



MART, Inc.

General Contractor

P.O. Box 170983, Irving, Texas 75017-0983 - 1503 Perry Street, Irving, Texas 75060

972.721.1522, 972.721.1660 (fax) - www.martcontractors.com

January 27, 2011

Collin County Purchasing Department
200 South McDonald Street Suite 230
McKinney, Texas 75069

Attn: Mr. Matt Dobecka, CPPB

Re: Generator Installation

Dear Mr. Dobecka:

Please accept this letter as our instrument of proposal to complete the work at the above referenced project as described below.

Inclusions and clarifications:

- Furnish all labor, material, equipment and disposal as required to install one (1) 750kW diesel generator as detailed herein.
- Drain fuel tank, disassemble existing generator and remove from site.
- Work as per Special Conditions 4.0 and Addendum # 1 dated 1/25/11.
- Modify existing exhaust stack and conform to new generator exhaust.
- Install day tank and fill with diesel.
- Modify and reinstall existing sheet metal intake to fit new generator.
- Commission and start up new generator.
- Install new generator as specified below:

Cummins Diesel Genset: 60Hz-750kW with 23 liter diesel engine

U.S. EPA, Stationary Emergency Application

Cummins Genset-Diesel,60Hz,750kW

Duty Rating-Standby Power

Listing-UL 2200

Emission Certification, EPA, Tier 2, NSPS CI Stationary Emergency

Voltage-277/480,3 Phase,Wye,4 Wire

Alternator-60 Hz, Wye, 480 Volt, 125C-Stdby

SET CONTROL-PCC 2100

Display Language-English

Display-Control, Graphical

Meters-AC Output, Analog

Interface-Communications Network, FTT-10

Control Mounting-Front Facing

Circuit Breaker-Left Side Only

CB-1200A,3P,600/690V,UL/IEC,ServEnt,100%UL,Left

Separator-Fuel/Water

Engine Cooling-Radiator, 50C Ambient

Shutdown-Low Coolant Level
 Coolant Heater-208/240/480V, 40F Minimum Ambient Temp
 Engine Air Cleaner-Normal Duty
 Genset Warranty- Standby Comprehensive Extended, 5 Years / 1,500 Hours
 Literature-English
 Common Parts Listing
 Product Revision – F
 Critical Exhaust Muffler and Stainless Steel Flex
 200 gallon UL142 Day Tank with high and low level fuel alarms
 Network Remote Annunciator, 20 Light Alarm Panel - FT-10
 Miscellaneous Freight FOB Jobsite
 Battery Rack, Free Standing, Steel Construction with legs for 2-SAE 8D Batteries
 12 Volt, Lead Acid
 2 Hour Resistive Load Bank, with written record per NFPA110 requirement
 SENS UL1236 Battery Charger, 10 Amp, with LED Display
 System Instruction for Site Personnel by Field Technician
 Spring Vibration Isolator - Quantity of One - 2400 Pound Maximum Capacity
 Generator Freight FOB Jobsite
 Resistive, Transportation, Set-Up & Operation per NFPA110 requirement
 System Check & Inspection
 Wire and Mount Battery Charger on Generator Set
 Freight of Parts
 2 Hour Building Load, with written record per NFPA110 requirement

Exclusions:

- Sales tax, new wiring, permits fees, concrete pad work, environmental work, phasing and patch & repair.

Pricing:.....\$ 149,000.00

We trust you will find this proposal in order, but should you have any questions, please do not hesitate to call.

Respectfully,
Mart, Inc.

Michael Todd Ingersoll

Model: DQCB
Frequency: 60
Fuel type: Diesel
KW rating: 750 standby
680 prime
Emissions level: EPA NSPS Stationary Emergency Tier 2

➤ **Generator set data sheet**



**Power
Generation**

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Exhaust emission data sheet:	EDS-1087
Exhaust emission compliance sheet:	EPA-1121
Sound performance data sheet:	MSP-1065
Cooling performance data sheet:	MCP-174
Prototype test summary data sheet:	PTS-160
Standard set-mounted radiator cooling outline:	
Optional set-mounted radiator cooling outline:	
Optional heat exchanger cooling outline:	
Optional remote radiator cooling outline:	

Fuel consumption	Standby				Prime				Continuous
	kW (kVA)				kW (kVA)				kW (kVA)
Ratings	750 (938)				680 (850)				
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	Full
US gph	16.0	28.0	40.0	51.0	15.0	25.0	36.5	48.0	
L/hr	60.6	106.0	151.4	193.1	56.8	94.6	138.2	181.7	

Engine	Standby rating	Prime rating	Continuous rating
Engine manufacturer	Cummins Inc.		
Engine model	QSK23-G7 NR2		
Configuration	Cast Iron, In line, 6 cylinder		
Aspiration	Turbocharged and air-to-air aftercooled		
Gross engine power output, kWm (bhp)	910 (1220)	808 (1085)	
BMEP at set rated load, kPa (psi)	2435 (353)	2214 (321)	
Bore, mm (in)	170 (6.69)		
Stroke, mm (in)	170 (6.69)		
Rated speed, rpm	1800		
Piston speed, m/s (ft/mln)	10.21 (2010)		
Compression ratio	16:1		
Lube oil capacity, L (qt)	102 (108)		
Overspeed limit, rpm	2100		
Regenerative power, kW	93		

