

State of Rhode Island and Providence Plantations
Department of Administration
Division of Purchases

RIVIP BIDDER CERTIFICATION COVER FORM

SECTION 1 - BIDDER INFORMATION

Bidder must be registered as a vendor on the RIVIP system at www.purchasing.ri.gov to submit a bid proposal.

Solicitation Number: 7549095A1
Solicitation Title: FURNISH AND INSTALL 2 GENERATORS - BRISTOL AND MIDDLETOWN ARMORIES -
ADDENDUM 1 (5 PGS)
**Bid Proposal Submission
Deadline Date & Time:** 11/18/2014 10:30 AM
RIVIP Vendor ID #: 3399
Bidder Name: Calson Construction Corporation
Address: 34 Oakdale Avenue

Johnston , RI 02919
USA
Telephone: (401) 272-1100
Fax: 401-272-0035
Contact Name: Caroline Calcagni
Contact Title: President
Contact Email: calsoncorp@aol.com

SECTION 2 —DISCLOSURES

Bidders must respond to every statement. Bid proposals submitted without a complete response may be deemed nonresponsive.

Indicate "Y" (Yes) or "N" (No) for Disclosures 1-3, and if "Yes," provide details below. Complete Disclosure 4.

- NO 1. State whether the Bidder, or any officer, director, manager, stockholder, member, partner, or other owner or principal of the Bidder or any parent, subsidiary, or affiliate has been subject to suspension or debarment by any federal, state, or municipal governmental authority, or the subject of criminal prosecution, or convicted of a criminal offense within the previous 5 years. If "Yes," provide details below.
- NO 2. State whether the Bidder, or any officer, director, manager, stockholder, member, partner, or other owner or principal of the Bidder or any parent, subsidiary, or affiliate has had any contracts with a federal, state, or municipal governmental authority terminated for any reason within the previous 5 years. If "Yes," provide details below.
- NO 3. State whether the Bidder, or any officer, director, manager, stockholder, member, partner, or other owner or principal of the Bidder or any parent, subsidiary, or affiliate has been fined more than \$5000 for violation(s) of any Rhode Island environmental law(s) by the Rhode Island Department of Environmental Management within the previous 5 years. If "Yes," provide details below.
4. List each officer, director, manager, stockholder, member, partner, or other owner or principal of the Bidder, and each intermediate parent company and the ultimate parent company of the Bidder. For each individual, provide his or her name, business address,

principal occupation, position with the Bidder, and the percentage of ownership, if any, he or she holds in the Bidder, and each intermediate parent company and the ultimate parent company of the Bidder.

Disclosure details (continue on additional sheet if necessary):

Caroline Calcaqni, President & Secretary, Management
G. Alfred Calcaqni, Jr., Vice President & Treasurer, Management
& Project Management
Stephen Capozzoli, Assistant Secretary, Electrical Division Management
All above: 34 Oakdale Avenue, Johnston, RI 02919
Company: Calson Construction Corporation

SECTION 3 —CERTIFICATIONS

Bidders must respond to every statement. Bid proposals submitted without a complete response may be deemed nonresponsive.

Indicate "Y" (Yes) or "N" (No), and if "No," provide details below.

THE BIDDER CERTIFIES THAT:

- Yes 1. The Bidder will immediately disclose, in writing, to the State Purchasing Agent any potential conflict of interest which may occur during the term of any contract awarded pursuant to this solicitation.
- Yes 2. The Bidder possesses all licenses and anyone who will perform any work will possess all licenses required by applicable federal, state, and local law necessary to perform the requirements of any contract awarded pursuant to this solicitation and will maintain all required licenses during the term of any contract awarded pursuant to this solicitation. In the event that any required license shall lapse or be restricted or suspended, the Bidder shall immediately notify the State Purchasing Agent in writing.
- Yes 3. The Bidder will maintain all required insurance during the term of any contract pursuant to this solicitation. In the event that any required insurance shall lapse or be canceled, the Bidder will immediately notify the State Purchasing Agent in writing.
- Yes 4. The Bidder understands that falsification of any information in this bid proposal or failure to notify the State Purchasing Agent of any changes in any disclosures or certifications in this Bidder Certification may be grounds for suspension, debarment, and/or prosecution for fraud.
- Yes 5. The Bidder has not paid and will not pay any bonus, commission, fee, gratuity, or other remuneration to any employee or official of the State of Rhode Island or any subdivision of the State of Rhode Island or other governmental authority for the purpose of obtaining an award of a contract pursuant to this solicitation. The Bidder further certifies that no bonus, commission, fee, gratuity, or other remuneration has been or will be received from any third party or paid to any third party contingent on the award of a contract pursuant to this solicitation.
- Yes 6. This bid proposal is not a collusive bid proposal. Neither the Bidder, nor any of its owners, stockholders, members, partners, principals, directors, managers, officers, employees, or agents has in any way colluded, conspired, or agreed, directly or indirectly, with any other bidder or person to submit a collusive bid proposal in response to the solicitation or to refrain from submitting a bid proposal in response to the solicitation, or has in any manner, directly or indirectly, sought by agreement or collusion or other communication with any other bidder or person to fix the price or prices in the bid proposal or the bid proposal of any other bidder, or to fix any overhead, profit, or cost component of the bid price in the bid proposal or the bid proposal of any other bidder, or to secure through any collusion, conspiracy, or unlawful agreement any advantage against the State of Rhode Island or any person with an interest in the contract awarded pursuant to this solicitation. The bid price in the bid proposal is fair and proper and is not tainted by any collusion, conspiracy, or unlawful agreement on the part of the Bidder, its owners, stockholders, members, partners, principals, directors, managers, officers, employees, or agents.
- Yes 7. The Bidder: (i) is not identified on the General Treasurer's list created pursuant to R.I. Gen. Laws § 37-2.5-3 as a person or entity engaging in investment activities in Iran described in § 37-2.5-2(b); and (ii) is not engaging in any such investment activities in Iran.
- Yes 8. The Bidder will comply with all of the laws that are incorporated into and/or applicable to any contract with the State of Rhode Island.

Certification details (continue on additional sheet if necessary):



**State of Rhode Island
 Department of Administration / Division of Purchases
 One Capitol Hill, Providence, Rhode Island 02908-5855
 Tel: (401) 574-8100 Fax: (401) 574-8387**

**BID 7549095
 Furnish and Install 2 Generators-Bristol and Middletown Armories**

Acknowledgement of addendum(a):

I have received and reviewed the following addendum(a) that pertain to this bid. This sheet must be submitted with your bid proposal. Failure to do so may result in your bid being considered NON-RESPONSIVE.

Addendum Number #1 Dated 11-12-14

Addendum Number _____ Dated _____

Signed [Signature] Dated 11-18-14

Title V.A.



Request for Quote

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ONE CAPITOL HILL
PROVIDENCE RI 02908

CREATION DATE : 23-OCT-14
BID NUMBER: 7549095
TITLE: FURNISH AND INSTALL 2 GENERATORS
-BRISTOL AND MIDDLETOWN ARMORYS

BID CLOSING DATE AND TIME:18-NOV-2014 10:30:00

BUYER: Cadoret, David
PHONE #: N/A

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DOA CONTROLLER
ONE CAPITOL HILL, 4TH FLOOR
SMITH ST
PROVIDENCE, RI 02908
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S
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O
MS SPECIAL INSTRUCTIONS
SEE BELOW
SEE BELOW, RI N/A
US

Requisition Number:

Note to Bidders: THERE WILL BE A MANDATORY PRE BID. SEE ATTACHED FOR INFORMATION.

| Line | Description | Quantity | Unit | Unit Price | Total |
|------|---|----------|------|------------|-------------|
| 1 | Furnish & Install (1) 60KW Single Phase 120/240 Volt, 1 phase, 60hz, Industrial Diesel Generator As Per The Attached Specifications. No substitution. Bristol location | 1.00 | Each | | \$69,445.00 |
| 2 | Furnish & Install (1) 60KW Single Phase 120/208 Volt, 1 phase, 60hz, Industrial Diesel Generator As Per The Attached Specifications. No substitution. Middletown location | 1.00 | Each | | \$70,660.00 |

Delivery: 12 weeks after receipt of PO

Terms of Payment: Net 30 days

It is the Vendor's responsibility to check and download any and all addenda from the RIVIP. This offer may not be considered unless a signed RIVIP generated Bidder Certification Cover Form is attached and the Unit Price column is completed. The signed Certification Cover Form must be attached to the front of the offer



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Labor and Training

Center General Complex

1511 Pontiac Avenue
Cranston, RI 02920-4407

TTY: Via RI Relay 711

Lincoln D. Chafee
Governor
Charles J. Fogarty
Director

STATE CONTRACT ADDENDUM

RHODE ISLAND DEPARTMENT OF LABOR AND TRAINING

PREVAILING WAGE REQUIREMENTS

(37-13-1 ET SEQ.)

The prevailing wage requirements are generally set forth in RIGL 37-13-1 et seq. These requirements refer to the prevailing rate of pay for regular, holiday, and overtime wages to be paid to each craftsmen, mechanic, teamster, laborer, or other type of worker performing work on public works projects when state or municipal funds exceed one thousand dollars (\$1,000).

All Prevailing Wage Contractors and Subcontractors are required to:

1. Submit to the Awarding Authority a list of the contractor's subcontractors for any part or all of the prevailing wage work in accordance with RIGL § 37-13-4;
2. Pay all prevailing wage employees at least once per week and in accordance with RIGL §37-13-7 (see Appendix B attached);
3. Post the prevailing wage rate scale and the Department of Labor and Training's prevailing wage poster in a prominent and easily accessible place on the work site in accordance with RIGL §37-13-11; posters may be downloaded at www.dlt.ri.gov/pw/Posters.htm .poster/htm or obtained from the Department of Labor and Training, Center General Complex, 1511 Pontiac Avenue, Cranston, Rhode Island;
4. Access the Department of Labor and Training website, at www.dlt.ri.gov on or before July 1st of each year, until such time as the contract is completed, to ascertain the current prevailing wage rates and the amount of payment or contributions for each covered prevailing wage employee and make any necessary adjustments to the covered employee's prevailing wage rates effective July 1st of each year in compliance with RIGL §37-13-8;
5. Attach a copy of this CONTRACT ADDENDUM and its attachments as a binding obligation to any and all contracts between the contractor and any

An Equal Opportunity Employer/Program./Auxiliary aids and services are available upon request to individuals with disabilities.

