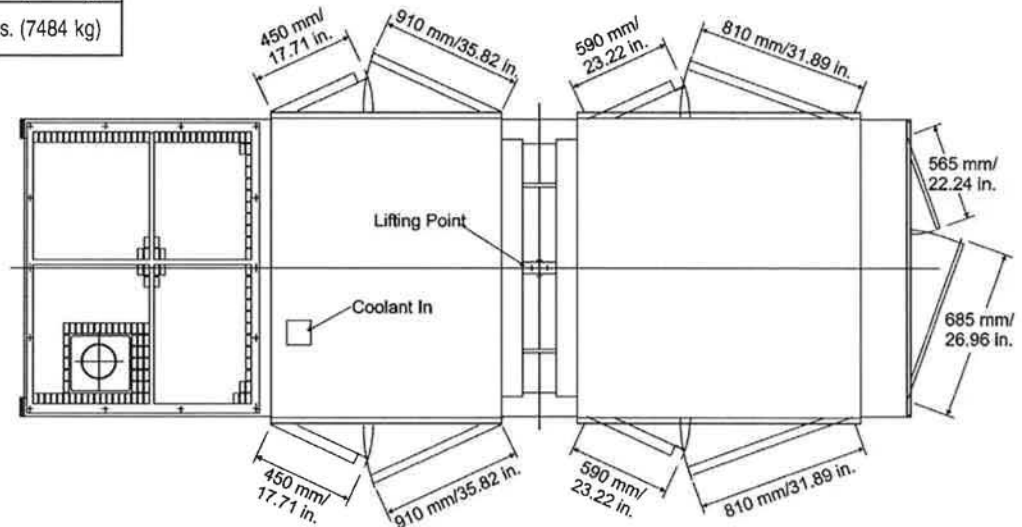
WhisperWatt™ Generator

Dimensions



Weight

Dry Weight	11642 lbs. (5280 kg)
Wet Weight	12877 lbs. (5840 kg)
Max. Lifting Point Capacity	16500 lbs. (7484 kg)



Manufactured by Denyo Co.

Your MQ Power dealer is:



MQ POWER
 POST OFFICE BOX 6254
 CARSON, CA 90749
 310-537-3700 • 800-883-2551
 FAX: 310-604-3831
 E-MAIL: mqpower@multiquip.com
 WWW: mqpower.com

TITAN INDUSTRIAL & SAFETY SUPPLY, INC.

P.O. BOX 665 SANTA MARIA, CA 93456

805-614-9293

FAX 805-614-9294

QUOTE

To From

Nipomo CSD
attn: Robert Cruz
Ph. 805-1341
fax: 929-

Ship To:

Sales Rep	FOB	Ship Via	Terms
MAC	Deat		

9/4/09

QTY	ITEM #	DESCRIPTION	UNIT PRICE	TOTAL
1	DCA-400SSI	320 Kw, complete w/ auto start/stop control, emergency stop, low coolant. all standard features. 129 gal fuel cell. with TRLE-400XF w/ fuel cell and surge or elect breaker or pointer hitch. with shipping included to Santa maria.		
		See attached		

Sub-Total	119,017.95
Tax	9,594.79
Total #	128,612.74

Instruction/Comments:

Thanks for the opportunity.

Quote good for 21 days. (9/4/09)

days.

after receipt of order.

PURCHASE ORDER #



DCA400SSI

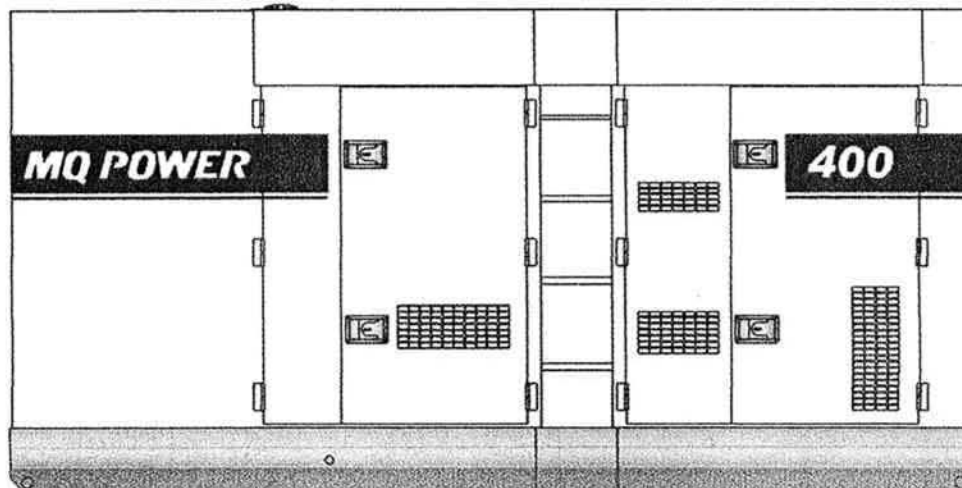
WhisperWatt™ Generator

WhisperWatt™ 400

Prime Rating: 320 kW (400 kVA)

Standby Rating: 352 kW (440 kVA)

60 Hertz



Standard Features

- **Heavy duty, turbocharged, direct injection, air to air intercooled diesel engine** provides maximum reliability.
- **Brushless alternator** reduces service and maintenance requirements and meets temperature rise standards for Class F insulation systems.
- **Open delta alternator design** provides virtually unlimited excitation for maximum motor starting capability.
- **Automatic voltage regulator (AVR)** provides precise regulation.
- **Electronic governor system** maintains frequency to $\pm 0.25\%$.
- **Full load acceptance** of standby nameplate rating in one step (NFPA 110, para 5-13.2.6).
- **Sound attenuated, weather resistant, steel housing** provides operation at 74 dB(A) at 23 feet. Fully lockable enclosure allows safe unattended operation.
- **Internal fuel tank** with direct reading fuel gauges are standard.
- **Fuel / water separator** removes condensation from fuel for extended engine life.
- **E-Coat primer** with polyurethane enamel finish coat.
- **Simultaneous single and three phase power.**
- **EPA emissions certified.** - Tier 3 emissions compliant.
- **Complete engine analog instrumentation** includes DC ammeter, oil pressure gauge, water temp. gauge, fuel level gauge, tachometer/hour meter, preheat indicator, manual engine speed control, emergency shutdown monitors, and emergency stop button.
- **Complete generator analog instrumentation** includes voltage regulator control, ammeter phase selector switch, voltmeter phase selector switch, AC voltmeter, AC ammeter, frequency meter, panel light, and circuit breaker.
- **Automatic safety shutdown system** monitors the water temperature, engine oil pressure, overspeed, and overcrank. Warning lights indicate abnormal conditions.
- **Low coolant level shutdown system** provides protection from critically low coolant levels. Includes control panel warning light.
- **Auto start/stop control** allows generator to start automatically in the event of a commercial power failure.
- **Complete power panel.** Fully covered; three-phase terminals and single phase receptacles allow fast and convenient hookup for most applications including temporary power boxes, tools and lighting equipment. All are NEMA standard.
- **Emergency stop switch.**
- **Battery switch.**
- **Voltage change over board** allows easy to change voltages as your applications require. 240/480 Buss Bar.



