

City Council Agenda Items
and
Contracts, Leases or Agreements

17-Jul-12

City Council Meeting Date
Agenda Items Only

David Jurgens
Submitted By

Wastewater Treatment
Division

Utilities
Department

Action Required:

Approval of the purchase of a replacement back up power generator for the Owl Creek lift station from Endless Power Corp. for \$61,330.00 plus sales tax, per Bid 12-42, and approval of a budget adjustment of \$80,832.00.

\$ 67,004	\$ 186,547	Upgrade/Replace Lift Stations-WWTP
Cost of this request	Category / Project Budget	Program Category / Project Name
5400.5800.5801.00	\$ 156,644	Wastewater Treatment Plant
Account Number	Funds Used to Date	Program / Project Category Name
02068.1	\$ 29,903	Water/Sewer
Project Number	Remaining Balance	Fund Name

Budgeted Item

Budget Adjustment Attached

[Signature]
Department Director

29 Jun 12
Date

Previous Ordinance or Resolution # _____

[Signature]
City Attorney

6-29-12
Date

Original Contract Date: _____

Original Contract Number: _____

[Signature]
Finance and Internal Services Director

6/29/12
Date

Received in City Clerk's Office 06-29-12 P12:04 *rcvd*
Kim J.

[Signature]
Chief of Staff

7/2/12
Date

Received in Mayor's Office
ENTERED 6/29/12
[Signature]

[Signature]
Mayor

7/3/12
Date

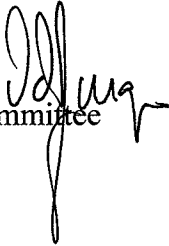
Comments:

www.accessfayetteville.org

To: Fayetteville City Council

Thru: Mayor Lioneld Jordan
 Don Marr, Chief of Staff

From: David Jurgens, Utilities Director
 Fayetteville Water and Sewer Committee



Date: June 27, 2012

Subject: Purchase of backup power generator for Owl Creek sewer pump station, Endless Power Corporation

RECOMMENDATION

Staff recommends approval of the purchase of a replacement back up power generator for the Owl Creek lift station from Endless Power Corporation for \$61,330.00 plus sales tax, per Bid 12-42, and approval of a budget adjustment.

BACKGROUND

The existing back up power generator was installed in January 2000. This generator experienced a critical failure and the unit's original equipment manufacturer is no longer in business. The exciter, which controls the magnetic field and controls the power output in the generator system, failed and the parts to replace the exciter are no longer available. The repairs would entail removing and modifying the body of the generator at an approximate cost of nearly \$20,000, and would create unpredictable risks that associated with the major modification of the generator.

The Owl Creek lift station pumps approximately 260,000 gallons a day of wastewater from the west side of Fayetteville. The backup generator is required by our NPDES permit, and provides the critical back up during power outage episodes thus preventing possible sewer overflows.

DISCUSSION

The City received bids May 11, 2012. After much research, it was determined that the low bidder's product meets all City specifications. The generator will be installed by City and CH2M Hill staff.

Vendor	Quantity	Price Each	Total Bid Price
Endless Power Corp.	1	\$61,330.00	\$61,330.00
Clifford Power Systems – Option 2	1	\$63,150.00	\$63,150.00
RP Power, LLC.	1	\$63,810.00	\$63,810.00
Clifford Power Systems – Option 1	1	\$65,045.00	\$65,045.00
Taylor Power Systems	1	\$70,287.00	\$70,287.00
Leete Generators	1	\$73,615.00	\$73,615.00
United Engines, LLC.	1	\$74,050.00	\$74,050.00
Cummins Mid-South, LLC.	1	\$94,368.00	\$94,368.00

BUDGET IMPACT

The original generator was trailer mounted and thus a fleet item that accumulated replacement charges. The new generator is skid mounted for a fixed installation, and will not be a Fleet item. The budget adjustment transfers the accumulated replacement funds to the Wastewater Treatment capital project 02068.

RESOLUTION NO. _____

A RESOLUTION AWARDDING BID #12-42 AND AUTHORIZING THE PURCHASE OF ONE (1) POWER GENERATOR FROM ENDLESS POWER CORP. IN THE AMOUNT OF \$61,330.00, PLUS APPLICABLE SALES TAX, FOR USE AT THE OWL CREEK LIFT STATION, AND APPROVING A BUDGET ADJUSTMENT

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1. That the City Council of the City of Fayetteville, Arkansas hereby awards Bid #12-42 and authorizes the purchase of one (1) power generator from Endless Power Corp. in the amount of \$61,330.00, plus applicable sales tax, for use at the Owl Creek lift station.

Section 2. That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution as Exhibit "A".

PASSED and APPROVED this 17th day of July, 2012.