Fuel flow		
Maximum fuel flow, L/hr (US gph)	685 (181)	
Maximum fuel inlet restriction, kPa (in Hg)	13.44 (4)	
Maximum fuel inlet temperature, °C (°F)	71 (160)	

Air	Standby rating	Prime rating	Continuous rating
Combustion air, m ³ /min (scfm)	64 (2242)	62 (2189)	
Maximum air cleaner restriction, kPa (in H ₂ O)	6.2 (25)		
Alternator cooling air, m ³ /min (cfm)	117 (4156)		

Exhaust

Exhaust flow at set rated load, m ³ /min (cfm)	152 (5358)	146 (5147)	
Exhaust temperature, °C (°F)	476 (888)	458 (856)	
Maximum back pressure, kPa (in H ₂ O)	10.1 (40.8)		

Standard set-mounted radiator cooling

Ambient design, °C (°F)	50 (122)		
Fan load, kW _m (HP)	27 (36)		
Coolant capacity (with radiator), L (US gal)	89 (23.5)		
Cooling system air flow, m ³ /min (scfm)	1252 (44183)		
Total heat rejection, MJ/min (Btu/min)	32.3 (30655)	29.6 (28065)	
Maximum cooling air flow static restriction, kPa (in H ₂ O)	0.12 (0.5)		
Maximum fuel return line restriction kPa (in Hg)	30.47 (9)		

Optional set-mounted radiator cooling

Ambient design, °C (°F)			
Fan load, kW _m (HP)			
Coolant capacity (with radiator), L (US gal)			
Cooling system air flow, m ³ /min (scfm)			
Total heat rejection, MJ/min (Btu/min)			
Maximum cooling air flow static restriction, kPa (in H ₂ O)			
Maximum fuel return line restriction, kPa (in Hg)			

Optional heat exchanger cooling

Set coolant capacity, L (US gal)			
Heat rejected, jacket water circuit, MJ/min (Btu/min)			
Heat rejected, aftercooler circuit, MJ/min (Btu/min)			
Heat rejected, fuel circuit, MJ/min (Btu/min)			
Total heat radiated to room, MJ/min (Btu/min)			
Maximum raw water pressure, jacket water circuit, kPa (psi)			
Maximum raw water pressure, aftercooler circuit, kPa (psi)			
Maximum raw water pressure, fuel circuit, kPa (psi)			
Maximum raw water flow, jacket water circuit, L/min (US gal/min)			
Maximum raw water flow, aftercooler circuit, L/min (US gal/min)			
Maximum raw water flow, fuel circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) Inlet temp, jacket water circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) Inlet temp, aftercooler circuit, L/min (US gal/min)			
Minimum raw water flow at 27 °C (80 °F) Inlet temp, fuel circuit, L/min (US gal/min)			
Raw water delta P at min flow, jacket water circuit, kPa (psi)			
Raw water delta P at min flow, aftercooler circuit, kPa (psi)			
Raw water delta P at min flow, fuel circuit, kPa (psi)			
Maximum jacket water outlet temp, °C (°F)			
Maximum aftercooler inlet temp, °C (°F)			
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)			
Maximum fuel return line restriction, kPa (in Hg)			

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Optional remote radiator cooling¹	Standby rating	Prime rating	Continuous rating
Set coolant capacity, L (US gal)			
Max flow rate at max friction head, jacket water circuit, L/min (US gal/min)			
Max flow rate at max friction head, aftercooler circuit, L/min (US gal/min)			
Heat rejected, jacket water circuit, MJ/min (Btu/min)			
Heat rejected, aftercooler circuit, MJ/min (Btu/min)			
Heat rejected, fuel circuit, MJ/min (Btu/min)			
Total heat radiated to room, MJ/min (Btu/min)			
Maximum friction head, jacket water circuit, kPa (psi)			
Maximum friction head, aftercooler circuit, kPa (psi)			
Maximum static head, jacket water circuit, m (ft)			
Maximum static head, aftercooler circuit, m (ft)			
Maximum jacket water outlet temp, °C (°F)			
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)			
Maximum aftercooler inlet temp, °C (°F)			
Maximum fuel flow, L/hr (US gph)			
Maximum fuel return line restriction, kPa (in Hg)			

Weights²

Unit dry weight kgs (lbs)	6379 (14061)
Unit wet weight kgs (lbs)	6521 (14372)

Notes:

¹ For non-standard remote installations contact your local Cummins Power Generation representative.

² Weights represent a set with standard features. See outline drawing for weights of other configurations.