DCA400SSI

WhisperWatt™ Generator

Specifications

Generator Specifications	
Design	Revolving field, Self-ventilated Drip-proof, Single bearing
No. of Poles	4-pole
Excitation	Brushless with AVR
Standby Output	352 KW (440 kVA)
Prime Output	320 KW (400 kVA)
Generator RPM	1800
Voltage — 3Ø	208, 220, 240, 415, 440, 480V Reconnectable
Voltage — 1Ø	120, 127, 139, 240, 254, 277V Adjustable
Armature Connection	Star with neutral
Voltage Regulation (No load to full load)	±0.5%
Power Factor	0.8
Frequency	60 Hz
Frequency Regulation: No Load to Full Load	Isochronous under varying loads from no load to 100% rated load
Frequency Regulation: Steady State	±0.25% of mean value for constant loads from no load to full load
Insulation	Class F
Sound Level dB(A) Full load at 23 feet	74

Engine Specifications	
Make / Model	Isuzu / 6WG1X
Emissions	EPA Tier 3 Certified
Starting System	Electric
Design	4-cycle, water cooled, direct injection, turbocharged, air to air Intercooled
Displacement	15681 cc
No. Cylinders	6
Bore x Stroke (mm)	147 x 154
Gross Engine Power Output	532 hp (402.7 kWm)
BMEP	236 psi (1970 kPa)
Piston Speed	1819 ft/min (9.24 m/s)
Compression Ratio	16.0 : 1
Engine Speed	1800 rpm
Overspeed Limit	2040 rpm
Oil Capacity Gallons (liters)	14.4 gal. (55 L)
Battery	12V 190Ah x 2 (24V System)

Fuel System		
Recommended Fuel	ASTM-D975-No.1 & No. 2-D	
Maximum Fuel Flow (per hour)	98.8 gal (374 L)	
Maximum Inlet Restriction (Hg)	8.86 in. (225 mm)	
Fuel Tank Capacity	129 gallons (490 L)	
Fuel Consumption	gph	lph
At full load	23.4	89.0
At 3/4 load	18.5	70.2
At 1/2 load	13.3	50.6
At 1/4 load	8.2	31.2

Cooling System	
Fan Load	21.5 hp (16kW)
Coolant Capacity (with radiator)	15.85 gallons (60 liters)
Coolant Flow Rate (per minute)	111 gal (420 L)
Heat Rejection to Coolant (per minute)	11850 Btu (12.5 MJ)
Heat Rejection from Engine (per minute)	3034 Btu (3.2 MJ)
Maximum Coolant Friction Head	20.3 psi (140 kPa)
Maximum Coolant Static Head	29.5 ft (9.0 m)
Ambient Temperature Rating	104°F (40°C)

Air	
Combustion Air	957 cfm (27.1 m³/min)
Maximum Air Cleaner Restriction	30 in. H ₂ O (7.5 kPa)
Alternator Cooling Air	2797 cfm (79.0 m³/min)
Radiator Cooling Air	12360 cfm (350 m³/min)

Exhaust System	
Gas Flow (full load)	2306 cfm (65.3 m³/min)
Gas Temperature	959°F (515°C)
Maximum Back Pressure	53.2 in. H ₂ O (13.3 kPa)

Amperage	
Rated Voltage	Maximum Amps
1Ø 120 Volt	888.9 Amps (4 wire)
1Ø 240 Volt	444.4 Amps (4 wire)
3Ø 240 Volt	962.3 Amps
3Ø 480 Volt	481.1 Amps
Main Line Circuit Breaker Rating	1000 Amps
Over Current Relay Trip Set Point	480 Amps

Warranty*

Isuzu Engine

12 months from date of purchase with unlimited hours or 24 months from date of purchase with 2000 hours (whichever comes first).

Generator

24 months from date of purchase or 2000 hours (whichever occurs first).

Trailer

12 months excluding normal wear items.

*Refer to the express written, one-year limited warranty sheet for additional information.

Generator is not intended for use in enclosed areas or where free flow of air is restricted. Backfeed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device.

Specifications are subject to change without notice.



DCA400SSI

WhisperWatt™ Generator

not added 9/4/09 MC

MQ POWER DECIBEL LEVELS

Our soundproof housing allows substantially lower operating noise levels than competitive designs. WhisperWatts are at home on construction sites, in residential neighborhoods, and at hospitals — just about anywhere.

- 90 — Subway / truck traffic
- 80 — Average city traffic
- 70 — Inside car at 60 mph
- 60 — Air conditioner at 20 feet
- 50 — Normal conversation

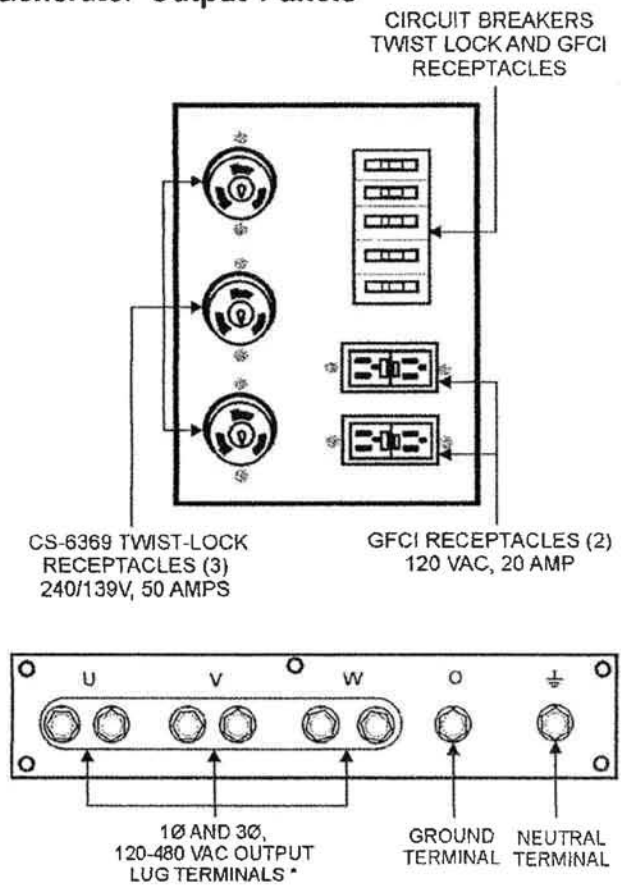
WhisperWatt at 23 feet

74.0
DECIBELS

Optional Generator Features

- Battery charger** — provides fully automatic and self-adjusting charging to the generator's battery system.
- Jacket water heater** — for easy starting in cold weather climates.
- Special batteries** — long life batteries provide extra engine cranking power.
- Spring Isolators** — provides extra vibration protection for standby applications.
- Trailer mounted package** — highway legal trailer with electronic or surge brakes with single, double, or triple axle configuration. Extra capacity fuel tanks are also available.

Generator Output Panels



Optional Output Connections

- Cam-Loks** — provides quick disconnect alternative to bolt-on connectors.
- Pin and Sleeve Connectors** — provides industry standard connectors for all voltage requirements.
- Output cable** — available in any custom length and size configuration.