APPROVED:

ATTEST:

By: _____
LIONELD JORDAN, Mayor

By: _____
SONDRA E. SMITH, City Clerk/Treasurer

City Of Fayetteville - Purchase Order (PO) Request

(Not a Purchase Order)

All purchases under \$2500 shall be used on a P-Card unless medical or 1099 service related. (Call x256 with questions)

All PO Request shall be scanned to the Purchasing e-mail: Purchasing@ci.fayetteville.ar.us

Requisition No.:	Date: A. 8 6/26/2012
P.O Number:	Expected Delivery Date: 7/15/2012

Vendor #: New	Vendor Name: Endless Power Corp	Mail Yes: <input type="checkbox"/> No: <input type="checkbox"/>	Quotes Attached Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Address: 22521 Hwy 365 North		Fob Point:	
City: North Little Rock	State: AR	Zip Code: 72113	Ship to code:
Requester: Cheryl Partain		Requester's Employee #: 2548	Extension: 224

Item	Description	Quantity	Unit of Issue	Unit Cost	Extended Cost	Account Numbers	Project/Supproject #	Inventory #	Fixed Asset #
1	Back up power generator for the Owl Creek Lift Station - Will be Fixed Asset#300913	1	Unit	61,330.00	61,330.00	5400.5800.5801.00	02068.1		
2					\$0.00				
3					\$0.00				
4					\$0.00				
5					\$0.00				
6					\$0.00				
7					\$0.00				
8					\$0.00				
9					\$0.00				
10					\$0.00				
*	Shipping/Handling		Lot		\$0.00				

Special Instructions:	Subtotal: \$61,330.00 Tax: \$5,673.03 Total: \$67,003.03
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Approvals:

Mayor: _____	Department Director: _____	Purchasing Manager: _____
Finance & Internal Services Director: _____	Budget Manager: _____	IT Manager: _____
Dispatch Manager: _____	Utilities Manager: _____	Other: _____





BID: 12-42
DATE: 05/11/12
TIME: 2:00 PM
CITY OF FAYETTEVILLE

Bid 12-42, Generator

BIDDER	Manufacturer and Model	TOTAL COST
1 Clifford Power Systems - Option 1	Generac SG0200KG20129N18HPLYE	\$65,045.00
2 Clifford Power Systems - Option 2	Generac SGO200KG20129N18HPLYE	\$63,150.00
3 Cummins Mid-South, LLC.	Cummins 250GFBC	\$94,368.00
4 Endless Power Corp.	Baldor IGLC210-2N	\$61,330.00
5 Leete Generators	Generac SG0200	\$73,615.00
6 RP Power, LLC.	Kohler 200REZXB	\$63,810.00
7 Taylor Power Systems	Taylor Power TG200	\$70,287.00
8 United Engines, LLC.	MTU Onsite Energy GS00200N6SRAS0984	\$74,050.00

*NOTICE: Bid award is contingent upon vendor meeting minimum specifications and formal authorization by City officials.

CERTIFIED: 
P. VICE, PURCH MGR


WITNESS

05/11/12
DATE

Fayetteville

ARKANSAS TDD (Telecommunication Device for the Deaf): 479.521.1316

City of Fayetteville, Arkansas
Purchasing Division – Room 306
113 W. Mountain
Fayetteville, AR 72701
Phone: 479.575.8220

INVITATION TO BID

INVITATION TO BID: BID 12-42, Generator

DEADLINE: Friday, May 11, 2012 before 2:00 PM, Local Time

DELIVERY LOCATION: Room 306 – 113 W. Mountain, Fayetteville, AR 72701

PURCHASING AGENT: Andrea Foren Rasco, CPPB, CPPO, aforen@ci.fayetteville.ar.us

DATE OF ISSUE AND ADVERTISEMENT: Saturday, April 21, 2012

INVITATION TO BID Bid 12-42, Generator

No late bids will be accepted. Bids shall be submitted in sealed envelopes labeled "Bid 12-42, Generator" with the name and address of the bidder.

All bids shall be submitted in accordance with the attached City of Fayetteville specifications and bid documents attached hereto. Each bidder is required to fill in every blank and shall supply all information requested; failure to do so may be used as basis of rejection.

The undersigned hereby offers to furnish & deliver the articles or services as specified, at the prices & terms stated herein, and in strict accordance with the specifications and general conditions of bidding, all of which are made a part of this offer. This offer is not subject to withdrawal unless upon mutual written agreement by the Proposer/Bidder and City Purchasing Manager.

Name of Firm: ENDLESS POWER CORP.

Contact Person: DAVID THOMSSON Title: PRES.

E-Mail: David@endlesspowercorp.com Phone: 501-851-1515

Business Address: 22521 Hwy 365 N.

City: N. Little Rock State: AR Zip: 72113

Signature: David J. Thomason Date: 5-10-2012

**City of Fayetteville
Bid 12-42, Generator
Bid Form**

DATE REQUIRED AS A COMPLETE UNIT: 60 days from Date of Order

*GUARANTEED DELIVERY DATE: 60 Days From order

F.O.B. 630 N. Double Springs Road, Fayetteville, AR 72704

ITEM:	DESCRIPTION:	QUANTITY:	*PRICE EACH:	*TOTAL PRICE
1.	Standby Generator <u>as specified</u>	1	\$ <u>61,330⁰⁰</u>	\$ <u>61,330⁰⁰</u>

Please Specify for Unit(s) Bid:

*MANUFACTURER: BALDOR *MODEL: IGLC210-2N

Bids must be submitted on this bid form in its entirety AND accompanied by descriptive literature on the products being bid.

EXECUTION OF BID -

Bidders are requested to indicate by check mark or "Yes/No" on each line of the Technical Specifications the compliance of the item bid. Actual specification of any deficient item must be noted on the bid sheet or separate attachment. If specifications of item bid differ from provided literature, deviation must be documented and certified by the manufacturer as a regular production option.