TTY via RI Relay 711



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Director

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1511 Pontiac Avenue
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Telephone; (401) 462-8000
TTY; Via RI Relay 711

- subcontractors and their assignees for prevailing wage work performed pursuant to this contract;
6. Provide for the payment of overtime for prevailing wage employees who work in excess of eight (8) hours in any one day or forty (40) hours in any one week as provided by RIGL §37-13-10;
 7. Maintain accurate prevailing wage employee payroll records on a Rhode Island Certified Weekly Payroll form available for download at www.dlt.ri.gov/pw.forms/htm, as required by RIGL §37-13-13, and make those records available to the Department of Labor and Training upon request;
 8. Furnish the fully executed RI Certified Weekly Payroll Form to the awarding authority on a monthly basis for all work completed in the preceding month.
 9. For general or primary contracts one million dollars (\$1,000,000) or more, shall maintain on the work site a fully executed RI Certified Prevailing Wage Daily Log listing the contractor's employees employed each day on the public works site; the RI Certified Prevailing Wage Daily Log shall be available for inspection on the public works site at all times; this rule shall not apply to road, highway, or bridge public works projects. Where applicable, furnish both the Rhode Island Certified Prevailing Wage Daily Log together with the Rhode Island Weekly Certified Payroll to the awarding authority.
 10. Assure that all covered prevailing wage employees on construction projects with a total project cost of one hundred thousand dollars (\$100,000) or more has a OSHA ten (10) hour construction safety certification in compliance with RIGL § 37-23-1;
 11. ~~Employ apprentices for the performance of the awarded contract when the contract is valued at one million dollars (\$1,000,000) or more, and~~ comply with the apprentice to journeyman ratio for each trade approved by the apprenticeship council of the Department of Labor and Training in compliance with RIGL §37-13-3.1;
 12. Assure that all prevailing wage employees who perform work which requires a Rhode Island trade license possess the appropriate Rhode Island trade license in compliance with Rhode Island law; and

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TTY via RI Relay 711

See Case
No. 13-2189
July 16, 2014



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13. Comply with all applicable provisions of RIGL §37-13-1, et. seq;

Any questions or concerns regarding this CONTRACT ADDENDUM should be addressed to the contractor or subcontractor's attorney. Additional Prevailing Wage information may be obtained from the Department of Labor and Training at www.dlt.ri.gov/pw.

CERTIFICATION

I hereby certify that I have reviewed this CONTRACT ADDENDUM and understand my obligations as stated above.

By: Caroline Calcagni

Title: President

Subscribed and sworn before me this 18th day of Nov, 2014

[Signature]
Notary Public

My commission expires: 2-22-15

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TTY via RI Relay 711*



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Labor and Training

Center General Complex

1511 Pontiac Avenue

Cranston, RI 02920-4407

Telephone: (401) 462-8000

APPENDIX A

TITLE 37

Public Property and Works

CHAPTER 37-13

Labor and Payment of Debts by Contractors

SECTION 37-13-5

§37-13-5 Payment for trucking or materials furnished - Withholding of sums due. -A contractor or subcontractor on public works authorized by a proper authority shall pay any obligation or charge for trucking and material which have been furnished for the use of the contractor or subcontractor, in connection with the public works being performed by him or her, within ninety (90) days after the obligation or charge is incurred or the trucking service has been performed or the material has been delivered to the site of the work, whichever is later. When it is brought to the notice of the proper authority in a city or town, or the proper authority in the state having supervision of the contract, that the obligation or charge has not been paid by the contractor or subcontractor, the proper authority may deduct and hold for a period not exceeding sixty (60) days, from sums of money due to the contractor or subcontractor, the equivalent amount of such sums certified by a trucker or materialman creditor as due him or her, as provided in this section, and which the proper authority determines is reasonable for trucking performed or materials furnished for the public works.

APPENDIX B

TITLE 37

Public Property and Works

CHAPTER 37-13

Labor and Payment of Debts by Contractors

SECTION 37-13-7

§ 37-13-7 Specification in contract of amount and frequency of payment of wages.
-(a) Every call for bids for every contract in excess of one thousand dollars (\$1,000), to which the state of Rhode Island or any political subdivision thereof or any public agency or quasi-public agency is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the state of Rhode Island or any political subdivision thereof, or any public agency or quasi-public agency and which requires or involves the employment of employees, shall contain a provision stating the minimum wages to be paid various types of employees which shall be based upon the wages that will be determined by the director of labor and training to be prevailing for the corresponding types of employees employed on projects of a character similar to the contract work in the city, town, village, or other appropriate political subdivision of the state of Rhode Island in which the work is to be performed. Every contract shall contain a stipulation that the contractor or his or her subcontractor shall pay all the employees employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates not less than those stated in the call for bids, regardless of any contractual relationships which may be alleged to exist between the contractor or subcontractor and the employees, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of the accrued payments as may be considered necessary to pay to the employees employed by the contractor, or any subcontractor on the work, the difference between the rates of wages required by the contract to be paid the employees on the work and the rates of wages received by the employees and not refunded to the contractor, subcontractors, or their agents.

(b) The terms "wages", "scale of wages", "wage rates", "minimum wages", and "prevailing wages" shall include:

- (1) The basic hourly rate of pay; and
- (2)) The amount of:

(A) The rate of contribution made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program; and

(B) The rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the employees affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal, state, or local law to provide any of the benefits; provided, that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the director of labor and training insofar as this chapter of this title and other acts incorporating this chapter of this title by reference are concerned may be discharged by the making of payments in cash, by the making of contributions of a type referred to in subsection (b)(2), or by the assumption of an enforceable commitment to bear the costs of a plan or program of a type referred to in this subdivision, or any combination thereof, where the aggregate of any payments, contributions, and costs is not less than the rate of pay described in subsection (b)(1) plus the amount referred to in subsection (b)(2).

(c) The term "employees", as used in this section, shall include employees of contractors or subcontractors performing jobs on various types of public works including mechanics, apprentices, teamsters, chauffeurs, and laborers engaged in the transportation of gravel or fill to the site of public works, the removal and/or delivery of gravel or fill or ready-mix concrete, sand, bituminous stone, or asphalt flowable fill from the site of public works, or the transportation or removal of gravel or fill from one location to another on the site of public works, and the employment of the employees shall be subject to the provisions of subsections (a) and (b).

(d) The terms "public agency" and "quasi-public agency" shall include, but not be limited to, the Rhode Island industrial recreational building authority, the Rhode Island economic development corporation, the Rhode Island airport corporation, the Rhode Island industrial facilities corporation, the Rhode Island refunding bond authority, the Rhode Island housing and mortgage finance corporation, the Rhode Island resource recovery corporation, the Rhode Island public transit authority, the Rhode Island student loan authority, the water resources board corporate, the Rhode Island health and education building corporation, the Rhode Island higher education assistance authority, the Rhode Island turnpike and bridge authority, the Narragansett Bay water quality management district commission, Rhode Island telecommunications authority, the convention center authority, the board of governors for higher education, the board of regents for elementary and secondary education, the capital center commission, the housing resources commission, the Quonset Point-Davisville management corporation, the Rhode Island children's crusade for higher education, the Rhode Island depositors economic protection corporation, the Rhode Island lottery commission, the Rhode Island

partnership for science and technology, the Rhode Island public building authority, and the Rhode Island underground storage tank board.

State of Rhode Island
PAYER'S REQUEST FOR TAXPAYER
IDENTIFICATION NUMBER AND CERTIFICATION

THE IRS REQUIRES THAT YOU FURNISH YOUR TAXPAYER IDENTIFICATION NUMBER TO US. FAILURE TO PROVIDE THIS INFORMATION CAN RESULT IN A \$60 PENALTY BY THE IRS. IF YOU ARE AN INDIVIDUAL, PLEASE PROVIDE US WITH YOUR SOCIAL SECURITY NUMBER (SSN) IN THE SPACE INDICATED BELOW. IF YOU ARE A COMPANY OR A CORPORATION, PLEASE PROVIDE US WITH YOUR EMPLOYER IDENTIFICATION NUMBER (EIN) WHERE INDICATED.

Taxpayer Identification Number (T.I.N.)

Enter your taxpayer identification number in the appropriate box. For most individuals, this is your social security number.

Social Security No. (SSN)

Employer ID No. (EIN)

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|----|---------|
| 05 | 0472828 |
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NAME Calson Construction Corporation

ADDRESS 34 Oakdale Ave

(REMITTANCE ADDRESS, IF DIFFERENT) n/a

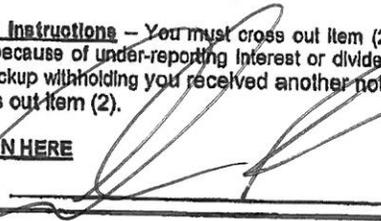
CITY, STATE AND ZIP CODE Johnston, RI 02919

CERTIFICATION: Under penalties of perjury, I certify that:

- (1) The number shown on this form is my correct Taxpayer Identification Number (or I am waiting for a number to be issued to me), and
- (2) I am not subject to backup withholding because either: (A) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (B) the IRS has notified me that I am no longer subject to backup withholding.

Certification Instructions - You must cross out item (2) above if you have been notified by the IRS that you are subject to backup withholding because of under-reporting interest or dividends on your tax return. However, if after being notified by IRS that you were subject to backup withholding you received another notification from IRS that you are no longer subject to backup withholding, do not cross out item (2).

PLEASE SIGN HERE

SIGNATURE  TITLE President DATE 11-18-14 TEL NO. 401-272-1100

BUSINESS DESIGNATION:

- Please Check One:
- | | | |
|--------------------------------------|---|---|
| Individual <input type="checkbox"/> | Medical Services Corporation <input type="checkbox"/> | Government/Nonprofit Corporation <input type="checkbox"/> |
| Partnership <input type="checkbox"/> | Corporation <input checked="" type="checkbox"/> | Trust/Estate <input type="checkbox"/> |
| | | Legal Services Corporation <input type="checkbox"/> |

NAME: Be sure to enter your full and correct name as listed in the IRS file for you or your business.

ADDRESS, CITY, STATE AND ZIP CODE: Enter your primary business address and remittance address if different from your primary address). If you operate a business at more than one location, adhere to the following:

- 1) Same T.I.N. with more than one location -- attach a list of location addresses with remittance address for each location and indicate to which location the year-end tax information return should be mailed.
- 2) Different T.I.N. for each different location -- submit a completed W-9 form for each T.I.N. and location. (One year-end tax information return will be reported for each T.I.N. and remittance address.)

CERTIFICATION -- Sign the certification, enter your title, date, and your telephone number (including area code and extension).

BUSINESS TYPE CHECK-OFF -- Check the appropriate box for the type of business ownership.