Optional Fuel Cell Features

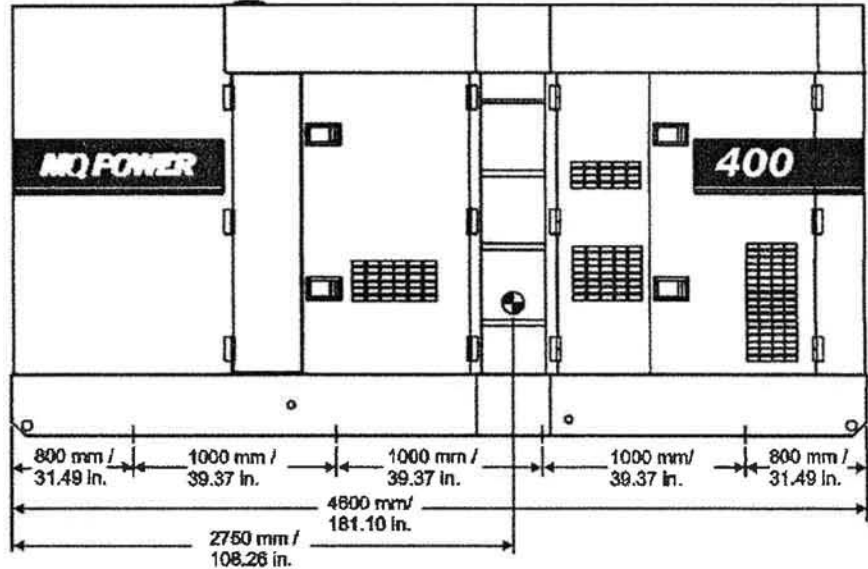
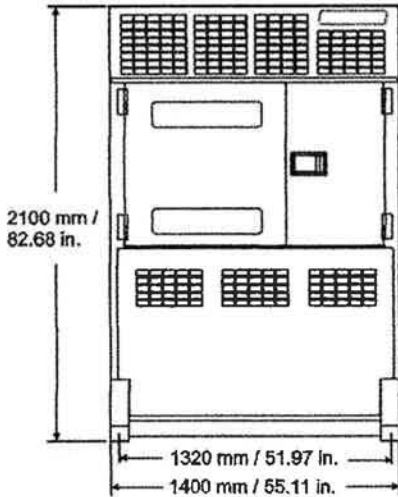
- Trailer fuel tank** — a second fuel cell located in the trailer allows for extended run time.
- Subbase fuel cells (double wall)** — Additional fuel cell for extended runtime operation. Contains a leak sensor, low fuel level switch, and a secondary containment tank. UL142 listed.
 - 12 hours of minimum run time.
 - 24 hours of minimum run time.



DCA400SSI

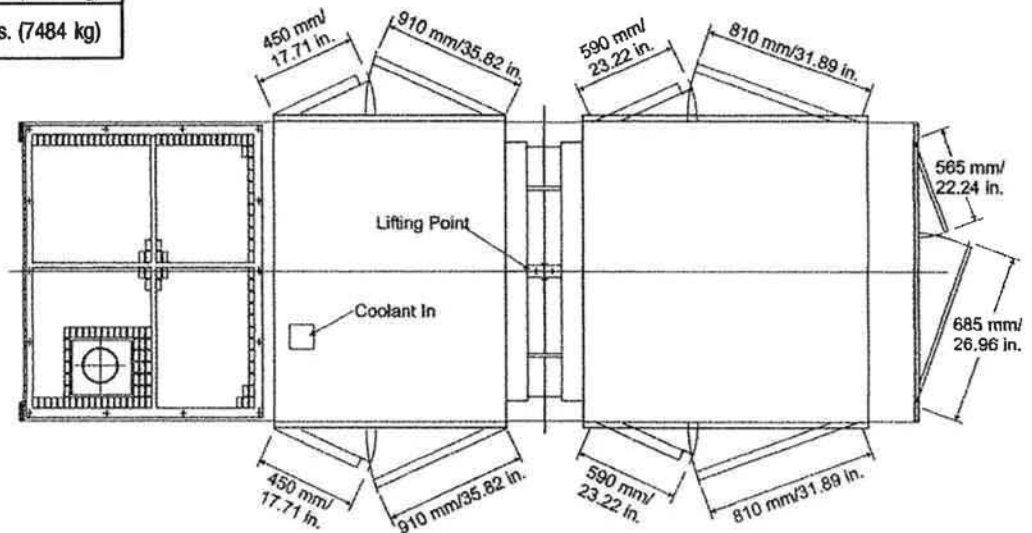
WhisperWatt™ Generator

Dimensions



Weight

Dry Weight	11642 lbs. (5280 kg)
Wet Weight	12877 lbs. (5840 kg)
Max. Lifting Point Capacity	16500 lbs. (7484 kg)



Manufactured by Denyo Co.

Your MQ Power dealer is:



MQ POWER
 POST OFFICE BOX 6254
 CARSON, CA 90749
 310-537-3700 • 800-883-2551
 FAX: 310-604-3831
 E-MAIL: mqpower@multiquip.com
 WWW: mqpower.com

POWER

MQ Power WhisperWatt 180 kVA to 800 kVA – Single / Three Phase

MODEL	DCA180SSI	DCA220SSJ	DCA250SSI	DCA300SSK	DCA300SSC	DCA400SSI	DCA600SSV	DCA800SSK
Generator								
Design	Revolving field, Self-ventilated, Drip-proof, Single bearing							
No. of poles	4-pole							
Excitation	Brushless with AVR							
Standby rating	158 kW (198kVA)	194 kW (242kVA)	220 kW (275kVA)	264 kW (330kVA)	264 kW (330kVA)	352 kW (440kVA)	528 kW (660kVA)	704 kW (880kVA)
Prime rating	144 kW (180kVA)	176 kW (220kVA)	200 kW (250kVA)	240 kW (300kVA)	240 kW (300kVA)	320 kW (400kVA)	480 kW (600kVA)	640 kW (800kVA)
Generator RPM	1800							
Voltage - 3 phase	208, 220, 240, 416, 440, 480V Reconnectable							
Voltage - 1 phase	120, 127, 139, 240, 254, 277V Adjustable							
Armature connection	Star with neutral							
Voltage regulation (no load to full load)	±0.5%							
Frequency	60 Hz							
Frequency regulation (steady state load)	±0.25% Includes Electronic Governor							
Power factor	0.8							
Sound level dB(A) Full load at 23 feet	71	73	68	72	73	71	74	73
Diesel Engine								
Make / Model	Isuzu 6HK1X	John Deere 6068HF485	Isuzu 6UZ1X	Komatsu SAA6D125E-5	Cummins QSL9-G3	Isuzu BH-6WG1X	Volvo TAD1642GE	Komatsu SAA6D170E-3
Emissions	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 3	Tier 2	Tier 2
Starting system	Electric							
Design	4-cycle Water cooled Direct injection Turbocharged Charge Air Cooled							
Displacement	7790 cc	6800 cc	9839 cc	11040 cc	8900 cc	15681 cc	16120 cc	23150 cc
No. of cylinders	6							
Bore x Stroke (mm)	115 x 125	106 x 127	120 x 145	125 x 150	114 x 145	147 x 154	144 x 165	170 x 170
Gross HP	265	315	348	420	399	532	809	1220
Fuel tank capacity gal.(liters)	100 (380)	100 (380)	121 (460)	129 (490)	129 (490)	129 (490)	129 (490)	129 (490)
Fuel consumption full load gph (lph) 3/4 load gph (lph) 1/2 load gph (lph) 1/4 load gph (lph)	10.6 (40.0) 8.0 (30.1) 6.1 (23.1) 3.7 (14.0)	13.6 (51.6) 10.4 (39.5) 7.7 (29.3) 4.5 (17.2)	14.7 (55.8) 10.9 (41.2) 7.5 (28.5) 4.4 (16.6)	16.7 (63.1) 12.4 (46.8) 8.8 (33.5) 5.2 (19.8)	19.0 (72.0) 15.5 (58.6) 11.1 (41.9) 5.9 (22.4)	23.0 (87.3) 18.0 (68.1) 12.9 (48.8) 7.8 (29.7)	33.1 (125.2) 24.2 (91.7) 17.3 (65.4) 10.5 (39.6)	41.3 (156.5) 30.8 (116.4) 22.6 (85.9) 14.5 (54.9)
Coolant capacity gal. (liters)	6.6 (25.0)	6.4 (24.0)	14.3 (54.0)	12.4 (46.1)	11.3 (43.0)	15.8 (60.0)	24.6 (93)	39.1 (148)
Oil capacity gal. (liters)	10.6 (40.0)	8.19 (31.0)	10.8 (41.0)	16.6 (63.0)	7.0 (26.5)	14.4 (55.0)	12.7 (48.0)	37.2 (141)
Battery	12V 100Ah x 2 24 V System	12V 128Ah	12V 150Ah x 2 24 V System	12V 150Ah x 2 24 V System	12V 150Ah x 2 24 V System	12V 200Ah x 2 24 V System	12V 200Ah x 2 24 V System	12V 200Ah x 4 24 V System
Size								
L x W x H in. (cm)	138 x 49 x 67 (350 x 124 x 170)	138 x 49 x 67 (355 x 124 x 170)	148 x 55 x 71 (375 x 140 x 180)	158 x 53 x 71 (400 x 147 x 180)	150 x 55 x 71 (380 x 140 x 180)	181 x 55 x 83 (460 x 140 x 210)	185 x 65 x 94 (470 x 165 x 240)	241 x 77 x 98 (611 x 195 x 250)
Approx Net Wt lbs. (kg)	6511 (2953)	7016 (3182)	8397 (3809)	10396 (4717)	8797 (3990)	11973 (5432)	16686 (7567)	24434 (11086)
Amps								
Single phase 120V	400.0A (4 wire)	489.9A (4 wire)	555.5A (4 Wire)	666.7A (4 wire)	666.7A (4 wire)	888.9A (4 wire)	1333.3A (4 wire)	1777.8A (4 wire)
Single phase 240V	200.0A (4 wire)	244.4A (4 wire)	277.7A (4 Wire)	333.3A (4 wire)	333.3A (4 wire)	444.4A (4 wire)	666.7A (4 wire)	888.9A (4 wire)
Three phase 240V	433A	529A	601A	722A	722A	962A	1443A	1924A
Three phase 480V	216A	265A	301A	361A	361A	481A	721A	962A