Derating factors

Standby	Engine power available up to 1371 m (4497 ft) at ambient temperatures up to 40 °C (104 °F). Above these elevations, derate at 4.4% per 305 m (1000 ft). Above 40 °C (104 °F) derate 10% per 10 °C (18 °F).
Prime	Engine power available up to 1084 m (3555 ft) at ambient temperatures up to 40 °C (104 °F). Above these elevations, derate at 4.5% per 305 m (1000 ft). Above 40 °C (104 °F) derate 20.9% per 10 °C (18 °F).
Continuous	

Ratings definitions

Emergency standby power (ESP):	Limited-time running power (LTP):	Prime power (PRP):	Base load (continuous) power (COP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

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Alternator data

Voltage	Connection ¹	Temp rise degrees C	Duty ²	Single phase factor ³	Max surge kVA ⁴	Winding No.	Alternator data sheet	Feature Code
380-480	Wye	125/105	S/P		3313	312	ADS-310	B282-2
220/380	Wye	105/80	S/P		4234	311	ADS-312	B599-2
480	Wye	105/80	S/P		3313	312	ADS-310	B600-2
480	Wye	80	S		3866	312	ADS-311	B601-2
600	Wye	105/80	S/P		3313	7	ADS-310	B603-2
600	Wye	80	S/P		3866	7	ADS-311	B604-2
380	Wye	80	S		4234	312	ADS-312	B660-2
480	Wye	125	P		2944	312	ADS-309	B718-2
600	Wye	125	P		2944	7	ADS-309	B720-2
190-480	Wye	125/105	S/P		2944	311	ADS-309	B731-2
208/416	Wye	105/80	S/P		3866	311	ADS-311	B733-2
208/416	Wye	80	S		4234	311	ADS-312	B734-2
400	Wye	105	S		3866	312	ADS-311	B735-2
480	Wye	125	S		2944	312	ADS-309	B738-2
600	Wye	125	S		2944	7	ADS-309	B739-2
416	Wye	125/105	S/P		3313	312	ADS-310	B741-2

Notes:

¹ Limited single phase capability is available from some three phase rated configurations. To obtain single phase rating, multiply the three phase kW rating by the Single Phase Factor³. All single phase ratings are at unity power factor.

² Standby (S), Prime (P) and Continuous ratings (C).

³ Factor for the *Single Phase Output from Three Phase Alternator* formula listed below.

⁴ Maximum rated starting kVA that results in a minimum of 90% of rated sustained voltage during starting.

Formulas for calculating full load currents:

Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

Single phase output

$$\frac{\text{kW} \times \text{SinglePhaseFactor} \times 1000}{\text{Voltage}}$$

Cummins Power Generation

1400 73rd Avenue N.E.
 Minneapolis, MN 55432 USA
 Phone: 763 574 5000
 Fax: 763 574 5298

Warning: Back feed 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 or after building main switch is open.

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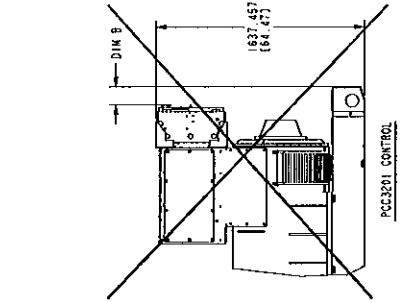
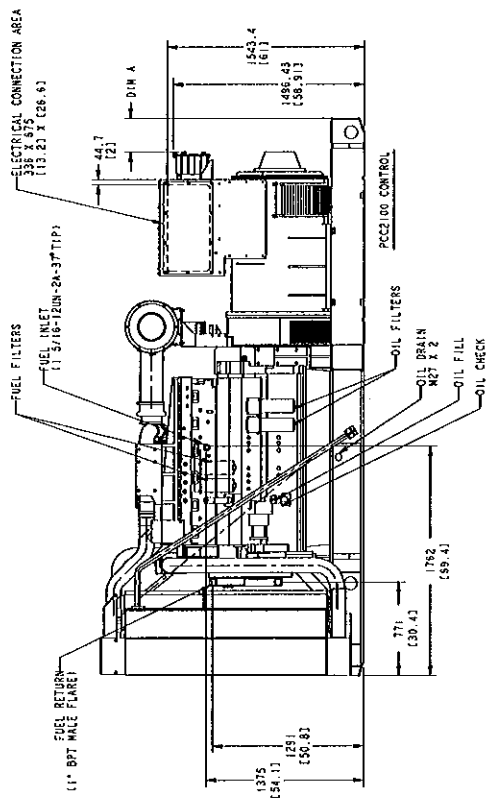
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EXAMINER

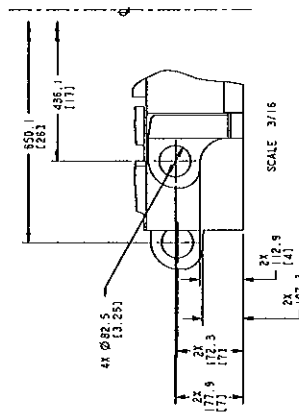
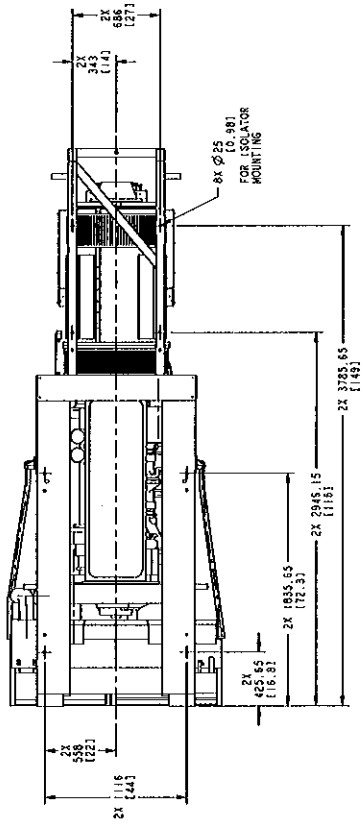
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NO.	REV.	DESCRIPTION