Upon signing this Bid, the bidder certifies that:

1. He/she has read and agrees to the requirements set forth in this proposal, including specifications, terms, standard conditions, and any pertinent information regarding the articles being bid on.
2. Unless otherwise noted and explained, the unit bid and listed meets or exceeds all of these requirements as specified by The City of Fayetteville.
3. The Bidder can and will comply with all specifications and requirements for delivery, documentation and support as specified herein.

Unsigned bids will be rejected. Items marked * are mandatory for consideration.

*NAME OF FIRM: ENDLESS POWER CORP.
Purchase Order/Payments shall be issued to this name

*BUSINESS ADDRESS: 22521 Hwy 365 N.

*CITY: N. Little Rock *STATE: AR *ZIP: 72113

*PHONE: 501-851-1515 FAX: 267-647-3858

*E-MAIL: David@endlesspowercorp.com

*BY: (PRINTED NAME) DAVID THOMAS

*AUTHORIZED SIGNATURE: David Thomas

*TITLE: President

City of Fayetteville
Bid 12-42, Generator
Technical Specification

Description: Stand-by Generator Specifications (replacement generator)
Location: Owl Creek Lift Station (LS #22)
Address: 630 N. Double Springs Road, Fayetteville, AR 72704

This bid is for the purchase of the generator only. Installation will be by the City or its designated representative.

Generator purchased shall produce 480V 3-phase power and it will supply adequate power during an emergency power outage or when the electrical company is repairing transformers and or lines, fuses. The existing lift station has a switch gear in place and is rated at 400 kW.

Generator will be installed by others at an existing lift station. The standby system will be coordinated so not to interfere with the lift station operation.

1. GENERAL:-

- 1.1 All unit(s) bid shall meet or exceed the minimum requirements or they will be deemed incomplete and will not be considered for bid award.
- 1.2 All specifications written are to minimums, unless otherwise noted.

2. MANUFACTURER / MODEL:-

- 2.1 Unit(s) bid shall be new standard production model as offered for commercial trade.

3. ITEM 1 – GENERATOR:

- A. Generator shall be 200 kW Standby; 185 kW prime; 480/277V generator.
- B. Deliver the project, as described in this exhibit, including:

1. Generation Equipment
2. Equipment and Installation Warranties
3. In-Service Training

- C. The generation equipment shall include:

1. Engine Generator set rated at 480V/277V; 200 kW (standby); 185 kW (prime), 0.8pf lagging; 250 KVA, 1800 RPM max
2. Permanent Magnet Generator
3. Electronic Engine Governor
4. Charging Alternator 24V
5. 24V Lead Acid Batteries, Rack and Battery Charger
6. Engine Cooling System
7. Exhaust System with Silencer

8. Fuel source as Natural Gas
9. Sound Attenuated Enclosure (maximum 71 dBA at 7 meters)
10. Block Heater
11. Lubricating Oil and Antifreeze- Initial fill

4. WARRANTY:

- A. The entire unit shall be warranted for a minimum of two years or 1500 hours period from the start-up date.
- B. Warranty shall include all parts, labor, and transportation of parts to and from the location of the warranty service center
- C. Awarded vendor shall be responsible for warranty administration of entire unit

5. DELIVERY / DOCUMENTATION:

- A. Units shall be delivered F.O.B. to the Owl Creek Lift Station (LS #22), located at 630 N. Double Springs Road, Fayetteville, AR 72704 , for compliance review and final acceptance
- B. Units shall be fully assembled, serviced, and ready for operation as delivered.
- C. Delivery shall be coordinated with the City in advance of the unit being delivered.

6. TRAINING:

- A. Onsite in-service service training will be provided to the City's Contract Operator's staff on the operation and maintenance of the generation equipment. In-service training shall include any commissioning services necessary to validate the equipment warranty.

7. OPTIONAL PRICING (will not be considered for bid evaluation):

- A. All bidders should provide the following optional pricing, as listed below, to be purchased at the City's discretion. Optional pricing shall not be considered in bid evaluation.

1. Description for annual maintenance (provide below):

2. Cost for annual maintenance: \$ 1,300⁰⁰
Price per year

City of Fayetteville
Bid 12-42, Generator
Statement of Disclosure – To Be Submitted With ALL Bids

This page does not count towards page limitations set forth in this request for proposal or bid. Proposer must disclose any possible conflict of interest with the City of Fayetteville, including, but not limited to, any relationship with any City of Fayetteville employee. Your response must disclose if a known relationship exists between any principal or employee of your firm and any City of Fayetteville employee or elected City of Fayetteville official.

If, to your knowledge, no relationship exists, this should also be stated in your response. Failure to disclose such a relationship may result in cancellation of a purchase and/or contract as a result of your response. This form must be completed and returned in order for your bid/proposal to be eligible for consideration.

PLEASE CHECK ONE OF THE FOLLOWING TWO OPTIONS, AS IT APPROPRIATELY APPLIES TO YOUR FIRM:

1.) NO KNOWN RELATIONSHIP EXISTS

2.) RELATIONSHIP EXISTS (Please explain)

PLEASE FILL OUT THE SECTION BELOW AND SUBMIT THIS FORM WITH YOUR BID OR PROPOSAL:

- 1.) I, as an officer of this organization, or per the attached letter of authorization, am duly authorized to certify the information provided herein are accurate and true; and
- 2.) My organization shall comply with all State and Federal Equal Opportunity and Non-Discrimination requirements and conditions of employment.