Rev.2 (7/09)

Features and specifications are subject to change without notice.
Units manufactured by Denyo Co. Ltd.

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1800 Waters Ridge Drive, Suite 500

Lawsville, TX 75887
800-383-2551
www.mqpower.com

www.mqpower.com

Tina Grietens

From: Michael Carriero [mikecarriero@sbcglobal.net]
Sent: Tuesday, September 22, 2009 4:29 AM
To: Tina Grietens
Subject: Generator and trailer updated
Attachments: Sub-Base Fuel Tanks_Rev 0.pdf

Tina,
Here is the updated generator and trailer with 552gal double wall fuel cell on it and battery charger quote.

You already have the info on the generator so here is the trailer and this will have the battery charger also. Your price delivered to you is \$144,650.00

The delivery will be to Titan in Santa Maria. You can come with your truck to pick up if that is alright. Any questions or if you need a faxed quote contact me and I will do my best.

As I said I am out of town until next Monday and have a Fall Protection class when I get back. I will be able to stop by on Tuesday if you wish.

Thank You,

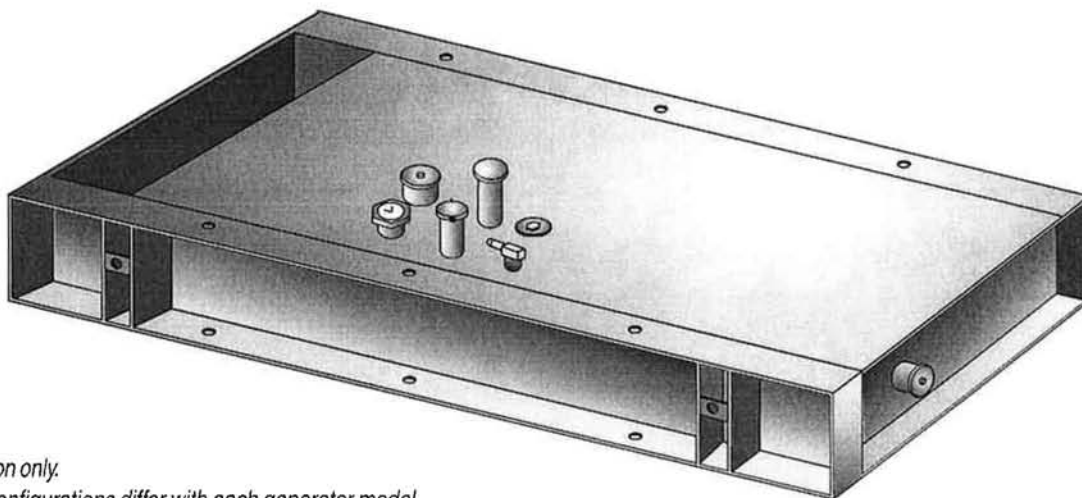
Michael Carriero

Titan Industrial & Safety
250 Kathleen Crt.
Santa Maria Ca. 93458
Cell: 805-331-2853
mikecarriero@sbcglobal.net



Sub-Base Fuel Tank

For WhisperWatt™ Generators



*Tank depiction only.
Fuel Tank Configurations differ with each generator model.
See reverse for tank models and specifications.*

MQ Power double wall sub-base fuel tanks utilize steel construction to ensure unit integrity, provide added protection against fuel spillage and to satisfy requirements for local and/or federal agencies governing installation and safety guidelines. All MQ Power double wall sub-base fuel tanks are certified to meet the UL142 Standard and are compliant with NFPA 30 regulations. Each tank is designed and engineered for each WhisperWatt™ generator model to provide fuel capacity for a minimum of either 12 hours or 24 hours of full load operation. Optional fuel capacities are available. Consult MQ Power for details.