TABULATION		
GEN FRAME SIZE	DIM A	DIM B
2100 CONTROL	264 (10.4)	142 (5.6)
3201 CONTROL	264 (10.4)	142 (5.6)
HCSK	163 (6.4)	41 (1.6)

- NOTE:
1. DIMENSIONS SHOWN IN 1, 2 BRACKETS ARE INCHES.
 2. FUEL INLET HOSE-1/50 (1/50) LONG WITH 1/2-11.5 NPT EXTERNAL FITTING.
 3. FUEL RETURN HOSE-2000 (79.1) LONG WITH 1/2-11.5 NPT EXTERNAL FITTING.



DESIGNED BY	J. G. HAMIL	DATE	11/18/52
DRAWN BY	K. R. RAY	DATE	11/18/52
CHECKED BY	K. R. RAY	DATE	11/18/52
APPROVED BY	J. G. HAMIL	DATE	11/18/52
COMPANY	GENERAL ELECTRIC COMPANY		
PROJECT NO.	11718		
DOC NO.	11718		
SCALE	3/16		
PGF	16		
PROJECT	A030Y552		
SHEET	2 OF 4		



PROTOTYPE TEST SUPPORT (PTS) 60 HZ TEST SUMMARY				
GENERATOR SET MODELS		REPRESENTATIVE PROTOTYPE		
600DQCA	750DQCB	Model:	800DQCC	
800DQCC		Alternator:	HC6H	
		Engine:	QSK23-G3 NR1	



The following summarizes prototype testing conducted on the designated representative prototype of the specified models. This testing is conducted to verify the complete generator set electrical and mechanical design integrity. Prototype testing is conducted only on generator sets not sold as new equipment.

Maximum Surge Power: 833 kW

The generator set was evaluated to determine the stated maximum surge power.

Torsional Analysis and Testing:

The generator set was tested to verify that the design is not subjected to harmful torsional stresses. A spectrum analysis of the transducer output was conducted over the speed range of 1350 to 1950 RPM.

Cooling System: 50 °C Ambient
0.5 in. H2O restriction

The cooling system was tested to determine ambient temperature and static restriction capabilities. The test was performed at full rated load in elevated ambient temperature under stated static restriction conditions.

Durability:

The generator set was subjected to a minimum 500 hour endurance test operating at variable load up to the standby rating based upon MIL-STD-705 to verify structural soundness and durability of the design.

Electrical and Mechanical Strength:

The generator set was tested to several single phase and three phase faults to verify that the generator can safely withstand the forces associated with short circuit conditions. The generator set was capable of producing full rated output at the conclusion of the testing.

Steady State Performance:

The generator set was tested to verify steady state operating performance was within the specified maximum limits.

Voltage Regulation:	±0.50%
Random Voltage Variation:	±0.50%
Frequency Regulation:	Isochronous
Random Frequency Variation:	±0.25%

Transient Performance:

The generator set was tested with the standard alternator to verify single step loading capability as required by NFPA 110. Voltage and frequency response on load addition or rejection were evaluated. The following results were recorded:

Full Load Acceptance:

Voltage Dip:	35.0	%
Recovery Time:	2.5	Second
Frequency Dip:	8.3	%
Recovery Time:	3.5	Second

Full Load Rejection:

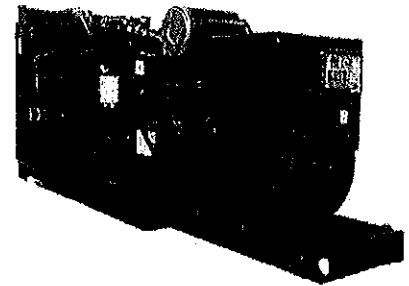
Voltage Rise:	24.1	%
Recovery Time:	1.2	Second
Frequency Rise:	3.8	%
Recovery Time:	1.6	Second

Harmonic Analysis:

(per MIL-STD-705B, Method 601.4)

Harmonic	Line to Line		Line to Neutral	
	No Load	Full Load	No Load	Full Load
3	0.052	0.04	0.144	0.092
5	0.128	1.36	0.058	1.32
7	1	0.196	1	0.19
9	0.012	0.034	0.033	0.066
11	0.985	0.84	1.01	0.83
13	0.158	0.32	0.12	0.29
15	0	05	0.025	0.022

Diesel generator set QSK23 series engine



> **Specification sheet**
545 kW - 800 kW 60 Hz

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Description

Cummins Power Generation commercial generator sets are fully integrated power generation systems providing optimum performance, reliability and versatility for stationary standby and prime power applications. Codes may not be available with all model configurations – consult factory for availability.



This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.



The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins Power Generation products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.



All low voltage models are CSA certified to product class 4215-01.



The generator set is available listed to UL 2200, Stationary Engine Generator Assemblies for all 60 Hz low voltage models. The PowerCommand control is Listed to UL 508 - Category NITW7 for U.S. and Canadian usage. Circuit breaker assemblies are UL 489 Listed for 100% continuous operation and also UL 869A Listed service Equipment.