DAVID THOMASSON

Printed Name



Signature

5/10/2012

Date



Configurator Submittal Package

ENDLESS POWER CORP

Quote Number: 156466743-10

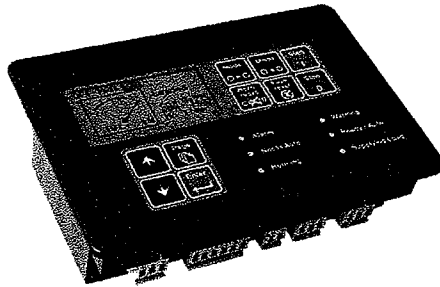
Project ID: City of Fayetteville

Project Description: CUSTOMGENSET - IGLC2102N

**BALDOR
 GENERATORS**

IntelliLite NT

Genset Controller



Standard Features

- Microprocessor based
- Secure settings with easy to use password protection
- Engine Protection features
- Generator Protection features
- Real Time Clock with Battery back up
- Event and performance log
 - Event based history with 119 events
 - Reason, Data and Time + all important values
 - Test Run scheduler
- User interface
 - Graphic 128 x 64 pixels LCD display
 - Multiple language capability
 - Setpoints adjustable at keypad or PC
 - Keypad provides tactile feedback
- Inputs and outputs
 - 3 configurable analog inputs
 - 7 Digital inputs
 - 7 Digital outputs
 - Magnetic RPM pick-up input
 - D+ preexcitation terminal
- EFI engine support
 - Engine specific CAN J1939 EFI engine support
 - Diagnostic messages in plain text
- RS-232 Interface

Introduction

The IntelliLite NT controller provides complete monitoring and protection for the Genset in manual or remote start mode. Provides remote control, user configuration and complete gen-set monitoring and protection.

The control features a powerful graphic display providing userfriendly information in an easy to understand format. Real time clock and event history log are valuable for troubleshooting. Instrumentation of internal values on VDO type analog gauges makes use easy even for untrained personnel.

- Controller is UL and ULC recognized
- Controller is NFPA110 compliant
- Front panel protection is IP65
- Large easy to read graphic LCD display
- LED's provide visual status information
- Password protection
- History log for rapid fault isolation
- Complete Engine, Alternator, Utility Line monitoring
- Optional Remote Keypad/Display
- Optional Remote Annunciator

LED Indications

ALARM	Indicates active or inactive, but still not reset shutdown alarm	WARNING	Indicates active or inactive, but still not reset warning alarm
NOT IN AUTO	Indication the controller in not in AUTO mode	READY/AUTO	Indicates the controller is in AUTO mode and is ready to operation. The LED goes off after the engine is started.
RUNNING	Indicates running engine	SUPPLYING LOAD	Indicates the gen-set is running, giving proper voltage and frequency and the outputs Read to Load, GCB close/open are closed.

Engine Application Data

Alarm List (WRN=Warning; SD=Shutdown)

Events	Description
Oil Press Wrn	Oil pressure is less than setpoint.
Oil Press Sd	Oil pressure is less than setpoint.
Eng Temp Wrn	Water temperature exceeds setpoint.
Eng Temp Sd	Water temperature exceeds setpoint.
Fuel Level Wrn	Fuel level is less than setpoint.
Fuel Level Sd	Fuel level is less than setpoint.
Vbat Wrn	Battery volts is out of limits.
AnInIOM Wrn	AnIn condition for IG-IOM/IGS-PTM.
AnInIOM Sd	AnIn condition for IG-IOM/IGS-PTM.
Digital IN Wrn	Digital Input condition Wrn/Sd
Battery Fail	Batt fail during start sequence.
Start fail Sd	GENSET start failed.
ParamFail	Wrong memory checksum.
Vgen <, > Sd	Output volts is out of limits.
Vgen unbl Sd	Output volts is unbalanced.
Fgen <,> Sd	Output freq is out of limits.
Igen unbl Sd	Output current is unbalanced.
Overload Sd	Output current exceeds setpoint.
Overspeed Sd	RPM exceeds setpoint.
Underspeed Sd	After start, RPM is less than setpoint.
EmergStop Sd	Emergency stop is opened.
GCB fail Sd	Generator circuit breaker failed.
Pickup Fault Sd	Speed sensor failed.
Stop fail Sd	Genset stop failed.
NextService Wrn	The NextServTimer expired.
ChrgFail Wrn	Alternator failed to charge battery.
SprinklActive Wrn	Active if Sprinkler output is closed.
RA15 fail Wrn	Lost connection to IGL-RA15 module.
IOM fail Sd	Lost connection to IG-IOM/IGS-PTM.
ECU Alarm Wrn	ECU alarm list is not empty.
LowRTCBatt Wrn	RTC backup battery is flat.