Standard Features

- **2" NPT Normal Vent Fitting** including screened atmospheric vent cap
- **Emergency Vent Fitting Inner Tank**
(NPT sized per NFPA 30 for the wetted surface of the inner tank including emergency pressure relief vent cap)
- **Emergency Vent Fitting Containment Area**
(NPT sized per the inner tank requirements including emergency pressure relief vent cap)
- **2" NPT Fuel Fill** including lockable cap and 8" pipe riser.
- **1/2" NPT Removable Fuel Supply Dip Tube**
- **1/2" NPT Removable Fuel Return Dip Tube**
- **Direct Reading Mechanical Gauge**
- **Low Fuel Level Switch**
- **Fuel In Basin Switch**
- **Black Enamel Paint**



Sub-Base Fuel Tank

For WhisperWatt™ Generators

WhisperWatt™ Sub Base Fuel Tank Specifications

Generator Model	Full Load Operation*	Fuel Capacity Gallons	Tank Dimensions L x W x H (in.)	Generator Model	Full Load Operation*	Fuel Capacity Gallons	Tank Dimensions L x W x H (in.)
DCA7000SS	12 hr	10	65 x 25 x 8	DCA150SSI	12 hr	107	134 x 47 x 8
	24 hr	20	65 x 25 x 12		24 hr	214	134 x 47 x 13
DCA10SPX	12 hr	15	55 x 25 x 8	DCA150SSJ	12 hr	110	126 x 47 x 8
	24 hr	30	55 x 25 x 12		24 hr	220	126 x 47 x 14
TLG12SPX4	12 hr	20	66 x 27 x 8	DCA180SSI	12 hr	165	138 x 49 x 10
	24 hr	40	66 x 27 x 11		24 hr	330	138 x 49 x 17
DCA15SPX4	12 hr	20	61 x 25 x 8	DCA180SSJ	12 hr	140	138 x 49 x 9
	24 hr	40	61 x 25 x 12		24 hr	280	138 x 49 x 15
DCA20SPX2	12 hr	20	73 x 29 x 8	DCA220SSJ	12 hr	165	138 x 49 x 10
	24 hr	40	73 x 29 x 12		24 hr	330	138 x 49 x 17
DCA25SSI	12 hr	25	73 x 29 x 8	DCA250SSI	12 hr	177	148 x 55 x 9
	24 hr	50	73 x 29 x 12		24 hr	354	148 x 55 x 16
DCA36SPX	12 hr	40	76 x 35 x 8	DCA300SSC	12 hr	228	150 x 55 x 11
	24 hr	80	76 x 35 x 14		24 hr	456	150 x 55 x 19
DCA45SSI	12 hr	40	76 x 35 x 8	DCA300SSK	12 hr	205	157 x 58 x 9
	24 hr	80	76 x 35 x 13		24 hr	410	157 x 58 x 16
DCA56SPX	12 hr	55	98 x 37 x 8	DCA400SSI	12 hr	276	181 x 55 x 12
	24 hr	110	98 x 37 x 14		24 hr	552	181 x 55 x 20
DCA70SSI	12 hr	55	94 x 35 x 8	DCA400SSV	12 hr	270	165 x 55 x 11
	24 hr	110	94 x 35 x 14		24 hr	540	165 x 55 x 20
DCA85SSJ	12 hr	64	102 x 35 x 9	DCA600SSV	12 hr	400	185 x 65 x 12
	24 hr	128	102 x 35 x 15		24 hr	800	185 x 65 x 22
DCA125SSI	12 hr	90	120 x 43 x 8	DCA800SSK	12 hr	580	240 x 77 x 12
	24 hr	180	120 x 43 x 14		24 hr	1160	240 x 77 x 20

* Full Load Operation hours are the minimum running time on the tank at full capacity. Actual running time will vary according to various conditions.

The above specifications are subject to change without notice.
Specifications for custom and special order units may vary.

Your MQ Power dealer is:



MQ POWER
 POST OFFICE BOX 6254
 CARSON, CA 90749
 310-537-3700 • 800-421-1244
 FAX: 310-632-2656
 E-MAIL: mqpower@multiquip.com
 WWW: mqpower.com

QUINN RENTAL SERVICES



FED ID 77-0485068

SALES INVOICE

JOB NUMBER
JOB SITE

NIPOMO

JOB PHONE

INVOICE#

70116520-0000

PAGE
1

DATE

9/22/09 7:16 AM RAY

CUSTOMER NUMBER 656587

BILL TO: NIPOMO COMMUNITY SERVICES DIST
PO BOX 326
NIPOMO, CA 93444

STORE PURCHASED FROM

830 W. Betteravia Road
Santa Maria, CA 93455
805-922-3529

CUSTOMER PHONE 805-929-1133	ORDER BY ROBERT	PURCHASE ORDER NUMBER ROBERT CRUZ	SALES REP RAY ALEXANDER	SYSTEM TIME 9/22/09 7:16 AM	YARD PERSON RAY
DEPOSITS	DRIVERS LICENSE NUMBER	Sales Quote			10/22/09

Item number	Unit	Price	AMOUNT
1 *MISC MULTIQUIP DCA400SSIC GENERATOR 3 PHASE 400KVA (ECU&EGSI)TIER 3 ISUZU ENGINE MQPBCKIT-E BATTERY CHARGER 24 VOLT/10AMP	EA	111239.040	111239.04
1 5420	FREIGHT FOR MISC ITEMS (NON-TAXABLE)	EA 2350.000	2350.00
	Sales Tax@ 8.250%		9177.22

PAST DUE ACCOUNTS SUBJECT TO A FINANCE CHARGE OF 1.5% PER MONTH (18% ANNUAL) FROM DATE OF INVOICE. BUYER AGREES TO PAY ANY AND ALL CHARGES INCURRED IN COLLECTION OF THIS INVOICE, INCLUDING ATTORNEY FEES, LEGAL FEES AND COURT COSTS. THE ITEMS LISTED ABOVE HAVE BEEN RECEIVED IN GOOD CONDITION. RESTOCKING CHARGES WILL APPLY TO RETURNED ITEMS.

PAY THIS AMOUNT	122766.26
PLEASE REMIT TO: QUINN RENTAL SERVICES DEPARTMENT 9857 LOS ANGELES, CA 90084-9857	
TERMS: NET 10th PROX	

X

CUSTOMER SIGNATURE

(single waul fuel tank)

ROBERT CRUZ

PRINTED NAME

QUINN RENTAL SERVICES



FED ID 77-0485068

SALES INVOICE

JOB NUMBER
JOB SITE

NIPOMO

JOB PHONE

INVOICE#

70116515-0000

PAGE
1

CUSTOMER NUMBER 656587

DATE 9/21/09 4:23 PM RAY

BILL TO: NIPOMO COMMUNITY SERVICES DIST
PO BOX 326
NIPOMO, CA 93444

STORE PURCHASED FROM
830 W. Betteravia Road
Santa Maria, CA 93455
805-922-3529

CUSTOMER PHONE 805-929-1133	ORDER BY ROBERT	PURCHASE ORDER NUMBER ROBERT	SALES REP RAY ALEXANDER	SYSTEM TIME 9/21/09 4:27 PM	YARD PERSON RAY
DEPOSIT#	DRIVERS LICENSE NUMBER	Sales Quote			10/21/09

Item number	Unit	Price	AMOUNT
1 *MISC MULTIQUIP DCA400SSIC GENERATOR 3 PHASE 400KVA (ECU&EGSI) TIER 3 ISUZU ENGINE MQPBCKIT-E BATTERY CHARGER 24 VOLT/10AMP MQPMISC TRAILER 400 EVSK-HEAVY DUTY SBT 552 GALLON 24 HOUR UL142 DOUBLE WALL DCA400SSI FUEL CELL	EA	123366.890	123366.89
1 5420	FREIGHT FOR MISC ITEMS (NON-TAXABLE)	EA 3000.000	3000.00
		Sales Tax@ 8.250%	10177.77

PAST DUE ACCOUNTS SUBJECT TO A FINANCE CHARGE OF 1.5% PER MONTH (18% ANNUAL) FROM DATE OF INVOICE. BUYER AGREES TO PAY ANY AND ALL CHARGES INCURRED IN COLLECTION OF THIS INVOICE, INCLUDING ATTORNEY FEES, LEGAL FEES AND COURT COSTS. THE ITEMS LISTED ABOVE HAVE BEEN RECEIVED IN GOOD CONDITION. RESTOCKING CHARGES WILL APPLY TO RETURNED ITEMS.