Mall to: Supplier Coordinator, One Capitol Hill, Providence, RI 02908

ELECTRICAL CORP AC003078
A-003078 B-000858
CALSON CONSTRUCTION CORPORATIO

STEPHEN L CAPOZZOLI
34 OAKDALE AVENUE
JOHNSTON RI 02919

Ronald R. Ambrose
Administrator

12/31/2015
Expiration Date



STATE OF RHODE ISLAND

CONTRACTORS' REGISTRATION
AND LICENSING BOARD

REGISTRATION NO.

EXP. DATE

REGISTRANT'S NAME

19046 07/17/16

GILSON CONSTRUCTION CORPORATION

AUTHORIZED REPRESENTATIVE

CAROLINE GILGREN

DRIVER'S LICENSE #

RI 0307803

EXECUTIVE DIRECTOR

Greg H. Walker



STATE OF RHODE ISLAND

CONTRACTORS' REGISTRATION
AND LICENSING BOARD

REGISTRATION NO.

EXP. DATE

REGISTRANT'S NAME

19046 07/17/16

GILSON CONSTRUCTION CORPORATION

AUTHORIZED REPRESENTATIVE

A. ALFRED GILGREN, JR.

DRIVER'S LICENSE #

RI 0300454

EXECUTIVE DIRECTOR

Greg H. Walker

THE AMERICAN INSTITUTE OF ARCHITECTS



A 1A Document A 3 1 0

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we Calson Construction Corporation,
34 Oakdale Avenue, Johnston, RI 02919

as Principal, hereinafter called the Principal, and Berkley Insurance Company,
475 Steamboat Rd., Greenwich, CT 06830

a corporation duly organized under the laws of the State of Delaware
as Surety, hereinafter called the Surety, are held and firmly bound unto _____
State of Rhode Island and Providence Plantations, One Capitol Hill, Providence, RI 02908

as Obligee, hereinafter called the Obligee, in the sum of _____
FIVE PERCENT OF THE AMOUNT OF THE ACCOMPANYING BID Dollars (\$ 5% of Bid),
for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind
ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly
by these presents.

WHEREAS, the Principal has submitted a bid for _____
#7549095 Bristol & Middletown Armorys - 2 Generators

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 18th day of November 2014

[Signature]
(Witness)

Calson Construction Corporation
(Principal) (Seal)

Carolyn Colca (Title) President

Berkley Insurance Company
(Surety) (Seal)

Denise F. Levesque
(Witness)

Joan A. Verardo (Title) Attorney-in-Fact

POWER OF ATTORNEY
BERKLEY INSURANCE COMPANY
WILMINGTON, DELAWARE

NOTICE: The warning found elsewhere in this Power of Attorney affects the validity thereof. Please review carefully.

KNOW ALL MEN BY THESE PRESENTS, that BERKLEY INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Delaware, having its principal office in Greenwich, CT, has made, constituted and appointed, and does by these presents make, constitute and appoint: Donald L. Goodrich or Joan A. Verardo of Goodrich-Blessing Agency, Inc. of Cranston, RI its true and lawful Attorney-in-Fact, to sign its name as surety only as delineated below and to execute, seal, acknowledge and deliver any and all bonds and undertakings, with the exception of Financial Guaranty Insurance, providing that no single obligation shall exceed Fifty Million and 00/100 U.S. Dollars (U.S.\$50,000,000.00), to the same extent as if such bonds had been duly executed and acknowledged by the regularly elected officers of the Company at its principal office in their own proper persons.

This Power of Attorney shall be construed and enforced in accordance with, and governed by, the laws of the State of Delaware, without giving effect to the principles of conflicts of laws thereof. This Power of Attorney is granted pursuant to the following resolutions which were duly and validly adopted at a meeting of the Board of Directors of the Company held on January 25, 2010:

RESOLVED, that, with respect to the Surety business written by Berkley Surety Group, LLC, the Chairman of the Board, Chief Executive Officer, President or any Vice President of the Company, in conjunction with the Secretary or any Assistant Secretary are hereby authorized to execute powers of attorney authorizing and qualifying the attorney-in-fact named therein to execute bonds, undertakings, recognizances, or other suretyship obligations on behalf of the Company, and to affix the corporate seal of the Company to powers of attorney executed pursuant hereto; and said officers may remove any such attorney-in-fact and revoke any power of attorney previously granted; and further

RESOLVED, that such power of attorney limits the acts of those named therein to the bonds, undertakings, recognizances, or other suretyship obligations specifically named therein, and they have no authority to bind the Company except in the manner and to the extent therein stated; and further

RESOLVED, that such power of attorney revokes all previous powers issued on behalf of the attorney-in-fact named; and further

RESOLVED, that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any power of attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligation of the Company; and such signature and seal when so used shall have the same force and effect as though manually affixed. The Company may continue to use for the purposes herein stated the facsimile signature of any person or persons who shall have been such officer or officers of the Company, notwithstanding the fact that they may have ceased to be such at the time when such instruments shall be issued.

IN WITNESS WHEREOF, the Company has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 15 day of January, 2013.

Attest:

Berkley Insurance Company

(Seal)

By

By

Ira S. Lederman
Senior Vice President & Secretary

Jeffrey M. Hafter
Senior Vice President

WARNING: THIS POWER INVALID IF NOT PRINTED ON BLUE "BERKLEY" SECURITY PAPER.

STATE OF CONNECTICUT)

) ss:

COUNTY OF FAIRFIELD)

Sworn to before me, a Notary Public in the State of Connecticut, this 15 day of January, 2013, by Ira S. Lederman and Jeffrey M. Hafter who are sworn to me to be the Senior Vice President and Secretary, and the Senior Vice President, respectively, of Berkley Insurance Company.

EILEEN KILLEEN

[Signature]
Notary Public, State of Connecticut

NOTARY PUBLIC, STATE OF CONNECTICUT
MY COMMISSION EXPIRES JUNE 30, 2017

CERTIFICATE

I, the undersigned, Assistant Secretary of BERKLEY INSURANCE COMPANY, DO HEREBY CERTIFY that the foregoing is a true, correct and complete copy of the original Power of Attorney; that said Power of Attorney has not been revoked or rescinded and that the authority of the Attorney-in-Fact set forth therein, who executed the bond or undertaking to which this Power of Attorney is attached, is in full force and effect as of this date.

Given under my hand and seal of the Company, this 18th day of November, 2014.

(Seal)

Andrew M. Tuma

WARNING - Any unauthorized reproduction or alteration of this document is prohibited. This power of attorney is void unless seals are readable and the certification seal at the bottom is embossed. The background imprint, warning and confirmation (on reverse) must be in blue ink.

Instructions for Inquiries and Notices Under the Bond Attached to This Power

Berkley Surety Group is the affiliated underwriting manager for the surety business of: Acadia Insurance Company, Berkley Insurance Company, Berkley Regional Insurance Company, Carolina Casualty Insurance Company, Union Standard Insurance Company, Continental Western Insurance Company, and Union Insurance Company.

To verify the authenticity of the bond, please call (866) 768-3534 or email BSGInquiry@berkleysurety.com

Any written notices, inquiries, claims or demands to the surety on the bond to which this Rider is attached should be directed to:

**Berkley Surety Group
412 Mount Kemble Avenue
Suite 310N
Morristown, NJ 07960
Attention: Surety Claims Department**

Or

email BSGClaim@berkleysurety.com

Please include with all notices the bond number and the name of the principal on the bond. Where a claim is being asserted, please set forth generally the basis of the claim. In the case of a payment or performance bond, please identify the project to which the bond pertains.

SD060

4.5L

Industrial Diesel Generator Set

EPA Certified Stationary Emergency

Standby Power Rating
60 kW 75 kVA 60 Hz

Prime Power Rating*
54 kW 68 kVA 60 Hz

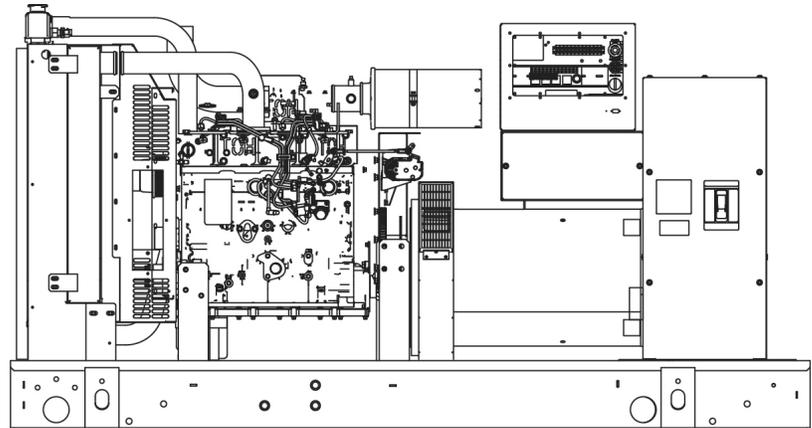


Image used for illustration purposes only

*EPA Certified Prime ratings are not available in the U.S. or its Territories

Codes and Standards

Generac products are designed to the following standards:



UL2200, UL508, UL142, UL498



NFPA70, 99, 110, 37



NEC700, 701, 702, 708



ISO9001, 8528, 3046, 7637, Pluses #2b, 4



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41

American National Standards Institute



IBC 2009, CBC 2010, IBC 2012, ASCE 7-05,
ASCE 7-10, ICC-ES AC-156 (2012)

Powering Ahead

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SD060

Standard Features

ENGINE SYSTEM

General

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel flexible exhaust connection
- Critical Exhaust Silencer (enclosed only)
- Factory Filled Oil
- Radiator Duct Adapter (open set only)

Fuel System

- Fuel lockoff solenoid
- Primary fuel filter

Cooling System

- Closed Coolant Recovery System
- UV/Ozone resistant hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene glycol antifreeze
- 120 VAC Coolant Heater

Engine Electrical System

- Battery charging alternator
- Battery cables
- Battery tray
- Solenoid activated starter motor
- Rubber-booted engine electrical connections

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- 12 leads (3-phase, non 600 V)
- Class H insulation material
- Vented rotor
- 2/3 pitch
- Skewed stator
- Auxiliary voltage regulator power winding
- Amortisseur winding
- Brushless Excitation
- Sealed Bearings
- Automated manufacturing (winding, insertion, lacing, varnishing)
- Rotor dynamically spin balanced (get tolerance)
- Full load capacity alternator
- Protective thermal switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of circuits - high/low voltage
- Separation of circuits - multiple breakers
- Silencer Heat Shield
- Wrapped Exhaust Piping
- Silencer housed in discharge hood (enclosed only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby rated Units)
- 1 Year Limited Warranty (Prime rated units)
- Silencer mounted in the discharge hood (enclosed only)