Monitored Parameters

Generator Protection

- Over/Under frequency
- Over/Under voltage
- Current/Voltage asymmetry
- Overcurrent/Overload
- Short Circuit Current detection
- True RMS Voltage measurement
 - Phase to Phase;
 - Phase to Neutral
 - PT ratio range 0.1-500
- True RMS current measurements
 - Current range 5 A
 - Maximal measured current 10 A
 - CT ratio range 1-5000
- Power measurements
 - Act / React Power and Power,
 - Power Factor per phase
 - Active and Reactive Energy counter

Engine Protection

- Oil Pressure
- Coolant Temperature
- Fuel Level
- Engine RPM
- Battery Condition
- Time to Next Service
- Total Operating Hours
- J1939 communications with ECU

Timers

- Pre Start Delay
- Maximum Crank time
- Pause time between crank attempts
- Idle time
- Stabil Time, Gen voltage output stabil time
- Gen Circuit Breaker (GCB) Close delay
- Cooling Time, unloaded Genset cool time
- After Cool Time, run cooling pump after stop
- Stop Time
- Horn Timeout

Specifications

Power Supply

Voltage	8-36VDC
Current	40-430mA depends voltage and temp
Volts tolerance	2 % at 24V

Ambient

Operating temp	-20 to +70°C
Storage temp	-30 to +80°C
Protection type	IP65
Humidity	95% no condensation
Low Voltage Directive	EN 61010-1:95 +A1:97
Electromagnetic Compatibility	EN 50081-1:94, EN 50081-2:96 EN 50082-1:99, EN 50082-2:97
Vibration	5 - 25 Hz, ±1,6mm 25 - 100 Hz, a = 4 g
Shock	a = 200 m/s ²

Generator

Frequency	50-60 Hz
Freq Tol.	0.2Hz

Current Monitor

IC nominal (from CT)	5A
Load (CT Zout)	<0.1Ω
CT input burden	<0.2 VA per phase (In=5A)
Measurement tolerance	2% of Nominal
Imax from CT	10A
Ipeak from CT	150 A / 1s
Imax continuous	12 A

Voltage Monitor

Voltage range	0 - 277 VAC phase to neutral 0 - 480 VAC phase to phase
Vmax	340 VAC phase to neutral 600 VAC phase to phase
Input Resistance	0.6 MΩ phase to phase 0.3 MΩ phase to neutral
Measurement tolerance	2% of Nominal
Overvoltage class	III / 2 (EN61010)

Digital Inputs/Outputs

Number of In/Outputs	7 / 7
Voltage Range	0-36 VDC
Input Resistance	4.2 kΩ
Volts for closed indication	0-2VDC
Volts for open indication	8-36VDC
Max Output Current	0.5A

Analog Inputs

Number of inputs	3
Resolution	10bits
Range (jumper)	V, Ohm (default), mA
Volts range	0-2.5V
Ohms range	0-2500Ω
mA range	0-20mA
Input impedance	> 100 kΩ for V measuring 180 Ω for mA measuring
Ω tolerance	± 2 % ± 2 Ω of measured value
V tolerance	± 1 % ± 1mV of measured value

Speed Pick Up

Sensor Type	magnetic pick-up (shielded cable)
Vin Minimum	2 Vpk-pk (from 4 Hz to 4 kHz)
Vin Maximum	50 Veff
Freq min	4 Hz
Freq max	10 kHz (min. input voltage 6Vpk-pk)
Freq tolerance	0.2 %

D+ Function

Imax output	300mA
Guaranteed level for signal Charging OK	80% of supply voltage

Horn Output

Volts	0-36VDC
Current	1A maximum

Optional Expansion Modules and Accessories

IGL-RA15

- Remote Annunciator
- Customizable Label
- 15 LED's - Can be programmed Red, Green or Yellow
- Lamp Test
- Local Horn Button
- Connect via Can Bus
- Can be used stand alone, or with an IGS-PTM or IGS-IOM

IGS-IOM

- I/O Extension Module
- 8 Binary Inputs, 8 Binary Outputs, 4 Analog Inputs, 1 Analog Output . Measures PT 100 and NI 100 sensors
- Analog Inputs: 0-2500 Ohms
- Analog Outputs- 0-20 mA
- Connect via J1939 Can Bus
- Can be used with a IGL-RA 15
- If this extension module is used, the IGS-PTM cannot be used

IL-NT AOUT8

- Slide in card
- Connect to standard VDO, Datcon, or similar type gauges
- UP to 8 gauges can be connected