U.S. EPA

Engine certified to Stationary Emergency U.S. EPA New Source Performance Standards, 40 CFR 60 subpart IIII Tier 2 exhaust emission levels. U.S. applications must be applied per this EPA regulation.

Features

Cummins® heavy-duty engine - Rugged 4-cycle, industrial diesel delivers reliable power, low emissions and fast response to load changes.

Alternator - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads and fault clearing short-circuit capability.

Permanent magnet generator (PMG) - Offers enhanced motor starting and fault clearing short-circuit capability.

Control system - The PowerCommand® electronic control is standard equipment and provides total genset system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, AmpSentry™ protection, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance.

Cooling system - Standard integral set-mounted radiator system, designed and tested for rated ambient temperatures, simplifies facility design requirements for rejected heat.

Enclosures - Optional weather protective and sound attenuated enclosures are available.

NFPA - The genset accepts full rated load in a single step in accordance with NFPA 110 for Level 1 systems.

Warranty and service - Backed by a comprehensive warranty and worldwide distributor network.

Model	Standby rating		Prime rating		Continuous rating		Data sheets	
	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz	50 Hz
DQCA	600 (750)		545 (681)				D-3352	
DQCB	750 (938)		680 (850)				D-3353	
DQCC	800 (1000)		725 (906)				D-3354	

Generator set specifications

Governor regulation class	ISO8528 Part 1 Class G3
Voltage regulation, no load to full load	± 0.5%
Random voltage variation	± 0.5%
Frequency regulation	Isochronous
Random frequency variation	± 0.25%
Radio frequency emissions compliance	IEC 801.2 through IEC 801.5; MIL STD 461C, Part 9

Engine specifications

Bore	169.9 mm (6.69 in)
Stroke	169.9 mm (6.69 in)
Displacement	23.15 litres (1413 in ³)
Configuration	Cast iron, in line 6 cylinder
Battery capacity	1400 amps minimum at ambient temperature of 0 °C to 10 °C (32 °F to 50 °F)
Battery charging alternator	35 amps
Starting voltage	24 volt, negative ground
Fuel system	Direct Injection: number 2 diesel fuel, fuel filter, automatic electric fuel shutoff
Fuel filter	Spin-on fuel filters with water separator
Air cleaner type	Dry replaceable element with restriction indicator
Lube oil filter type(s)	Fleetguard dual venturi spin-on, combination full flow and bypass filters
Standard cooling system	High ambient radiator

Alternator specifications

Design	Brushless, 4 pole, drip proof revolving field
Stator	2/3 pitch
Rotor	Single bearing, flexible discs
Insulation system	Class H
Standard temperature rise	125 °C standby at 40 °C ambient
Exciter type	PMG (permanent magnet generator)
Phase rotation	A (U), B (V), C (W)
Alternator cooling	Direct drive centrifugal blower fan
AC waveform total harmonic distortion	< 5% no load to full linear load, < 3% for any single harmonic
Telephone influence factor (TIF)	< 50 per NEMA MG1-22.43
Telephone harmonic factor (THF)	< 3

Available voltages

60 Hz line-neutral/line-line	50 Hz line-neutral/line-line
<ul style="list-style-type: none"> • 110/190 • 115/200 • 120/208 • 127/220 • 139/240 • 220/380 • 230/380 • 240/416 • 255/440 • 277/480 • 347/600 	

* Note: Consult factory for other voltages.

Generator set options and accessories

Engine

- 208/240/480 V coolant heater for ambient above 4.5 °C (40 °F)
- Fuel/water separator
- Heavy duty air cleaner

Control panel

- 120/240 V 100 W control anti-condensation heater
- Paralleling configuration
- Remote fault signal package
- Run relay package

Alternator

- 80 °C rise
- 105 °C rise
- 125 °C rise
- 120/240 V anti-condensation heater
- Temperature sensor - alternator bearing RTD

Cooling system

- 50 °C ambient

Exhaust system

- Industrial grade exhaust silencer
- Residential grade exhaust silencer
- Critical grade exhaust silencer

Generator set

- AC entrance box
- Battery
- Battery rack with hold-down - floor standing

- Circuit breaker - set mounted
- Disconnect switch - set mounted
- PowerCommand Network
- Remote annunciator panel
- Spring Isolators
- 2 year warranty
- 5 year warranty
- 10 year major components warranty

* Note: Some options may not be available on all models - consult factory for availability.

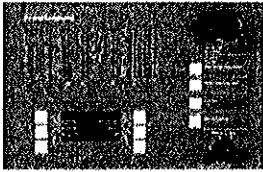
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Control system PCC 3201



PowerCommand control is an integrated generator set control system providing governing, voltage regulation, engine protection and operator interface functions. Major features include:

- Integral AmpSentry™ Protective Relay providing a full range of alternator protection functions that are matched to the alternator provided.
- Battery monitoring and testing features and smart starting control system.
- Three phase sensing, full wave rectified voltage regulation system, with a PWM output for stable operation with all load types.
- Control suitable for operation in ambient temperatures from -40 °C to +70 °C (-40 °F to +158 °F) and altitudes to 5000 meters (13,000 feet).
- Prototype tested; UL, CSA, and CE compliant.
- InPower™ PC-based service tool available for detailed diagnostics.
- Optional Echelon® LONWORKS® network interface.