ENCLOSURE (if selected)

- Rust-proof fasteners with nylon washers to protect finish
- High performance sound-absorbing material
- Gasketed doors
- Stamped air-intake louvers
- Air discharge hoods for radiator-upward pointing
- Stainless steel lift off door hinges
- Stainless steel lockable handles
- Rhino Coat™ - Textured polyester powder coat

TANKS (if selected)

- UL 142
- Double wall
- Vents
- Sloped top
- Sloped bottom
- Factory pressure tested (2 psi)
- Rupture basin alarm
- Fuel level
- Check valve in supply and return lines
- Rhino Coat™ - Textured polyester powder coat
- Stainless hardware

CONTROL SYSTEM



Control Panel

- Digital H Control Panel - Dual 4x20 Display
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable PLC
- RS-232/485
- All-Phase Sensing DVR
- Full System Status
- Utility Monitoring
- Low Fuel Pressure Indication
- 2-Wire Start Compatible
- Power Output (kW)
- Power Factor
- kW Hours, Total & Last Run

- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance algorithm
- Sealed Boards
- Password parameter adjustment protection
- Single point ground

- 15 channel data logging
- 0.2 msec high speed data logging
- Alarm information automatically comes up on the display

Alarms

- Oil Pressure (Pre-programmable Low Pressure Shutdown)
- Coolant Temperature (Pre-programmed High Temp Shutdown)
- Coolant Level (Pre-programmed Low Level Shutdown)
- Low Fuel Pressure Alarm
- Engine Speed (Pre-programmed Over speed Shutdown)
- Battery Voltage Warning
- Alarms & warnings time and date stamped
- Alarms & warnings for transient and steady state conditions
- Snap shots of key operation parameters during alarms & warnings
- Alarms and warnings spelled out (no alarm codes)

SD060

Configurable Options

ENGINE SYSTEM

- General
- Oil Make-Up System
 - Oil Heater
 - Industrial Exhaust Silencer

Fuel System

- Flexible fuel lines
- Primary fuel filter

Engine Electrical System

- 10A UL battery charger
- 2.5A UL battery charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical coating
- Permanent Magnet Excitation

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

GENERATOR SET

- Gen-Link Communications Software (English Only)
- IBC Seismic Certification
- 8 Load Position Load Center
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty

ENCLOSURE

- Weather Protected
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- 150 MPH Wind Kit
- 12 VDC Enclosure Lighting Kit
- 120 VAC Enclosure Lighting Kit
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch

TANKS (Size on last page)

- Electrical Fuel Level
- Mechanical Fuel Level
- 8" Vent Extension
- 13" Vent Extension
- 19" Vent Extension

CONTROL SYSTEM

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> 21-Light Remote Annunciator <input type="checkbox"/> Remote Relay Panel (8 or 16) <input type="checkbox"/> Oil Temperature Sender with Indication Alarm <input type="checkbox"/> Remote E-Stop (Break Glass-Type, Surface Mount) | <ul style="list-style-type: none"> <input type="checkbox"/> Remote E-Stop (Red Mushroom-Type, Surface Mount) <input type="checkbox"/> Remote E-Stop (Red Mushroom-Type, Flush Mount) <input type="checkbox"/> Remote Communication - Modem | <ul style="list-style-type: none"> <input type="checkbox"/> Remote Communication - Ethernet <input type="checkbox"/> 10A Run Relay <input type="checkbox"/> Ground fault indication and protection functions |
|--|---|---|

Engineered Options

ENGINE SYSTEM

- Coolant heater ball valves
- Block Heaters
- Fluid containment pans

ALTERNATOR SYSTEM

- 3rd Breaker System

GENERATOR SET

- Special Testing

ENCLOSURE

- Motorized Dampers
- Door switched for intrusion alert
- Enclosure ambient heaters

TANKS

- Overfill protection valve
- UL2085 Tank
- ULC S-601 Tank
- Stainless Steel Tank
- Special Fuel Tanks (MIDEQ and FL DEP/DERM, etc.)
- Vent Extensions

CONTROL SYSTEM

- Spare inputs (x4) / outputs (x4) - H Panel Only
- Battery Disconnect Switch

Rating Definitions

Standby – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications.

Power ratings in accordance with ISO 8528-1, Second Edition dated 2005-06-01, definitions for Prime Power (PRP) and Emergency Standby Power (ESP).

SD060

application and engineering data

ENGINE SPECIFICATIONS

General

| | |
|--------------------------|--------------------------|
| Make | Generac |
| EPA Emissions Compliance | Stationary Emergency |
| EPA Emissions Reference | See Emissions Data Sheet |
| Cylinder # | 4 |
| Type | In-Line |
| Displacement - L (cu in) | 4.5 (274.6) |
| Bore - mm (in) | 105 (4.1) |
| Stroke - mm (in) | 132 (5.2) |
| Compression Ratio | 17.5:1 |
| Intake Air Method | Turbocharged |
| Cylinder Head Type | 2 Valve |
| Piston Type | Aluminum |
| Crankshaft Type | Forged Steel |

Engine Governing

| | |
|-------------------------------------|------------------------|
| Governor | Electronic Isochronous |
| Frequency Regulation (Steady State) | ± 0.25% |

Lubrication System

| | |
|------------------------------|-------------|
| Oil Pump Type | Gear |
| Oil Filter Type | Full Flow |
| Crankcase Capacity - L (qts) | 13.6 (14.4) |

Cooling System

| | |
|---------------------------------|-------------------------|
| Cooling System Type | Closed |
| Water Pump Flow | Belt Driven Centrifugal |
| Fan Type | Pusher |
| Fan Speed (rpm) | 2538 |
| Fan Diameter mm (in) | 660.4 (26) |
| Coolant Heater Wattage | 1500 |
| Coolant Heater Standard Voltage | 120 V /240 V |

Fuel System

| | |
|----------------------------|------------------------------|
| Fuel Type | Ultra Low Sulfur Diesel Fuel |
| Fuel Specifications | ASTM |
| Fuel Filtering (microns) | 5 |
| Fuel Inject Pump | Stanadyne |
| Fuel Pump Type | Engine Driven Gear |
| Injector Type | Mechanical |
| Fuel Supply Line - mm (in) | 12.7 (0.5) NPT |
| Fuel Return Line - mm (in) | 12.7 (0.5) NPT |

Engine Electrical System

| | |
|-----------------------------|------------------------------|
| System Voltage | 12 VDC |
| Battery Charging Alternator | 20 A |
| Battery Size | See Battery Index 0161970SBY |
| Battery Voltage | 12 VDC |
| Ground Polarity | Negative |

ALTERNATOR SPECIFICATIONS

| | |
|-------------------------------------|------------------------|
| Standard Model | 390 |
| Poles | 4 |
| Field Type | Revolving |
| Insulation Class - Rotor | H |
| Insulation Class - Stator | H |
| Total Harmonic Distortion | < 3% |
| Telephone Interference Factor (TIF) | < 50 |
| Standard Excitation | Synchronous Brushless |
| Bearings | One-Pre Lubed & Sealed |
| Coupling | Direct, Flexible Disc |
| Load Capacity - Standby | 100% |
| Prototype Short Circuit Test | Yes |

| | |
|------------------------------------|---------|
| Voltage Regulator Type | Digital |
| Number of Sensed Phases | 3 |
| Regulation Accuracy (Steady State) | ± 0.25% |

SD060

operating data

POWER RATINGS

| | Standby | |
|---------------------------------|---------|-----------|
| Single-Phase 120/240 VAC @1.0pf | 60 kW | Amps: 250 |
| Three-Phase 120/208 VAC @0.8pf | 60 kW | Amps: 208 |
| Three-Phase 120/240 VAC @0.8pf | 60 kW | Amps: 180 |
| Three-Phase 277/480 VAC @0.8pf | 60 kW | Amps: 90 |
| Three-Phase 346/600 VAC @0.8pf | 60 kW | Amps: 72 |

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

| Alternator | kW | 480 VAC | | | | | | 208/240 VAC | | | | | |
|------------|-----|---------|-----|-----|-----|-----|-----|-------------|-----|-----|-----|-----|-----|
| | | 10% | 15% | 20% | 25% | 30% | 35% | 10% | 15% | 20% | 25% | 30% | 35% |
| Standard | 60 | 42 | 63 | 83 | 104 | 125 | 146 | 32 | 47 | 62 | 78 | 94 | 110 |
| Upsize 1 | 80 | 59 | 88 | 117 | 147 | 176 | 205 | 44 | 66 | 88 | 110 | 132 | 154 |
| Upsize 2 | 100 | 79 | 118 | 157 | 197 | 236 | 200 | 59 | 89 | 118 | 148 | 177 | 206 |

FUEL CONSUMPTION RATES*

| Fuel Pump Lift - ft (m) | | Diesel - gph (lph) | |
|--|--|--------------------|------------|
| 3 (1) | | Percent Load | gph (lph) |
| Total Fuel Pump Flow (Combustion + Return) | | 25% | 1.4 (5.3) |
| 13.6 gph | | 50% | 2.7 (10.2) |
| | | 75% | 3.8 (14.4) |
| | | 100% | 4.8 (18.2) |

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

| | Standby | |
|--|---------------------|--------------|
| Coolant Flow per Minute | gpm (lpm) | 32.7 (123.8) |
| Coolant System Capacity | gal (L) | 4.5 (17.44) |
| Heat Rejection to Coolant | BTU/hr | 123,000 |
| Inlet Air | cfm (m3/hr) | 6360 (180) |
| Max. Operating Radiator Air Temp | F° (C°) | 122 (50) |
| Max. Ambient Temperature (before derate) | F° (C°) | 104 (40) |
| Maximum Radiator Backpressure | in H ₂ O | 0.5 |

COMBUSTION AIR REQUIREMENTS

| Flow at Rated Power | Standby |
|---------------------|-----------|
| cfm (m3/min) | 247 (7.0) |

ENGINE

| | Standby | |
|--------------------------|----------------|------------|
| Rated Engine Speed | rpm | 1800 |
| Horsepower at Rated kW** | hp | 93 |
| Piston Speed | ft/min (m/min) | 1559 (475) |
| BMEP | psi | 154 |