IGS-PTM

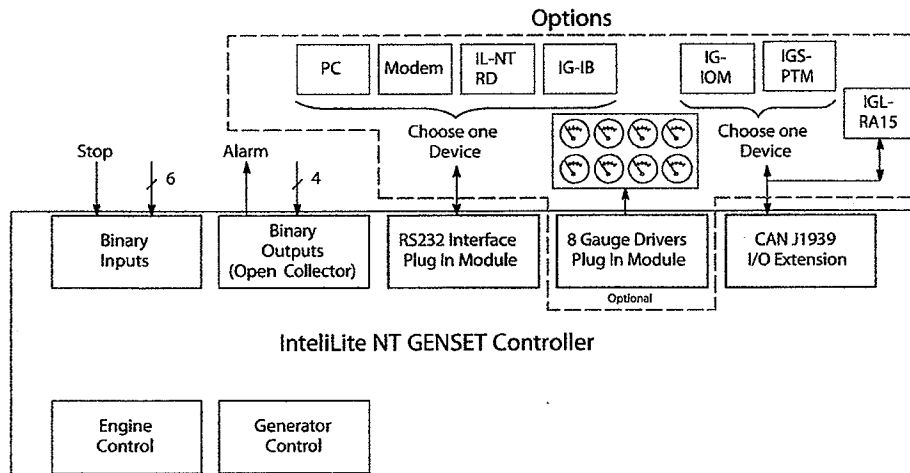
- I/O Extension Module
- 8 Binary Inputs, 8 Binary Outputs, 4 Analog Inputs, 1 Analog Output
- Measures PT 100 and NI 100 sensors
- Analog Inputs: 0-250 Ohms, 0-100mV, 0-20 mA
- Analog Outputs- 0-20 mA
- Connect via J 1939 CanBus
- Can be used with a IGL-RA 15
- If this extension module is used, the IGS-IOM cannot be used

IL-NT RD

- Remote Display
- Connects to RS-232 Interface . If this function is used, the IG-IB cannot be used

IG-IB

- Internet Module
- Connect via Ethernet or Dial-up . Control Via Internet
- Full 2 way communication
- If this module is used, the IL-NT RD cannot be used



Configurator Submittal Package - Quote Number: 156466743-10 - Custom Generator



Baldor Electric Company • P. O. Box 2400 • Fort Smith, AR 72902-2400 U.S.A.
 Phone (479) 646-4711 • Fax (479) 648-5792 • International Fax (479) 648-5895

www.baldor.com

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 FM24108

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BALDOR High Performance Enclosure (HPE) **GENERATORS**

Genset Enclosure

High Performance Enclosure

HPE Weather resistant enclosures with sound attenuating material are highly engineered and are the result of many years of experience in the standby generation markets.

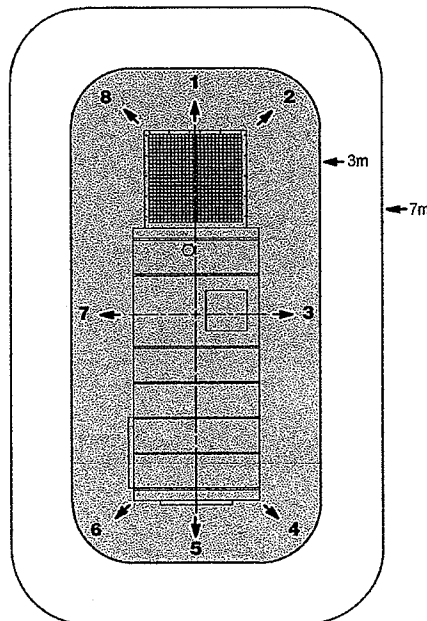
HPE Type	Noise Reduction		Silencer Grade
	@3m	@7m	
Level 0	3dbA	5dbA	Industrial
Level 1	15dbA	25dbA	Critical
Level 2	25dbA	32dbA	Hospital

Protective Coating

The walls and roof are finished with DuPont Powder Coating No. PFT500S8, Almond color, TGIC-Polyester, electrostatically applied enamel-based powder paint 1.5 to 2.5 mil. thickness that is baked at 400°F for 15 minutes. This provides a durable weather resistant finish that will protect your investment for many years to come.

Noise Measurements

Noise measurements are taken at 3 meters (and 7m) from the enclosure as indicated in this figure. The Genset exhaust hood is position #1.



Standard Features (All Levels)

- Roof and wall sections are 14 gauge ASTM A569 hot rolled steel with #4 finish
- Modular construction allows flexibility to meet various field conditions including reversing door swing, adding or moving doors, or adding sound attenuating hoods.
- Wall sections use overlapping flanges that are bolted together and to the base rail with SAE grade 5 bolts with Nylock® or Rivnut® fasteners or equivalent.
- Roof, wall and door sections are no more than 42 inch wide with folded flanges of no less than 2-1/4 inch to prevent moisture from entering the genset area and can withstand up to 120 MPH wind load.
- Weather resistant drip proof construction include a roof section load rating of 25 lb/ft² with 1 inch overhung drip edge and rain gutters over all doors and openings to maintain less than 0.01 ounces of moisture penetration per square foot of louver free area during a 4 inch per hour rainfall.
- Grade 2 hardware kit includes zinc plated fasteners, zinc plated cast aluminum keylock door handles, and heavy duty stainless steel hinges with removable brass pins.
- Heavy duty door gaskets are made from non-hygroscopic rubber to prevent doors from freezing shut during inclement weather.
- Structural steel frame includes spring vibration isolators between genset and base to decouple genset from enclosure mounting points. Frame includes integral lifting points capable of lifting the genset with the enclosure without damage.
- Internal stub up area is provided for easy access to power cabling and fuel supply connections.



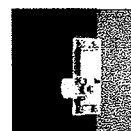
Construction

The bolt together modular design is superior to a welded box. Sections may be removed for service of major components.



Hinges

Stainless steel butt hinges with removable brass pins are long lasting and easy to open or close for routine maintenance.



Latch

Heavy duty, single-point latches are durable and easy to use.