Operator/display panel

- Off/manual/auto mode switch
- Manual run/stop switch
- Panel lamp test switch
- Emergency stop switch
- Exercise switch
- Alpha-numeric display with pushbutton access for viewing engine and alternator data and providing setup, controls and adjustments
- LED lamps indicating not in auto, common warning, common shutdown, remote start
- Configurable for local language

Engine protection

- Overspeed shut down
- Low oil pressure warning and shut down
- High coolant temperature warning and shut down
- High oil temperature warning
- Low coolant level warning or shut down
- Low coolant temperature warning
- High and low battery voltage warning
- Weak battery warning
- Dead battery shut down
- Fail to start (overcrank) shut down
- Fail to crank shut down
- Redundant start disconnect
- Cranking lockout
- Sensor failure indication

Engine data

- DC voltage
- Lube oil pressure
- Coolant temperature
- Lube oil temperature
- Engine speed
- Engine ECM data

AmpSentry AC protection

- Over current and short-circuit shut down
- Over current warning
- Single and three phase fault regulation
- Over and under voltage shut down
- Over and under frequency shut down
- Overload warning with alarm contact
- Reverse power and reverse Var shut down

Alternator data

- Line-to-line and line-to-neutral AC volts
- Three phase AC current
- Frequency
- Total and individual phase power factor, kW and kVA
- Bus voltage and frequency (with paralleling options)

Other data

- Genset model data
- Start attempts, starts, running hours
- kW hours (total and since reset)
- Fault history
- Load profile (accessible with InPower)

Governing

- Digital electronic isochronous governor
- Temperature dynamic governing
- Smart idle speed mode

Voltage regulation

- Digital PWM electronic voltage regulation
- Three phase line-to-neutral sensing
- Single and three phase fault regulation
- Configurable torque matching

Control functions

- Data logging on faults
- Fault simulation (requires InPower)
- Time delay start and cooldown
- Cycle cranking
- Configurable customer outputs (4)
- Configurable network inputs (8) and outputs (16) (with optional network)
- Remote emergency stop

Paralleling (Option)

- Active digital phase lock loop synchronizer
- Isochronous kW and kVar load sharing controls
- kW import/export and kVar/PF control for utility (mains) paralleling

Options

- Thermostatically controlled space heater
- Key-type mode switch
- Ground fault module
- Auxiliary relays (3)
- Echelon LONWORKS interface
- Modion Gateway to convert to Modbus (loose)
- PowerCommand iWatch web server for remote monitoring and alarm notification (loose)
- Digital input and output module(s) (loose)
- Remote annunciator (loose)
- Paralleling
- Power transfer control

For further detail see document S-1444.

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www.cumminspower.com

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S-1551f (7/10)



Ratings definitions

Emergency standby power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Limited-time running power (LTP):

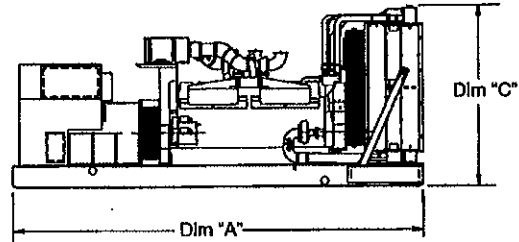
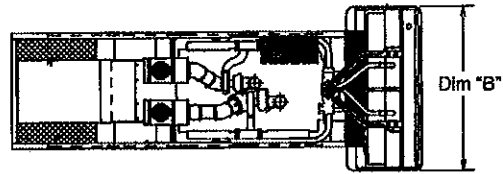
Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.

Prime power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Base load (continuous) power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.



This outline drawing is for reference only. See respective model data sheet for specific model outline drawing number.

Do not use for installation design

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Set Weight* dry kg (lbs)	Set Weight* wet kg (lbs)
DQCA	4394.5 (173)	1715 (68)	2060.1 (81.1)	6377 (14061)	6518 (14372)
DQCB	4394.5 (173)	1715 (68)	2060.1 (81.1)	6377 (14061)	6518 (14372)
DQCC	4394.5 (173)	1715 (68)	2060.1 (81.1)	6377 (14061)	6518 (14372)

* Note: Weights represent a set with standard features. See outline drawings for weights of other configurations.

Cummins Power Generation

1400 73rd Avenue N.E.
Minneapolis, MN 55432 USA
Telephone: 763 574 5000
Fax: 763 574 5298

Warning: Back feed 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 or after building main switch is open.

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www.cumminspower.com

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S-15511 (7/10)



Mart, Inc.