EXHAUST

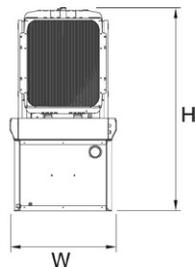
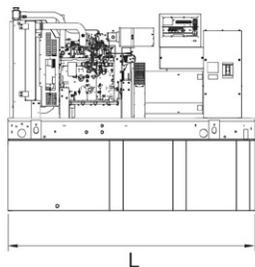
| | Standby | |
|-----------------------------------|--------------|-------------|
| Exhaust Flow (Rated Output) | cfm (m³/min) | 534 (15.1) |
| Max. Backpressure (Post Silencer) | inHg (Kpa) | 1.5 (5.1) |
| Exhaust Temp (Rated Output) | °F (°C) | 930 (498.8) |
| Exhaust Outlet Size (Open Set) | mm (in) | 76.2 (3.0) |

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

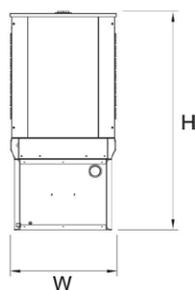
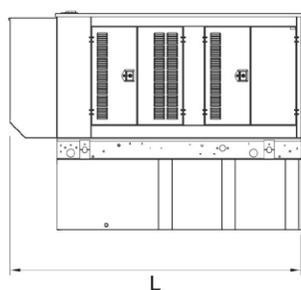
SD060

dimensions and weights*



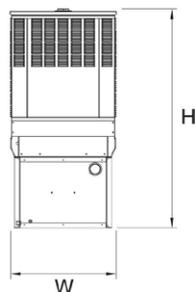
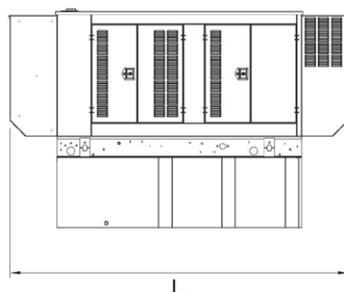
OPEN SET

| RUN TIME HOURS | USABLE CAPACITY GAL (L) | L x W x H in (mm) | WT lbs (kg) - Tank & Open Set |
|----------------|-------------------------|--|-------------------------------|
| NO TANK | - | 93 (2362.2) x 40 (1016) x 49 (1244.6) | 2425 (1100) |
| 16 | 79 (299) | 93 (2362.2) x 40 (1016) x 62 (1574.8) | 2947 (1201) |
| 39 | 189 (715.4) | 93 (2362.2) x 40 (1016) x 74 (1879.6) | 3183 (1444) |
| 63 | 300 (1135.6) | 93 (2362.2) x 40 (1016) x 86 (2184.4) | 3407 (1545) |
| 73 | 350 (1325) | 110 (2794) x 40 (1016) x 86 (2184.4) | NA |
| 106 | 510 (1930.5) | 117 (2971.8) x 47 (1193.8) x 86 (2184.4) | 3790 (1719) |
| 123 | 589 (2229.6) | 128 (3251.2) x 49 (1244.6) x 86 (2184.4) | 4269 (1936) |



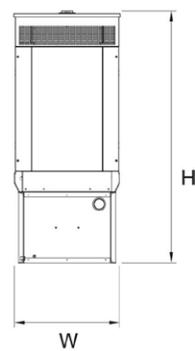
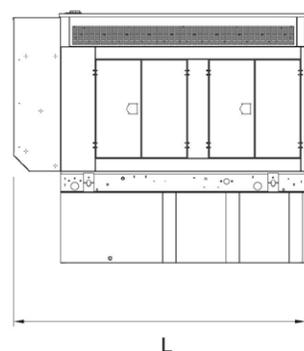
STANDARD ENCLOSURE

| RUN TIME HOURS | USABLE CAPACITY GAL (L) | L x W x H in (mm) | WT lbs (kg) - Enclosure Only | |
|----------------|-------------------------|--|------------------------------|----------|
| | | | Steel | Aluminum |
| NO TANK | - | 112 (2844.8) x 41 (1041.4) x 56 (1422.4) | 425 (193) | 155 (70) |
| 16 | 79 (299) | 112 (2844.8) x 41 (1041.4) x 69 (1752.6) | | |
| 39 | 189 (715.4) | 112 (2844.8) x 41 (1041.4) x 81 (2057.4) | | |
| 63 | 300 (1135.6) | 112 (2844.8) x 41 (1041.4) x 93 (2362.2) | | |
| 73 | 350 (1325) | 112 (2844.8) x 41 (1041.4) x 93 (2362.2) | | |
| 106 | 510 (1930.5) | 117 (2971.8) x 47 (1193.8) x 93 (2362.2) | | |
| 123 | 589 (2229.6) | 128 (3251.2) x 49 (1244.6) x 93 (2362.2) | | |



LEVEL 1 ACOUSTIC ENCLOSURE

| RUN TIME HOURS | USABLE CAPACITY GAL (L) | L x W x H in (mm) | WT lbs (kg) - Enclosure Only | |
|----------------|-------------------------|--|------------------------------|-----------|
| | | | Steel | Aluminum |
| NO TANK | - | 130 (3302) x 41 (1041.4) x 56 (1422.4) | 450 (204) | 285 (129) |
| 16 | 79 (299) | 130 (3302) x 41 (1041.4) x 69 (1752.6) | | |
| 39 | 189 (715.4) | 130 (3302) x 41 (1041.4) x 81 (2057.4) | | |
| 63 | 300 (1135.6) | 130 (3302) x 41 (1041.4) x 93 (2362.2) | | |
| 73 | 350 (1325) | 130 (3302) x 41 (1041.4) x 93 (2362.2) | | |
| 106 | 510 (1930.5) | 130 (3302) x 47 (1193.8) x 93 (2362.2) | | |
| 123 | 589 (2229.6) | 130 (3302) x 49 (1244.6) x 93 (2362.2) | | |



LEVEL 2 ACOUSTIC ENCLOSURE

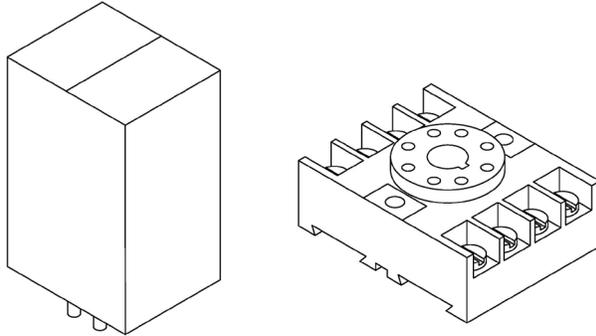
| RUN TIME HOURS | USABLE CAPACITY GAL (L) | L x W x H in (mm) | WT lbs (kg) - Enclosure Only | |
|----------------|-------------------------|---|------------------------------|-----------|
| | | | Steel | Aluminum |
| NO TANK | - | 112 (2844.8) x 41 (1041.4) x 69 (1752.6) | 625 (284) | 395 (180) |
| 16 | 79 (299) | 112 (2844.8) x 41 (1041.4) x 82 (2082.8) | | |
| 39 | 189 (715.4) | 112 (2844.8) x 41 (1041.4) x 94 (2387.6) | | |
| 63 | 300 (1135.6) | 112 (2844.8) x 41 (1041.4) x 106 (2692.4) | | |
| 73 | 350 (1325) | 112 (2844.8) x 41 (1041.4) x 106 (2692.4) | | |
| 106 | 510 (1930.5) | 117 (2971.8) x 47 (1193.8) x 106 (2692.4) | | |
| 123 | 589 (2229.6) | 128 (3251.2) x 49 (1244.6) x 106 (2692.4) | | |

*All measurements are approximate and for estimation purposes only. Sound dBA can be found on the sound data sheet. Enclosure Only weight is added to Tank & Open Set weight to determine total weight.

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

Engine Run Relay

Accessories



- For use with Generac PMDCP, H-100, E panel or C panel control systems
- 10 Amp Contact Rating
- 12 or 24 Volt DC input
- Contact open or closure on engine run

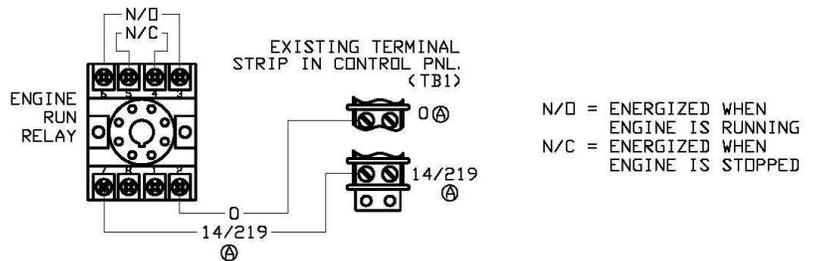
Contacts

| | |
|----------|--------------|
| Type | DPDT |
| Material | Silver |
| Rating | UL |
| | 10A @ 240VAC |
| | 10A @ 30VDC |

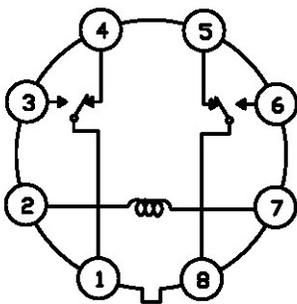
Coils

| | |
|---------------|----------|
| Input Voltage | 24VDC |
| Resistance | 400 Ohms |
| Nominal Power | 1.5 W |

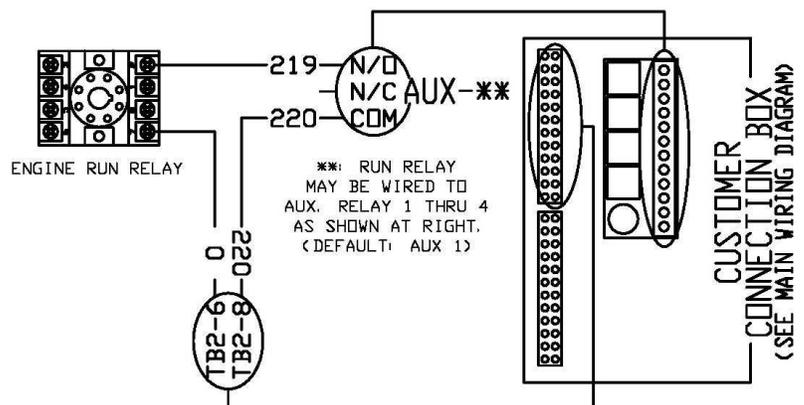
Wiring Diagram, Engine Run Relay with C panel, E panel, H-100 Panel



PIN DETAIL



Wiring Diagram, Engine Run Relay with PMDCP



H-100 Control Panel

Controls



DESCRIPTION

- Digital controls for all safety shutdowns
- Isochronous governor control
- Digital 3 ϕ sensing voltage regulator
- Sealed Digital Circuit Board
- 2 Amp static battery charger
- Mates with HTS transfer switch and any 2-wire start ATS
- Alarm and event logging
- Built-in diagnostics
- Internal PLC
- Optional modem with dialout

STANDARD FEATURES

The Quiet-Test™ H-100 Control Panel is a digital microprocessor electronic controller that integrates all engine and transfer switch functions into a single control system.