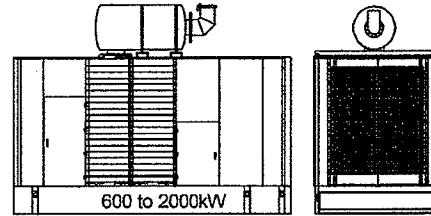
Handle

Lockable L-type door handles are keyed alike, easy to use and provide security.

Standard Features, HPE Level 0

In addition to the "Standard Features (All Levels)" the following additional features are also included for the Level 0 Enclosure:

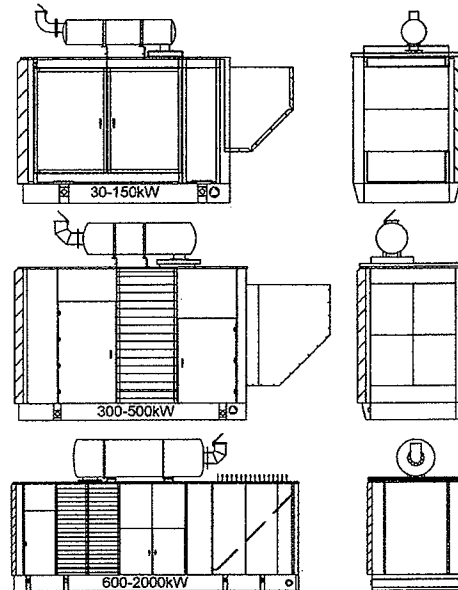
- Weather Resistant Enclosure
- Noise reduction 3dBA at 3 Meters
- Unit Mounted Radiator suitable for 40°C Ambient
- External mount Industrial Grade silencer. Silencer is mounted above the enclosure roof using heavy duty powder coated brackets. Integral rain shield is included on exhaust pipe to enclosure opening to divert rain and debris away from the genset area.
- Fixed Louvers for Cooling Air Intake are made of mil finished aluminum. Louvers divert rain and debris away from the genset area and include a bird and debris screen.
- Punched Screen Air Discharge barrier is mounted in front of the unit mounted radiator to protect from birds and debris. Air discharge barrier is made of the same enclosure material to complement the genset exterior.



See Data Sheet for dimension information.
 (<http://www.baldor.com/products/generators/idlc.asp>)

Standard Features, HPE Level 1

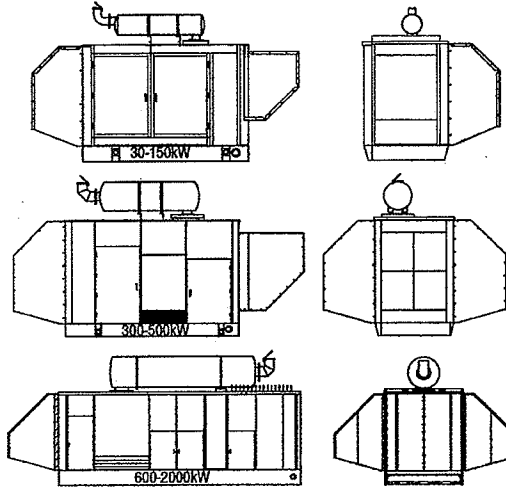
- Sound Attenuated Enclosure
- Noise reduction 15dBA at 3 Meters
- Unit Mounted Radiator suitable for 40°C Ambient
- External mount Critical Grade silencer. Silencer is mounted above the enclosure roof using heavy duty powder coated brackets. Integral rain shield is included on exhaust pipe to enclosure opening to divert rain and debris away from the genset area.
- Fixed Acoustic Louvers for Cooling Air Intake are made of mil finished aluminum exterior with fiberglass insulation and perforated aluminum on interior facing surface. Louvers divert rain and debris away from the genset area and include a bird and debris screen.
- Air Discharge Hood is mounted in front of the unit mounted radiator and includes an integral Punched Screen Barrier to protect from birds and falling debris. Discharge Hood is lined with acoustic foam insulation and includes a rain gutter to channel water away from the genset interior. Discharge hood and barrier is made of the same enclosure material to complement the genset exterior.
- Sound Deadening Interior Surface is designed with 3 inches of thermoset fiber material set between the exterior wall and a perforated mil finished aluminum interior wall.



See Data Sheet for dimension information.
 (<http://www.baldor.com/products/generators/idlc.asp>)

Standard Features, HPE Level 2

- Sound Attenuated Enclosure
- Noise reduction 25dBA at 3 Meters
- Unit Mounted Radiator suitable for 40°C Ambient
- External mount Hospital Grade silencer. Silencer is mounted above the enclosure roof using heavy duty powder coated brackets. Integral rain shield is included on exhaust pipe to enclosure opening to divert rain and debris away from the genset area.
- Air Intake Hoods lined with acoustic foam are mounted over Fixed Acoustic Louvers for Cooling Air Intake. Hoods are manufactured of aluminum and the louvers are made of mil finished aluminum exterior with fiberglass insulation and perforated aluminum on interior facing surface. Louvers divert rain and debris away from the genset area and include a bird and debris screen.
- Air Discharge Hood is mounted in front of the unit mounted radiator and includes an integral Punched Screen Barrier to protect from birds and falling debris. Discharge Hood is lined with acoustic foam insulation and includes a rain gutter to channel water away from the genset interior. Discharge hood and barrier is made of the same enclosure material to complement the genset exterior.
- Sound Deadening Interior Surface is designed with a barium sulfate reflector sandwiched between two sections of 1-1/2 inches of thermoset fiber material. The 3+ inches of acoustic insulation is set between the exterior wall and a perforated mil finished aluminum interior wall.