PAY THIS AMOUNT 136544.66

PLEASE REMIT TO:
QUINN RENTAL SERVICES
DEPARTMENT 9857
LOS ANGELES, CA 90084-9657

TERMS: NET 10th PROX

X

CUSTOMER SIGNATURE

ROBERT CRUZ

PRINTED NAME

70116515-000

v2.01

(double wall fuel tank)



DCA400SSI

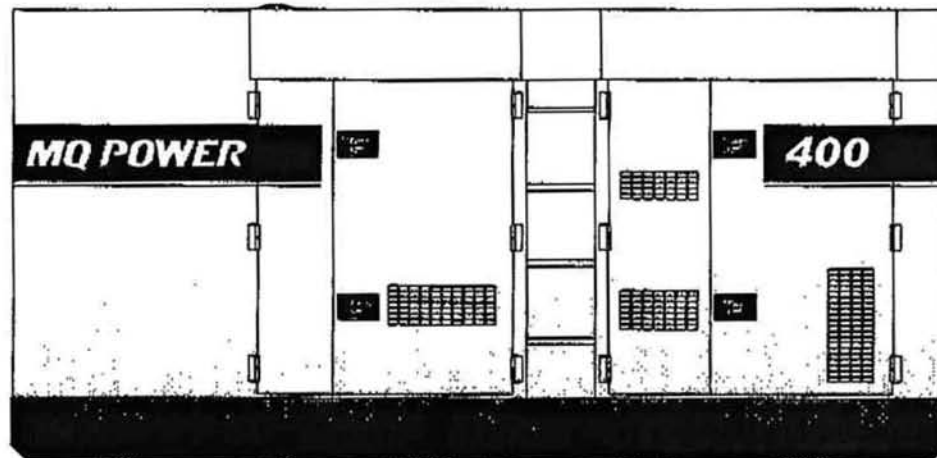
WhisperWatt™ Generator

WhisperWatt™ 400

Prime Rating: 320 kW (400 kVA)

Standby Rating: 352 kW (440 kVA)

60 Hertz



Standard Features

- **Heavy duty, turbocharged, direct injection, air to air intercooled diesel engine** provides maximum reliability.
- **Brushless alternator** reduces service and maintenance requirements and meets temperature rise standards for Class F insulation systems.
- **Open delta alternator design** provides virtually unlimited excitation for maximum motor starting capability.
- **Automatic voltage regulator (AVR)** provides precise regulation.
- **Electronic governor system** maintains frequency to $\pm 0.25\%$.
- **Full load acceptance** of standby nameplate rating in one step (NFPA 110, para 5-13.2.6).
- **Sound attenuated, weather resistant, steel housing** provides operation at 74 dB(A) at 23 feet. Fully lockable enclosure allows safe unattended operation.
- **Internal fuel tank** with direct reading fuel gauges are standard.
- **Fuel / water separator** removes condensation from fuel for extended engine life.
- **E-Coat primer** with polyurethane enamel finish coat.
- **Simultaneous single and three phase power.**
- **EPA emissions certified.** • Tier 3 emissions compliant.
- **Complete engine analog instrumentation** includes DC ammeter, oil pressure gauge, water temp. gauge, fuel level gauge, tachometer/hour meter, preheat indicator, manual engine speed control, emergency shutdown monitors, and emergency stop button.
- **Complete generator analog instrumentation** includes voltage regulator control, ammeter phase selector switch, voltmeter phase selector switch, AC voltmeter, AC ammeter, frequency meter, panel light, and circuit breaker.
- **Automatic safety shutdown system** monitors the water temperature, engine oil pressure, overspeed, and overcrank. Warning lights indicate abnormal conditions.
- **Low coolant level shutdown system** provides protection from critically low coolant levels. Includes control panel warning light.
- **Auto start/stop control** allows generator to start automatically in the event of a commercial power failure.
- **Complete power panel.** Fully covered; three-phase terminals and single phase receptacles allow fast and convenient hookup for most applications including temporary power boxes, tools and lighting equipment. All are NEMA standard.
- **Emergency stop switch.**
- **Battery switch.**
- **Voltage change over board** allows easy to change voltages as your applications require. 240/480 Buss Bar.

DCA400SSI Rev 1



DCA400SSI

WhisperWatt™ Generator

Specifications

Generator Specifications

Design	Revolving field, Self-ventilated Drip-proof, Single bearing
No. of Poles	4-pole
Excitation	Brushless with AVR
Standby Output	352 KW (440 KVA)
Prime Output	320 KW (400 KVA)
Generator RPM	1800
Voltage — 3Ø	208, 220, 240, 415, 440, 480V Reconnectable
Voltage — 1Ø	120, 127, 139, 240, 254, 277V Adjustable
Armature Connection	Star with neutral
Voltage Regulation (No load to full load)	±0.5%
Power Factor	0.8
Frequency	60 Hz
Frequency Regulation: No Load to Full Load	Isochronous under varying loads from no load to 100% rated load
Frequency Regulation: Steady State	±0.25% of mean value for constant loads from no load to full load
Insulation	Class F
Sound Level dB(A) Full load at 23 feet	74

Engine Specifications

Make / Model	Isuzu / 6WG1X
Emissions	EPA Tier 3 Certified
Starting System	Electric
Design	4-cycle, water cooled, Direct Injection, turbocharged, air to air Intercooled
Displacement	15681 cc
No. cylinders	6
Bore x Stroke (mm)	147 x 154
Gross Engine Power Output	532 hp (402.7 kWm)
BMEP	236 psi (1,970 kPa)
Piston Speed	1819 ft/min (9.24 m/s)
Compression Ratio	18.0 : 1
Engine Speed	1800 rpm
Overspeed Limit	2040 rpm
Oil capacity gallons (liters)	14.4 gal. (55 L)
Battery	12V 190Ah x 2 (24V System)

Fuel System

Recommended Fuel	ASTM-D975-No.1 & No. 2-D	
Maximum Fuel Flow (per hour)	98.8 gal (374 L)	
Maximum Inlet Restriction (Hg)	8.86 in. (225 mm)	
Fuel Tank Capacity	129 gallons (490 L)	
Fuel Consumption	gph	lph
At full load	23.4	89.0
At 3/4 load	18.5	70.2
At 1/2 load	13.3	50.6
At 1/4 load	6.2	31.2

Cooling System

Fan Load	21.5 hp (16kW)
Coolant Capacity (with radiator)	15.85 gallons (60 liters)
Coolant Flow Rate (per minute)	111 gal (420 L)
Heat Rejection to Coolant (per minute)	11850 Btu (12.5 MJ)
Heat Rejection from Engine (per minute)	3034 Btu (3.2 MJ)
Maximum Coolant Friction Head	20.3 psi (140 kPa)
Maximum Coolant Static Head	29.5 ft (9.0 m)
Ambient Temperature Rating	104°F (40°C)

Air

Combustion Air	957 cfm (27.1 m³/min)
Maximum Air Cleaner Restriction	30 in. H ₂ O (7.5 kPa)
Alternator Cooling Air	2797 cfm (79.0 m³/min)
Radiator Cooling Air	12360 cfm (350 m³/min)

Exhaust System

Gas Flow (full load)	2306 cfm (65.3 m³/min)
Gas Temperature	959°F (515°C)
Maximum Back Pressure	53.2 in H ₂ O (13.3 kPa)

Amperage

Rated Voltage	Maximum Amps
1Ø 120 Volt	888.9 Amps (4 wire)
1Ø 240 Volt	444.4 Amps (4 wire)
3Ø 240 Volt	962.3 Amps
3Ø 480 Volt	481.1 Amps
Main Line Circuit Breaker Rating	1000 Amps
Over Current Relay Trip Set Point	480 Amps

Warranty*

Isuzu Engine

12 months from date of purchase with unlimited hours or 24 months from date of purchase with 2000 hours (whichever comes first).