- Two 4 line x 20 displays
- Full system status
- 3 phase sensing digital voltage regulator
- Remote ports
 - RS232
 - RS485
 - Canbus
- Water proof connections
- All engine sensors are 4-20 ma for minimal interference
- Built in PLC

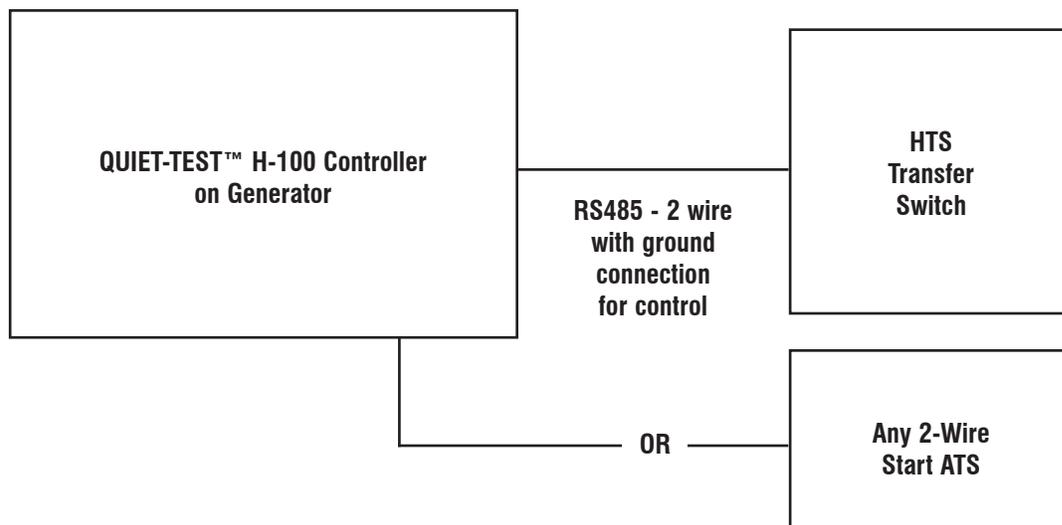
In addition, the generator set parameters can be manipulated and monitored without standing in front of the control panel with GenLink® software. The Generac H-100 control also monitors and controls transfer switch functions when used with the HTS Transfer Switch.

- Monitors utility voltage
- Monitors generator voltage
- Timer for line interrupt delay
- Timer for engine warmup
- Timer for minimum engine run time
- Timer for return to utility position
- Timer for engine cooldown
- Built in exerciser timer (7 day)
- Additional 2 wire start controls for any 2 wire transfer switch.

H-100 Control Panel

- Full range stand-by operation
- Full system status
 - 3 phase AC volts
 - 3 phase amps
 - kW
 - Power factor
 - Reactive power
 - Oil pressure
 - Water temperature
 - Water level
 - Oil temperature (optional)
 - Fuel pressure
 - Engine speed
 - Battery voltage
 - Alternator frequency
 - Time
 - Date
 - Transfer switch status
 - Run hours
 - Service reminders
 - Trending
 - Fault history (alarm log)
 - I²t function for full generator protection
 - Built in PLC for special applications
- Shutdowns
 - Overvoltage
 - Overspeed
 - Low oil pressure
 - High coolant temperature
 - Low coolant level
- Remote communication
 - RS232
 - Optional modem
 - Canbus
- Configurable to NFPA 110, level 1 or 2
- Programmable auto crank
- Emergency Stop
- On Off Manual Switch
- Not in Auto flashing light
- Audible alarm for fault condition
- Transfer switch logic communicates with HTS transfer switch
- Weekly exerciser (programmable)
- Selectable Low speed exercise
- Digital voltage regulator with 3 phase sensing (3 phase units)
- Isochronous governor
- Waterproof electrical connectors
- Temperature Range -40° to 70° C

TYPICAL CONTROL CONNECTION



21 Light Remote Annunciator and Remote Relay Panels

Accessories

- Model 0054650 Gray Remote Annunciator Panel without Relays
- Model 0054660 Gray Remote Relay Panel without LED's and Keypad (Relays Only)
- Model 0054640 Gray Remote Annunciator Panel with 8 Relays
- Model 0056370 Tan Flush Mount Enclosure w/o Annunciator
- Model 0066950 Gray Flush Mount Enclosure w/o Annunciator



Description:

The remote Annunciator Panel provides remote monitoring and annunciation of up to 18 generator parameters using LED's located on the annunciator keypad. It also provides two system level warnings which are System Ready and Communications OK.

The Relay panel has up to 8 selectable functions on form A relays, and multiple relay panels can be connected for all 18 generator parameters.

The specific faults can be selected using either the DIP switches located on the annunciator circuit board or through a computer via the RS232 connection on the circuit board. All relays are energized on power up and open during a fault condition.

Communication is via a RS485 serial data link and power is supplied by the generator battery (+12 VDC or +24 VDC)

The remote Annunciator Panel complies with NFPA 99 and NFPA 110.

Environmental Specifications:

| | |
|---|--|
| Operating Temperature | -25 °C to 60 °C |
| Humidity | 0 to 95% Non Condensing |
| Power Supply | Generator Battery, +12 or +24 Volts DC |
| Power Usage..... | 6 watts typical |
| Communication Line | RS485 fully isolated twisted pair cable with shield |
| Maximum Cable Length..... | 4000 feet |
| Relay Output | One NO contact (Energized when annunciator is powered and no faults are present) |
| Relay Contact Rating | 30 VDC, 1 amp |
| Enclosure Rating | NEMA 1 |
| Alarm Horn (Remote Annunciator Panels Only) | 90 dB @ 10 cm |

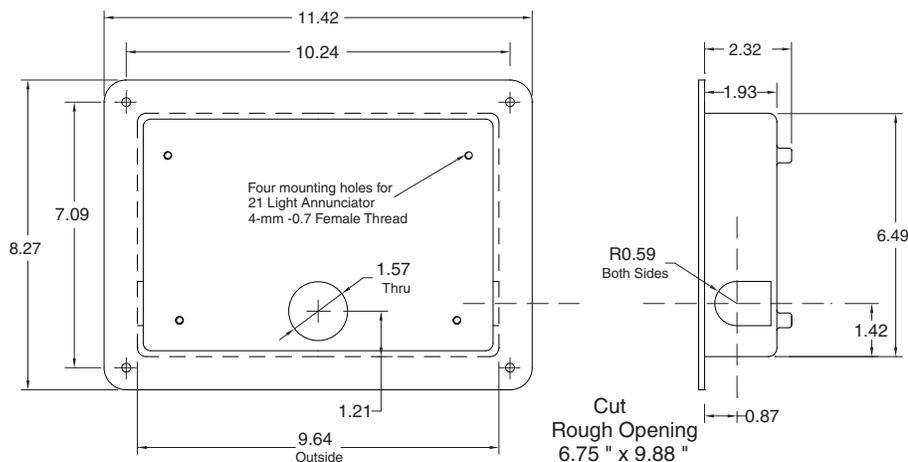
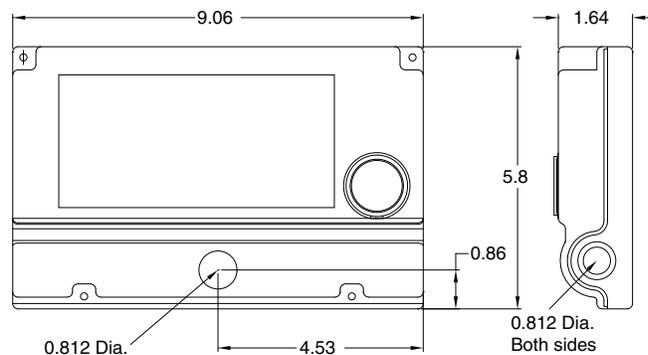
21 Light Remote Annunciator and Remote Relay Panels

| Function | Color | Alarm | Latched |
|----------------------|--------|-------|---------|
| Pre-low Oil Pressure | Yellow | Yes | Yes |
| Pre- High Water Temp | Yellow | Yes | Yes |
| Pre Low Water Temp | Yellow | Yes | Yes |
| Pre- Low Fuel | Yellow | Yes | Yes |
| Battery Chrg AC Fail | Yellow | Yes | No |
| Low Battery Voltage | Yellow | Yes | No |
| High Battery Voltage | Yellow | No | No |
| Not in Auto | Red | Yes | No |
| RPM Sensor Loss | Red | Yes | Yes |
| Overcrank | Red | Yes | Yes |
| Over speed | Red | Yes | Yes |
| Low Oil Pressure | Red | Yes | Yes |
| Hi Water Temp | Red | Yes | Yes |
| Lo Water Level | Red | Yes | Yes |
| Emergency Stop | Red | Yes | No |
| Gen Running | Yellow | No | No |
| Gen Power (ATS) | Yellow | No | No |
| Line Power (ATS) | Green | No | No |
| Systems Ready | Green | Yes | No |
| Communications OK | Green | Yes | No |
| Spare | Green | No | No |

Spare Keypad Switch - Can be used to implement a remote start function. (Model 005464 only)

Surface Mount Annunciator

The 21 Light Annunciator can mount to a flat surface with connections through the 0.812 Dia knockout on the back surface or through 0.812 knockouts on sides as shown.



Flush Mount Annunciator

This Flush Mount Box is recessed into the wall opening and the surface mount annunciator mounts to the (4) 4 mm screw holes on the back surface. After wire connections are made the front annunciator cover is attached.