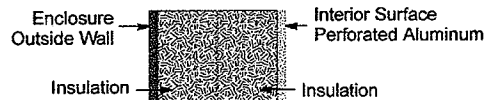
See Data Sheet for dimension information.
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Noise Attenuation Methods

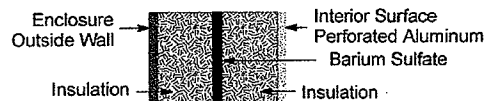
Sound Attenuation Material Specifications

- Inorganic glass fiber bonded with thermosetting resin into pre-formed 1-1/2 inch thick boards. Minimum density is 3.0 lb/ft³ (48 kg/cm³).
- Surface burning meet NFPA 90A and 90B
- Corrosive resistance meet ASTM C665 and exceeds Mil-I-24244B for stress corrosion
- Moisture absorption is less than 5% by weight when exposed to air at 120°F (49°C) and 95% humidity for 96 hours per ASTM C553
- Shrinkage is less than 0.3% linear per ASTM C356
- Interior wall is made of 0.032 inch thick perforated mil finish aluminum with a minimum of 40% open area for maximum sound absorption
- Level 2 enclosures include a Barium Sulfate Loaded Vinyl Sheet Reflector sandwiched between two layers of 1-1/2 inch glass fiber boards. Reflector is 1 lb/ft² surface mass and meet ASTM E 90-90.

Level 1 Noise Attenuation



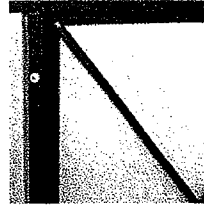
Level 2 Noise Attenuation



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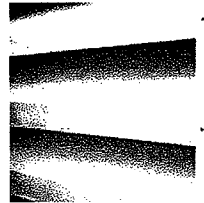
Optional Features

- **Aluminum Exterior Construction:** Roof and wall sections are manufactured with pre-painted 0.08 inch 5052-H32 aluminum formed into 3 inch thick panels with #4 finish. An aluminum exterior has superior corrosion resistance in salt spray or alkaline environment and provides a durable weather resistant finish to protect your genset investment for years to come.
- **Grade 3 Hardware Kit:** Enclosure includes stainless steel fasteners for all exterior surfaces, zinc plated cast aluminum keylock door handles, and heavy duty stainless steel hinges with removable brass pins. Recommended when an Aluminum Enclosure is requested.
- **Seismic Vibration Isolators:** Structural steel base includes Zone 4 Seismic Type spring vibration isolators between genset and base to decouple genset from enclosure mounting points. With proper mounting of the genset to foundation the increased vibration capability will better prepare the genset for a seismic event.
- **High Temperature Radiator:** Unit mounted radiator and engine cooling system can be upgraded for high ambient temperature operation. Ambient temperatures of 45°C or 50°C can be requested depending on engine manufacturers recommendations and specifications. Please review genset data sheets for maximum ambient temperature capability.
- **UL2200 Enclosure Construction:** The genset and enclosure can be designed and manufactured to the requirements of UL2200. The UL2200 Listed genset will be constructed with materials, guards, and components as necessary to carry the UL Listed markings.
- **Sub Base Fuel Tank:** For diesel powered gensets the genset and enclosure can be mounted to a sub base fuel tank. Double wall UL142 Listed tanks are recommended for all applications and are required if UL2200 Listing is requested. When specified with High Performance Enclosures the genset will mount to the sub base tank through vibration isolators while the enclosure will mount directly to the sub base flange area.
- **Intake Louver:** Intake louvers can be supplied with fixed or motorized units using acoustic or non-acoustic blades. Louvers will be designed so that water cannot be trapped and will include a bird and debris screen.
- **Discharge Louver:** Radiator cooling discharge air outlet will be protected with an extruded aluminum gravity closing damper. The damper will be constructed with lip seals to protect the genset from foreign objects and will open when the engine air flow starts and close when the air flow stops.



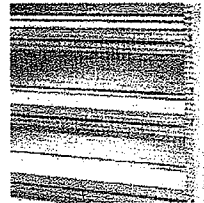
Sound Deadening Lining

Sound absorbing acoustical insulation held in place by perforated aluminum sheets, with 1/8" holes providing about 40% open area for maximum sound dampening.



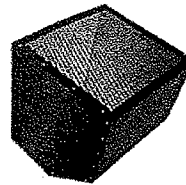
Acoustic Intake

Exterior view.
Constructed of mill finish aluminum.



Acoustic Intake

Interior view.
Includes bird screen, acoustic insulation and perforated aluminum.



Acoustic Exhaust Hood

Constructed of 14 gauge steel or aluminum lined with sound deadening insulation and perforated aluminum.

BALDOR GENERATORS WORLD HEADQUARTERS

Baldor Electric Company • P. O. Box 2400 • Fort Smith, AR 72902-2400 U.S.A.
Phone (479) 646-4711 • Fax (479) 648-5792 • International Fax (479) 648-5895

www.baldor.com