Generator

24 months from date of purchase or 2000 hours (whichever occurs first).

Trailer

12 months excluding normal wear items.

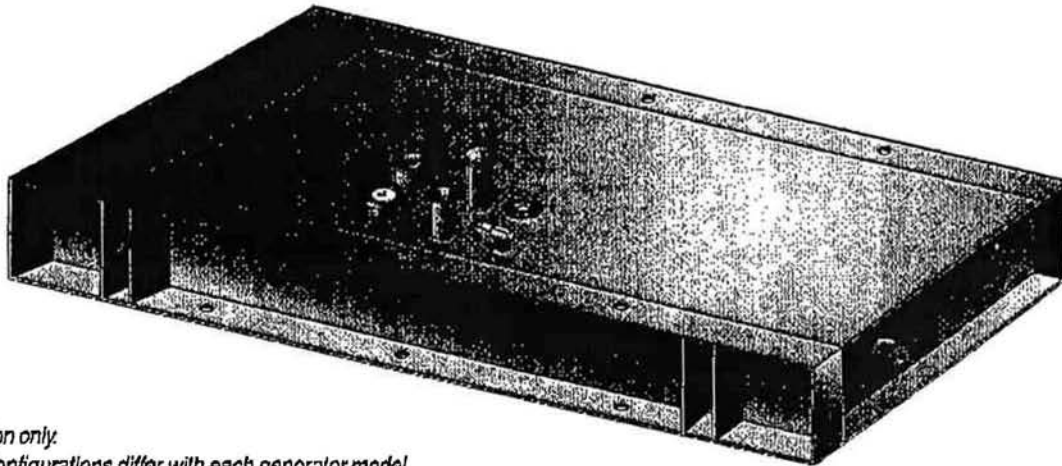
*Refer to the express written, one-year limited warranty sheet for additional information.

Generator is not intended for use in enclosed areas or where free flow of air is restricted. Backfeed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device.

Specifications are subject to change without notice.



Sub-Base Fuel Tank For WhisperWatt™ Generators



Tank depiction only.

Fuel Tank Configurations differ with each generator model.

See reverse for tank models and specifications.

MQ Power double wall sub-base fuel tanks utilize steel construction to ensure unit integrity, provide added protection against fuel spillage and to satisfy requirements for local and/or federal agencies governing installation and safety guidelines. All MQ Power double wall sub-base fuel tanks are certified to meet the UL142 Standard and are compliant with NFPA 30 regulations. Each tank is designed and engineered for each WhisperWatt™ generator model to provide fuel capacity for a minimum of either 12 hours or 24 hours of full load operation. Optional fuel capacities are available. Consult MQ Power for details.

Standard Features

- **2" NPT Normal Vent Fitting** including screened atmospheric vent cap
- **Emergency Vent Fitting Inner Tank**
(NPT sized per NFPA 30 for the wetted surface of the inner tank including emergency pressure relief vent cap)
- **Emergency Vent Fitting Containment Area**
(NPT sized per the inner tank requirements including emergency pressure relief vent cap)
- **2" NPT Fuel Fill** including lockable cap and 8" pipe riser.
- **1/2" NPT Removable Fuel Supply Dip Tube**
- **1/2" NPT Removable Fuel Return Dip Tube**
- **Direct Reading Mechanical Gauge**
- **Low Fuel Level Switch**
- **Fuel In Basin Switch**
- **Black Enamel Paint**



Sub-Base Fuel Tank

For WhisperWatt™ Generators

WhisperWatt™ Sub Base Fuel Tank Specifications

Generator Model	Full Load Operation*	Fuel Capacity Gallons	Tank Dimensions L x W x H (in.)	Generator Model	Full Load Operation*	Fuel Capacity Gallons	Tank Dimensions L x W x H (in.)
DCA7000SS	12 hr	10	65 x 25 x 8	DCA150SSI	12 hr	107	134 x 47 x 8
	24 hr	20	65 x 25 x 12		24 hr	214	134 x 47 x 13
DCA10SPX	12 hr	15	55 x 25 x 8	DCA150SSJ	12 hr	110	126 x 47 x 8
	24 hr	30	55 x 25 x 12		24 hr	220	126 x 47 x 14
TLG12SPX4	12 hr	20	66 x 27 x 8	DCA180SSI	12 hr	165	138 x 49 x 10
	24 hr	40	66 x 27 x 11		24 hr	330	138 x 49 x 17
DCA15SPX4	12 hr	20	61 x 25 x 8	DCA180SSJ	12 hr	140	138 x 49 x 9
	24 hr	40	61 x 25 x 12		24 hr	280	138 x 49 x 15
DCA20SPX2	12 hr	20	73 x 29 x 8	DCA220SSJ	12 hr	165	138 x 49 x 10
	24 hr	40	73 x 29 x 12		24 hr	330	138 x 49 x 17
DCA25SSI	12 hr	25	73 x 29 x 8	DCA250SSI	12 hr	177	148 x 55 x 9
	24 hr	50	73 x 29 x 12		24 hr	354	148 x 55 x 16
DCA36SPX	12 hr	40	76 x 35 x 8	DCA300SSC	12 hr	228	150 x 55 x 11
	24 hr	80	76 x 35 x 14		24 hr	456	150 x 55 x 19
DCA45SSI	12 hr	40	76 x 35 x 8	DCA300SSK	12 hr	205	157 x 56 x 9
	24 hr	80	76 x 35 x 13		24 hr	410	157 x 56 x 16
DCA56SPX	12 hr	55	98 x 37 x 8	DCA400SSI	12 hr	276	181 x 55 x 12
	24 hr	110	98 x 37 x 14		24 hr	552	181 x 55 x 20
DCA70SSI	12 hr	55	94 x 35 x 8	DCA400SSV	12 hr	270	165 x 55 x 11
	24 hr	110	94 x 35 x 14		24 hr	540	165 x 55 x 20
DCA85SSJ	12 hr	64	102 x 35 x 9	DCA600SSV	12 hr	400	185 x 65 x 12
	24 hr	128	102 x 35 x 15		24 hr	800	185 x 65 x 22
DCA125SSI	12 hr	80	120 x 43 x 8	DCA800SSK	12 hr	580	240 x 77 x 12
	24 hr	180	120 x 43 x 14		24 hr	1160	240 x 77 x 20

* Full Load Operation hours are the minimum running time on the tank at full capacity. Actual running time will vary according to various conditions.

The above specifications are subject to change without notice.
Specifications for custom and special order units may vary.