ALTERNATOR DATA

60kW ALTERNATOR 60 Hz

Alternator Ratings (Series Wye Testing)

| | | |
|-------------------------------|---------------|---------|
| kW | 60 | |
| kVA | 75 | |
| Type | Brushless/PMG | |
| Connections | 12 Lead | |
| Efficiency @ 1.0 Power Factor | 208/240 | 480/600 |
| 20% Load | 87.7 | 89 |
| 40% Load | 87.8 | 89.1 |
| 60% Load | 88.1 | 89.4 |
| 80% Load | 88.4 | 89.7 |
| 100% Load | 88.6 | 89.9 |
| 100% @ 0.8 PF | 88.1 | 89.4 |

Machine Parameters Continued

| | |
|----------------------------|---------------|
| Waveform Distortion | <5% |
| Telephone Influence Factor | <50 |
| Synchronous Speed | 1800 rpm |
| Maximum Overspeed | 3300 rpm |
| Number of Bearings | 1 Sealed Ball |
| Insulation System | Class H |
| Excitation System | Class H |

Temperature Rise vs Output (0.8 pf)

| kW Rating | Temp Rise ° C | Temperature Rise is based |
|-----------|---------------|---------------------------|
| 49 | 80 ° | 40° C Ambient |
| 54 | 105 ° | |
| 60 | 120 ° | |

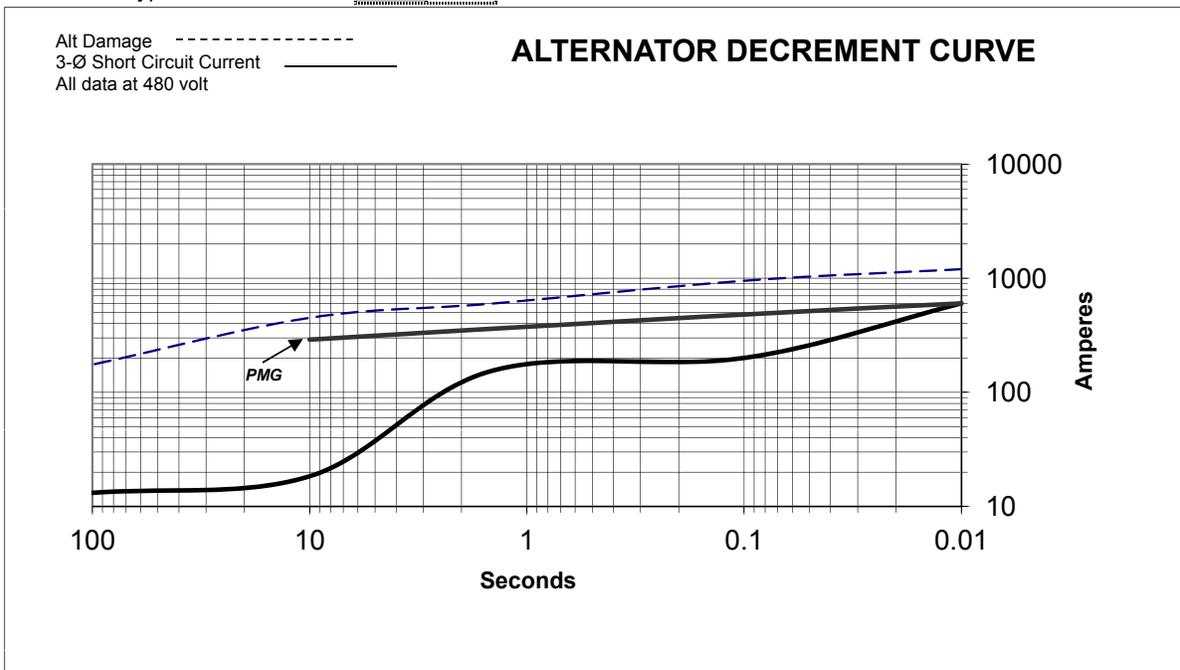
Machine Parameters @ Max kW Ratings

| | |
|-------------------------------|------|
| Subtransient Reactance p.u. | 0.15 |
| Transient Reactance | 0.23 |
| Synchronous Reactance | 3.85 |
| Negative Sequence Reactance | 0.3 |
| Zero Sequence Reactance | 0.11 |
| Short Circuit Ratio | 0.33 |
| Excitation Voltage | 190 |
| Excitation Current @ Rated kW | 4.2A |
| Lamination Type | 390 |

Instantaneous Voltage Dip

| Voltage | 10% | 15% | 20% | 25% | 30% | 35% |
|----------|-----|-----|-----|-----|-----|-----|
| 208, 240 | 32 | 47 | 62 | 78 | 94 | 110 |
| 480 | 42 | 63 | 83 | 104 | 125 | 146 |
| 600 | | | | | | |

Options - - - - - Antifungal Coating
Alternator Heater



GENprotect™

Seamless protection for industrial power generators.

GENprotect Operation

The design choice of an onsite power system using a Generac Industrial Power Generator assures your emergency power source is protected from unexpected power distribution faults. Typically, a generator will include some type of over-current device, such as a circuit breaker, or be protected by inherent design with the controller protecting the alternator through a protection algorithm. Generac's GENprotect generator protection system monitors the system current output and protects the alternator with extended security against fault scenarios that could occur within the site's downstream distribution system.

It is a common misconception that the alternator's main circuit breaker protects the alternator from a short circuit event. The main output breaker protects the cabling and provides a convenient disconnect. The characteristic trip curve for the industry standard thermal magnetic breaker (MCCB, molded case thermal magnetic or solid state) does not coordinate with the thermal damage limitation for an on-site generator. If circuit breakers are used for generator protection, a solid-state circuit breaker with full adjustments (Long Time, Short Time and Instantaneous, LSI) is required to coordinate the breaker protection curve within the generator thermal damage curve. Historically, this limitation was often accepted in system design since failures of the main generator feeder are extremely rare. Most short circuit events happen at a branch circuit, equipment level, where the fault is easily cleared by the smaller down stream breakers.

Given the mission critical nature of today's back-up power applications, it is more desirable to protect the system against even relatively rare failure modes. As generator controllers have become more powerful it is feasible for manufactures to supply coordinated short circuit protection integral to the generator control system, negating the need for a main-line circuit breaker.

Generac's GENprotect alternator protection algorithm monitors the generator output. If this monitoring senses short circuit current in excess of rated amps, GENprotect steps in to provide a controlled and safe approach to breaker coordination and alternator protection. GENprotect first limits the alternator short circuit current level to 300%. By limiting the available fault current, GENprotect extends the time the alternator can maintain fault current resulting in consistent breaker coordination. Without this functionality a line to neutral fault may be at 800% of rated current and need to be cleared within 1.4 seconds.

The second function GENprotect performs is I²T thermal protection for the alternator. Since a short circuit event can heat the alternator so rapidly, it is not possible to protect the alternator by monitoring temperature. Instead GENprotect calculates the heat energy of the fault current. When this energy reaches the limits of NEMA MG1, GENprotect trips the generator off-line. This configuration ensures the alternator is protected and the power system is ensured 10 seconds of 300% fault current for breaker coordination.

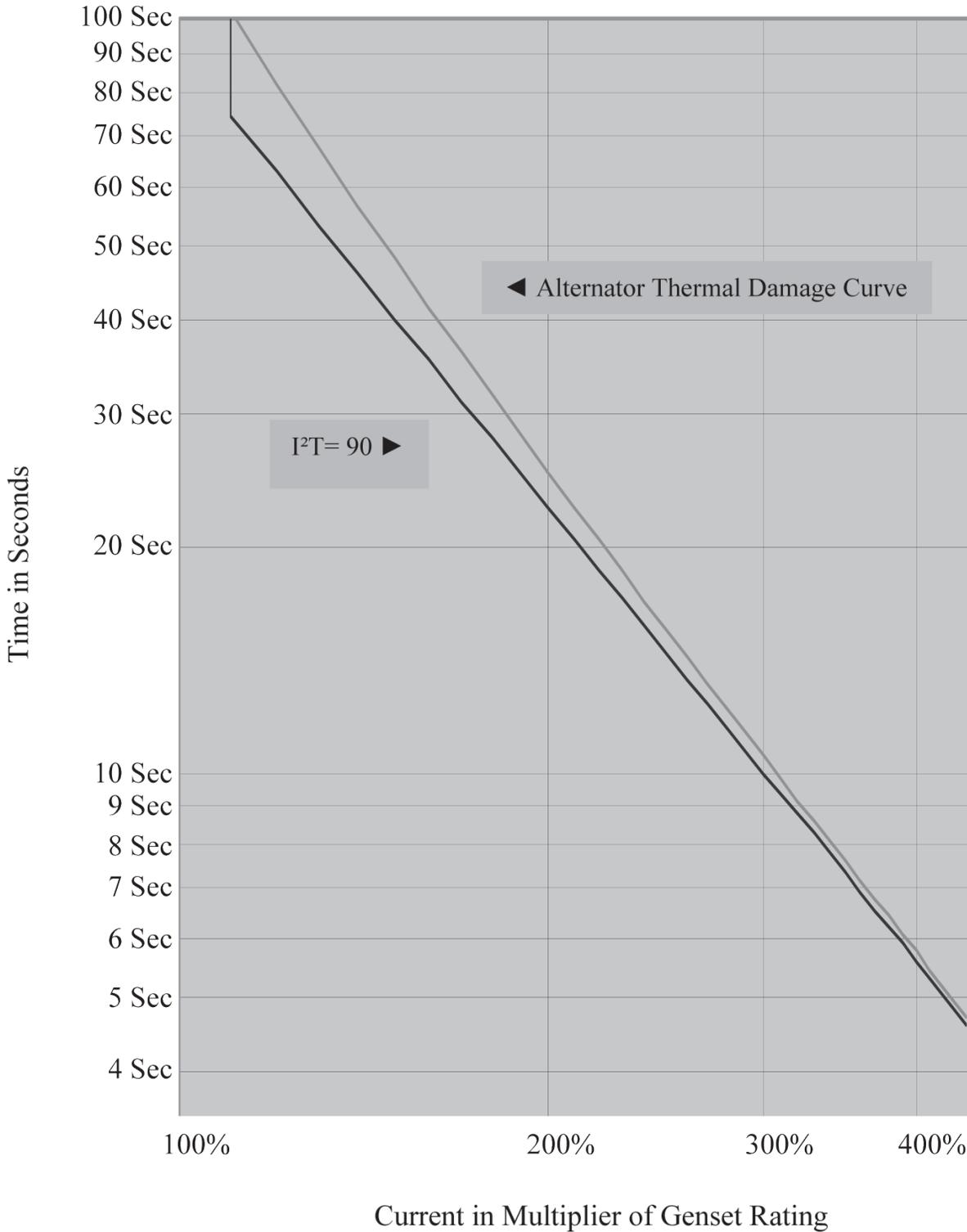
DESCRIPTION

- GENprotect is an alternator protection algorithm approved by UL.
- Protects alternator from damage due to shorts and electrical faults.
- Provides breaker coordination and alternator protection.
- Allows for use of multiple circuit breaker choices, including "no" breaker.