Bid Contact **Leonard Vitek**
leonard.vitek@martcontractors.com
Ph 972-721-1522

Address **1503 Perry Street**
Irving, TX 75060

Qualifications **CISV**

Item #	Line Item	Notes	Unit Price	Qty/Unit	Total Price	Attch.	Docs
11033-11-1-01	750kW Stationary Diesel Generator:750kW Stationary Diesel Generator	Supplier Product Code: 11033-11-1-01 Cummins Diesel 750kW	First Offer - \$128,000.00	1 / lot	\$128,000.00		Y
					Lot Total		\$128,000.00
Item #	Line Item	Notes	Unit Price	Qty/Unit	Total Price	Attch.	Docs
11033-11-2-01	Day Tank:Day Tank	Supplier Product Code: 11033-11-2-01	First Offer - \$2,000.00	1 / each	\$2,000.00		Y
					Lot Total		\$2,000.00
Item #	Line Item	Notes	Unit Price	Qty/Unit	Total Price	Attch.	Docs
11033-11-3-01	Delivery/Installation/Start Up:Delivery/Installation/Set Up/Start Up	Supplier Product Code: 11033-11-3-01	First Offer - \$19,000.00	1 / lot	\$19,000.00		Y
					Lot Total		\$19,000.00
Item #	Line Item	Notes	Unit Price	Qty/Unit	Total Price	Attch.	Docs
11033-11-4-01	Alternate-Trade-In:Alternate-Trade-In	Supplier Product Code: 11033-11-4-01 Scrap value	First Offer - (\$2,500.00)	1 / each	(\$2,500.00)		Y
					Lot Total		(\$2,500.00)
Supplier Total							\$146,500.00

Supplier: **Mart, Inc.**

**SIGNATURE FORM
COLLIN COUNTY, TEXAS**

DELIVERY WILL BE F.O.B. INSIDE DELIVERY AT COLLIN COUNTY DESIGNATED LOCATIONS AND ALL TRANSPORTATION CHARGES PAID BY THE SUPPLIER TO DESTINATION.

DELIVERY TO BE SPECIFIED IN CALENDAR DAYS FROM DATE OF ORDER. **120**

WE **DO NOT** TAKE EXCEPTION TO THE BID SPECIFICATIONS.

WE TAKE EXCEPTION TO THE BID SPECIFICATIONS (EXPLAIN):

n/a

COMPANY INFORMATION/PROFILE/REFERENCES

Preferential Requirement: The County of Collin, as a governmental agency of the State of Texas, may not award a contract to a nonresident bidder unless the nonresident's bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located (Government Code, Title 10, V.T.C.A., Chapter 2252, Subchapter A). Bidder shall make answer to the following questions by selecting the appropriate radio button or inserting information in the box provided:

Is your principal place of business in the State of Texas? Yes No

If the answer to question is "yes", no further information is necessary; if "no", please indicate:

in which state is your principal place of business is located: n/a

if that state favors resident bidders (bidders in your state) by some dollar increment or percentage: Yes No

if "yes", what is that dollar increment or percentage? n/a

Company Profile: IS YOUR FIRM?

Sole Proprietorship Yes No

General Partnership Yes No

Limited Partnership Yes No

Corporation Yes No

Other Yes No

List Legal Names in Company: **Mart, Inc.**

List at least three (3) companies or governmental agencies where these same/like products/services, as stated herein, have been provided. Include company name, address, contact name and telephone number.

**City of Dallas, TX
1500 Marilla Street
Dallas, Texas 75201
Samuel Tan, 214-671-8080**

**City of New Summerfield, TX
c/o KSA Engineers
6781 Oak Hill Blvd.
Tyler, Texas 75703
Lynn Hitt, 903-581-8141**

**City of Cuney, TX
c/o Schaumberg & Polk
320 S. Broadway Avenue
Tyler, Texas 75702
Gilbert Arteaga, 903-595-3913**

AS PERMITTED UNDER TITLE 8, CHAPTER 271, SUBCHAPTER F, SECTION 271.101 AND 271.102 V.T.C.A. AND TITLE 7, CHAPTER 791, SUBCHAPTER C, SECTION 791.025, V.T.C.A., OTHER LOCAL GOVERNMENTAL ENTITIES MAY WISH TO ALSO PARTICIPATE UNDER THE SAME TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT. EACH ENTITY WISHING TO PARTICIPATE MUST ENTER INTO AN INTERLOCAL AGREEMENT WITH COLLIN COUNTY AND HAVE PRIOR AUTHORIZATION FROM VENDOR. IF SUCH PARTICIPATION IS AUTHORIZED, ALL PURCHASE ORDERS WILL BE ISSUED DIRECTLY FROM AND SHIPPED DIRECTLY TO THE LOCAL GOVERNMENTAL ENTITY REQUIRING SUPPLIES/SERVICES. COLLIN COUNTY SHALL NOT BE HELD RESPONSIBLE FOR ANY ORDERS PLACED, DELIVERIES MADE OR PAYMENT FOR SUPPLIES/SERVICES ORDERED BY THESE ENTITIES. EACH ENTITY RESERVES THE RIGHT TO DETERMINE THEIR PARTICIPATION IN THIS CONTRACT. WOULD BIDDER BE WILLING TO ALLOW OTHER LOCAL GOVERNMENTAL ENTITIES TO PARTICIPATE IN THIS CONTRACT, IF AWARDED, UNDER THE SAME TERMS AND CONDITIONS? Yes No

By signing and submitting this Bid/Proposal, Bidder/Offeror acknowledges, understands the specifications, any and all addenda, and agrees to the bid/proposal terms and conditions and can provide the minimum requirements stated herein. Bidder/Offeror acknowledges they have read the document in its entirety, visited the site, performed investigations and verifications as deemed necessary, is familiar with local conditions under which work is to be performed and will be responsible for any and all errors in Bid/Proposal submittal resulting from Bidder/Offeror's failure to do so. Bidder/Offeror acknowledges the prices submitted in this Bid/Proposal have been carefully reviewed and are submitted as correct and final. If Bid/Proposal is accepted, vendor further certifies and agrees to furnish any and all products/services upon which prices are extended at the price submitted, and upon conditions in the specifications of the Invitation for Bid/Request for Proposal.