Your MQ Power dealer is:



MQ POWER

POST OFFICE BOX 6254
CARSON, CA 90749
310-537-3700 • 800-421-1244
FAX: 310-632-2656
E-MAIL: mqpower@multiquip.com
WWW: mqpower.com



DCA400SSI WhisperWatt™ Generator

MQ POWER DECIBEL LEVELS

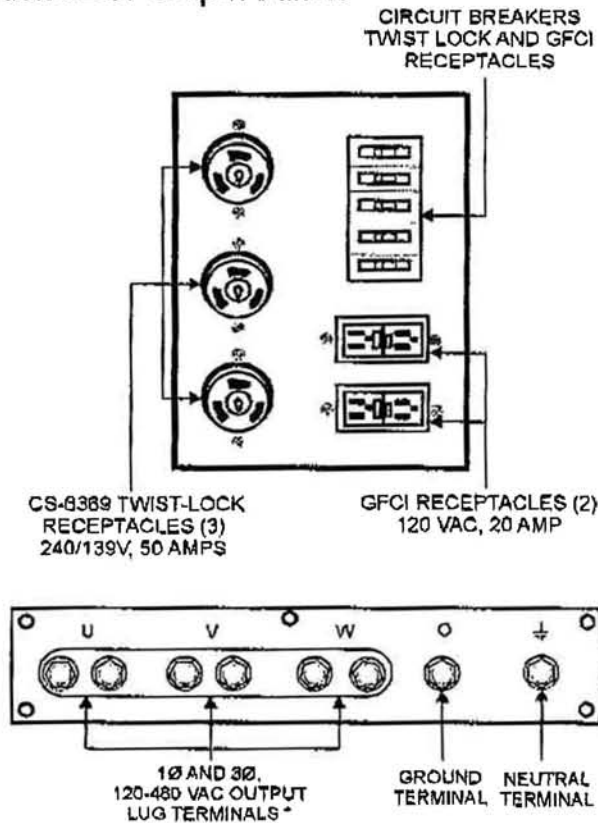
Our soundproof housing allows substantially lower operating noise levels than competitive designs. WhisperWatts are at home on construction sites, in residential neighborhoods, and at hospitals — just about anywhere.

- 90 — Subway / truck traffic
- 80 — Average city traffic
- 74.0 — WhisperWatt at 23 feet
- 70 — Inside car at 60 mph
- 60 — Air conditioner at 20 feet
- 50 — Normal conversation

Optional Generator Features

- Battery charger** — provides fully automatic and self-adjusting charging to the generator's battery system.
- Jacket water heater** — for easy starting in cold weather climates.
- Special batteries** — long life batteries provide extra engine cranking power.
- Spring Isolaters** — provides extra vibration protection for standby applications.
- Trailer mounted package** — highway legal trailer with electronic or surge brakes with single, double, or triple axle configuration. Extra capacity fuel tanks are also available.

Generator Output Panels



Optional Output Connections

- Cam-Loks** — provides quick disconnect alternative to bolt-on connectors.
- Pin and Sleeve Connectors** — provides industry standard connectors for all voltage requirements.
- Output cable** — available in any custom length and size configuration.

Optional Fuel Cell Features

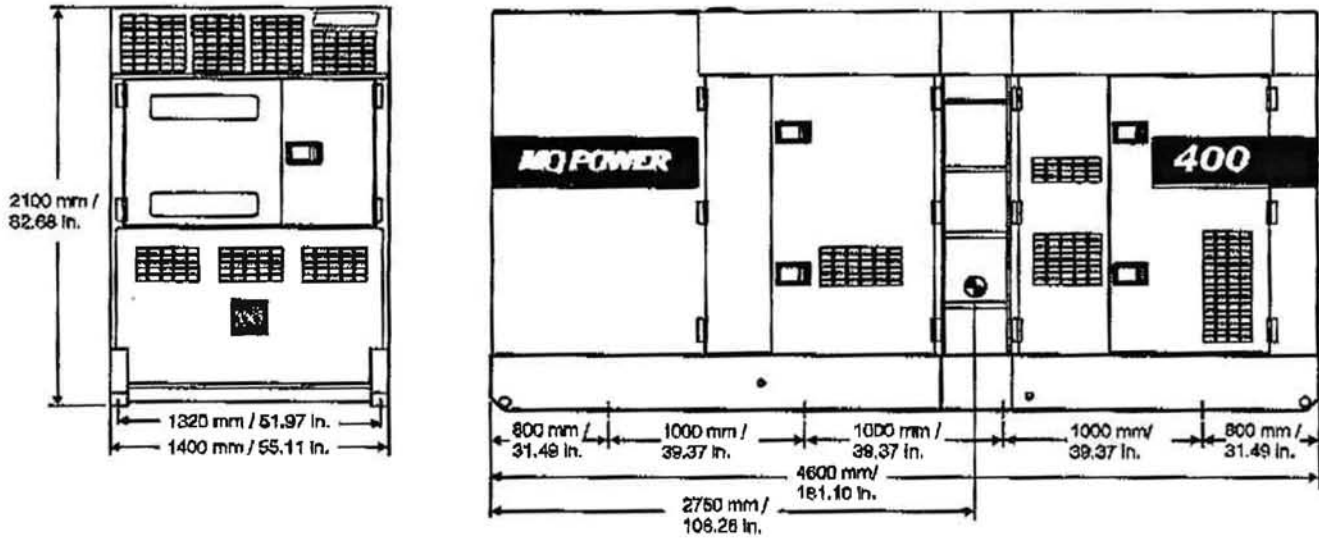
- Trailer fuel tank** — a second fuel cell located in the trailer allows for extended run time.
- Subbase fuel cells (double wall)** — Additional fuel cell for extended runtime operation. Contains a leak sensor, low fuel level switch, and a secondary containment tank. UL142 listed.
 - 12 hours of minimum run time.
 - 24 hours of minimum run time.



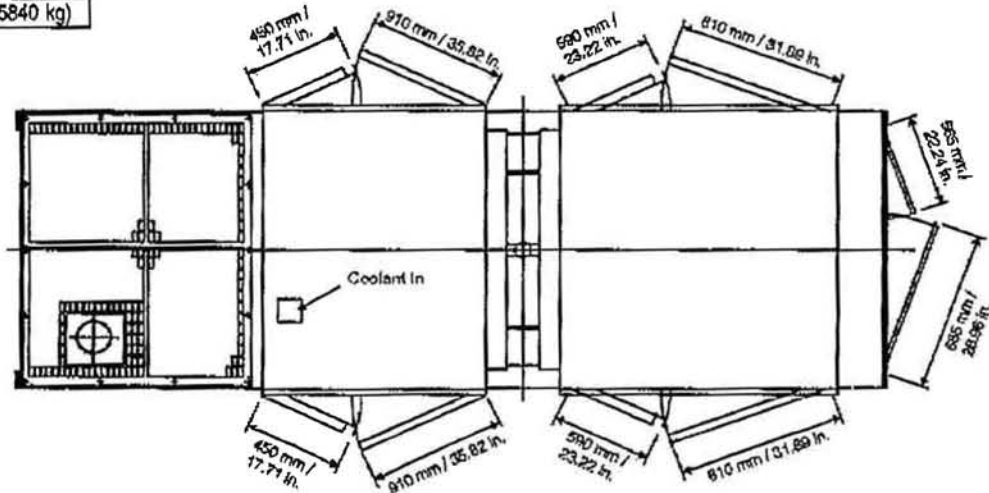
DCA400SSI

WhisperWatt™ Generator

Dimensions



Weight	
Dry Weight	11,642 lbs. (5280 kg)
Wet Weight	12,877 lbs. (5840 kg)



Manufactured by Denyo Co.

Your MQ Power dealer is:



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