THE UNDERSIGNED HEREBY CERTIFIES THE FOREGOING BID/PROPOSAL SUBMITTED BY THE COMPANY LISTED BELOW HEREINAFTER CALLED "BIDDER/OFFEROR" IS THE DULY AUTHORIZED AGENT OF SAID COMPANY AND THE PERSON SIGNING SAID BID/PROPOSAL HAS BEEN DULY AUTHORIZED TO EXECUTE SAME. BIDDER/OFFEROR AFFIRMS THAT THEY ARE DULY AUTHORIZED TO EXECUTE THIS CONTRACT; THIS COMPANY; CORPORATION, FIRM, PARTNERSHIP OR INDIVIDUAL HAS NOT PREPARED THIS BID/PROPOSAL IN COLLUSION WITH ANY OTHER BIDDER/OFFEROR OR OTHER PERSON OR PERSONS ENGAGED IN THE SAME LINE OF BUSINESS; AND THAT THE CONTENTS OF THIS BID/PROPOSAL AS TO PRICES, TERMS AND CONDITIONS OF SAID BID/PROPOSAL HAVE NOT BEEN COMMUNICATED BY THE UNDERSIGNED NOR BY ANY EMPLOYEE OR AGENT TO ANY OTHER PERSON ENGAGED IN THIS TYPE OF BUSINESS PRIOR TO THE OFFICIAL OPENING OF THIS BID/PROPOSAL.

Company Name	Mart, Inc.
Street Address of Principal Place of Business	1503 Perry Street
City, State, Zip	Irving, Texas, 75060
Phone of Principal Place of Business	972-721-1522
Fax of Principal Place of Business	972-721-1660
E-mail Address of Representative	mart@martgc.com
Federal Identification Number	75-1577338
Date	01/27/2011
Acknowledgement of Addenda	#1 <input checked="" type="checkbox"/> #2 <input type="checkbox"/> #3 <input type="checkbox"/> #4 <input type="checkbox"/> #5 <input type="checkbox"/> #6 <input type="checkbox"/>
Authorized Representative Name	Vernon R. Proctor
Authorized Representative Title	President
Signature (Required for paper bid submission)	VRP

Supplier: **Mart, Inc.**

AFFIDAVIT OF COMPLIANCE

I, the undersigned, declare and affirm that my company is in compliance with the Immigration and Reform Act of 1986 and all employees are legally eligible to work in the United States of America.

I further understand and acknowledge that any non-compliance with the Immigration and Reform Act of 1986 at any time during the term of this contract will render the contract voidable.

Name of Company	Mart, Inc.
Title of Officer	President
Name of Officer	Vernon R. Proctor
Date:	01/27/2011

Supplier: **Mart, Inc.**

In order to better serve our bidders, the Collin County Purchasing Department is conducting the following survey. We appreciate your time and effort expended to submit your bid. Please take a moment to complete the below. Should you have any questions or require more information please call (972) 548-4165.

HOW DID YOU RECEIVE NOTICE OF THIS REQUEST FOR BID OR PROPOSALS?

- | | | | | |
|----------------------------------|--------------------------|-----|--------------------------|----|
| McKinney Courier-Gazette? | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Plan Room? | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Collin County Web-Site? | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Facsimile or email from BidSync? | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

Other **ISQFT.com (website)**

HOW DID YOU RECEIVE THE BID DOCUMENTS?

- | | | | | |
|--------------------------------------|-------------------------------------|-----|--------------------------|----|
| Downloaded from Home Computer? | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Downloaded from Company Computer? | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| Requested a Copy from Collin County? | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

Other

Thank You,

Collin County Purchasing Department

Supplier: **Mart, Inc.**

CONFLICT OF INTEREST QUESTIONNAIRE FORM CIQ	
For vendor or other person doing business with local governmental entity	
<p>This questionnaire is being filed in accordance with chapter 176 of the Local Government Code by a person doing business with the governmental entity.</p> <p>By law this questionnaire must be filed with the records administrator of the local government not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.</p> <p>A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.</p>	OFFICE USE ONLY
	Date Received
1	<p>Name of person doing business with local governmental entity.</p> <p>not applicable</p>
2	<p><input type="checkbox"/> Check this box if you are filing an update to a previously filed questionnaire.</p> <p>(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than September 1 of the year for which an activity described in Section 176.006(a), Local Government Code, is pending and not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)</p>
3	<p>Name each employee or contractor of the local governmental entity who makes recommendations to a local government officer of the governmental entity with respect to expenditures of money AND describe the affiliation or business relationship.</p> <p>not applicable</p>
4	<p>Name each local government officer who appoints or employs local government officers of the governmental entity for which this questionnaire is filed AND describe the affiliation or business relationship.</p> <p>not applicable</p>

Adopted 11/02/2005