GENERAC® | **INDUSTRIAL POWER**

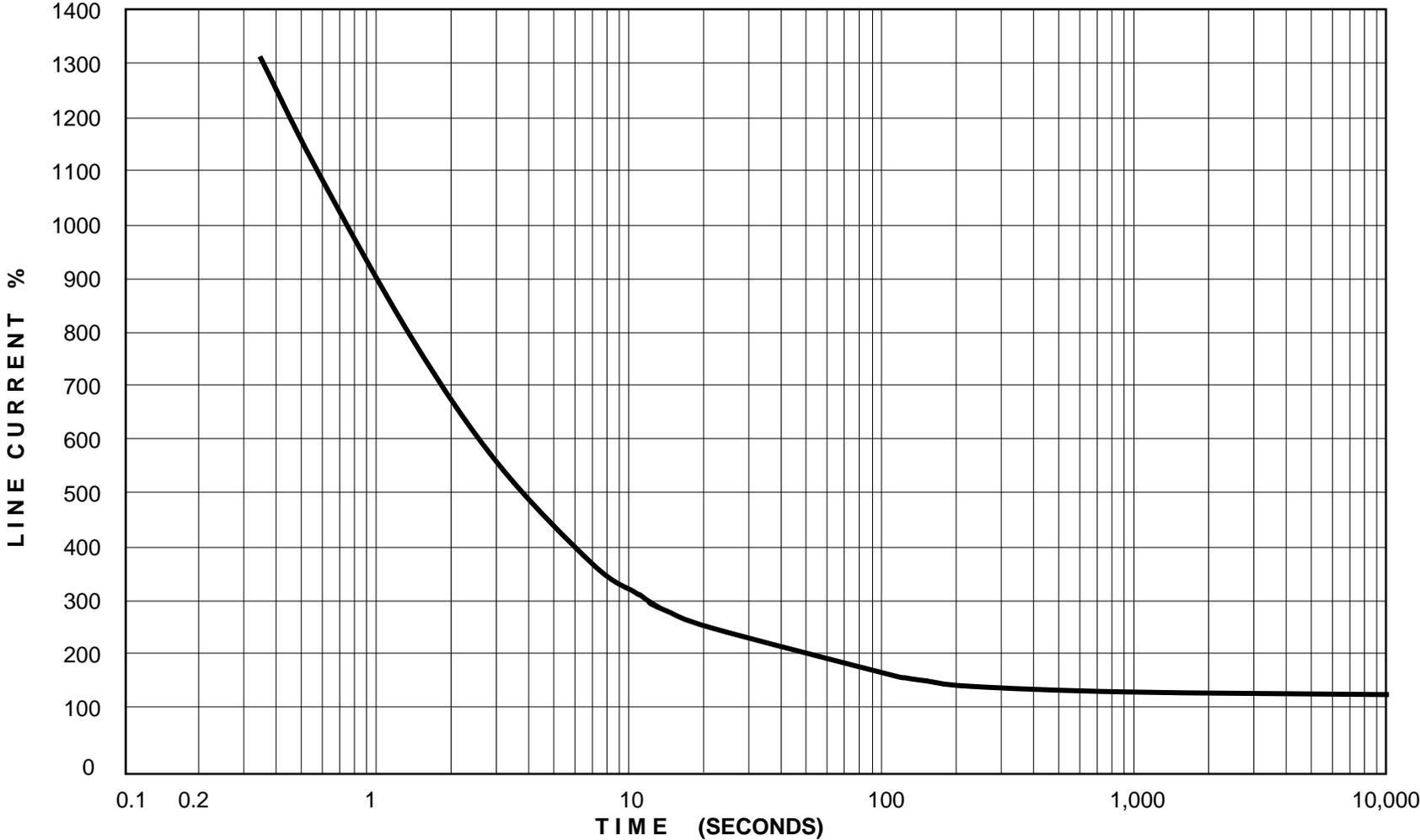
Generac I²T Trip Curve



The above Figure shows the Generac GENprotect thermal protection curve for use in protection and coordination studies. The alternator Thermal Damage Curve is shown just to the right of the GENprotect protection curve. If the alternator load is greater than the thermal damage protection curve for the alternator, the generator set will trip off-line. For example, an overload current of 110% for 75 seconds causes an overload alarm and will trip the generator off-line, shutting down the engine. GENprotect will provide generator protection over a full range of time and current, from instantaneous faults to overloads lasting several minutes. An advantage of GENprotect over a MCCB is that GENprotect allows for downstream breakers to clear faults without tripping the generator off-line, providing selective coordination with the first level of downstream breakers.

**25 – 130 KW
390 mm**

THERMAL DAMAGE CURVE



GENERATOR SIZE: 25-35-40-50-60-80-100-125-130 KW
LAMINATION SIZE: 390 mm
CALCULATIONS BASED ON WINDING TEMPERATURE OF 475° F BY EMBEDDED THERMOCOUPLE

Battery Options

Industrial Genset Battery Index

• Warranty by Exide Corp. • Exide e-mail: tbgna@exide.com • 800-782-7848 National Hotline • Dry Batteries Available**

Industrial Spark-Ignited Gensets - Available Batteries

| Engine | System Voltage | Battery Quantity | Generac Part # | | | | |
|-----------|----------------|------------------|--------------------|-------------------|--------------------|-------------------|-------------------|
| | | | 058208 (Group 24F) | 077483 (Group 26) | 058665 (Group 27F) | 061119 (Group 31) | 061104 (Group 8D) |
| G2.4 | 12 | 1 | | X | | | |
| G5.4 | 12 | 1 | X | | X or D | X or D | |
| G6.8 | 12 | 1 | | | X or D | X or D | |
| G8.0/G9.0 | 12 | 1 | | | X or D | X or D | |
| G12.9 | 24 | 2 | | | | | X or D |
| G21.9 | 24 | 2 | | | | | X or D |

X = Battery available with electrolyte and installed in genset.
D = Battery available dry and installed in genset.

Industrial Diesel Gensets - Available Batteries

| Engine | System Voltage | Battery Quantity | Generac Part # | | | |
|-------------------------|----------------|---------------------|--------------------|--------------------|-------------------|-------------------|
| | | | 058208 (Group 24F) | 058665 (Group 27F) | 061119 (Group 31) | 061104 (Group 8D) |
| D2.4 Generac | 12 | 1 | | X or D | X or D | |
| D3.4 Generac | 12 | 1 | | X or D | X or D | |
| D4.5 FPT | 12 | 1 | | | X or D | |
| D6.7 FPT 100 & 130kW | 12 | 1 or 2 [†] | | | X or D | |
| D6.7 FPT 150 & 175kW | 12 | 2 [†] | | | X or D | |
| D8.7 FPT | 24 | 2 | | | X or D | |
| D10.3 FPT | 24 | 2 | | | X or D | X or D |
| D12.9 FPT | 24 | 2 | | | X or D | X or D |
| D12.5 Perkins | 24 | 2 | | | | X or D |
| D15.2 Perkins | 24 | 2 | | | | X or D |
| D16.0 Volvo | 24 | 2 | | | X or D | X or D |
| D18.1 Perkins | 24 | 2 | | | | X or D |

X = Battery available with electrolyte and installed in genset.
D = Battery available dry and installed in genset.

[†] = Single or dual-paralleled battery options are available on 100 & 130kW. Single-battery option not available on 150 & 175kW.

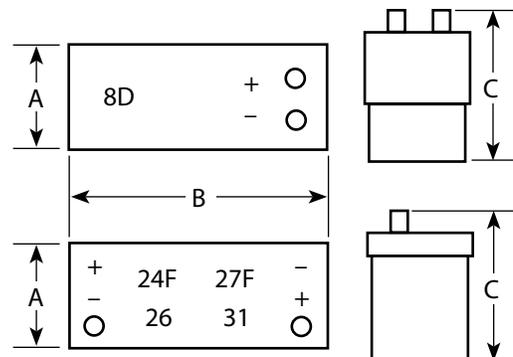
Battery Specifications

| Part Number | Group Number* | Nominal CCA @ 0° F | Dimensions (inches) Nominal | | |
|-------------|---------------|-----------------------|-----------------------------|-------|------|
| | | | A | B | C |
| 058208 | 24F | 525 | 6.75 | 10.63 | 9.00 |
| 077483 | 26 | 525 | 6.75 | 8.25 | 7.75 |
| 058665 | 27F | 700 | 6.75 | 12.50 | 9.00 |
| 061119 | 31 | 925 | 6.75 | 13.00 | 9.40 |
| 061104 | 8D | 1155 | 11.12 | 20.75 | 9.88 |

All batteries are 12 volt, 6 cell construction, lead calcium type.
For 24 volt systems, batteries are wired in series.

* BCI Group Size reference.

** Add an "A" suffix to the Generac part number for dry batteries, which are shipped without electrolyte.





DESCRIPTION

GENERAC POWER SYSTEMS' generator enclosures provide year-round weather protection for your power equipment. Engineered with functionality and value in mind, the enclosure design benefits are unique in that the enclosures utilize dimensionally matched components for either a weather protective configuration or a sound attenuated/acoustic configuration. With common components used between designs, modifications and on-site upgrades can be accomplished with ease.

The enclosure design offers several benefits over the “standard enclosures” of other manufacturers. Generac’s enclosures have been created with the goal of maximizing the customer’s product performance satisfaction while maintaining the functionality of reducing exterior noise levels and discouraging product tampering.

Although others may require a “premium” for a self-enclosed exhaust system, rugged steel panel construction or protective polyethylene washers under all exterior panel fasteners, Generac includes these and several other features on every enclosure configuration. Be sure to compare. Generac Enclosures offer additional design enhancement extras that other “standard enclosures” do not.

Generator Enclosures

Post-free twin doors

Provides large, unobstructed service access



Heavy-gauge, stainless steel, partial pin hinges with nylon spacers

Durable, corrosion-free, removable doors



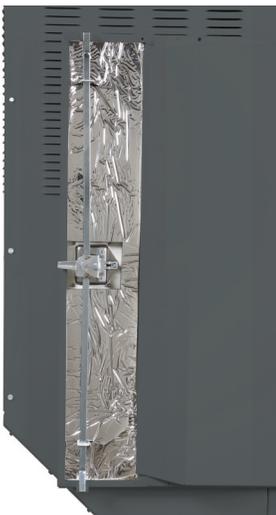
Gasket-free, interconnected roof panel joint

Drip-free, maintenance-free



Two-point door latch system

Ensures proper seal preventing water ingress and sound egress



Dense, closed-cell foam insulation with reflective silver Mylar layer

Improved sound attenuation without damaging effects from radiant heat exposure

Lockable turn and tuck stainless steel latch handle

Corrosion-free, non-protruding and secure



Generator Enclosures

| FEATURES: | BENEFITS: |
|---|---|
| ■ Dimensional Matching of acoustic and non-acoustic enclosure designs | ■ Reduces variation in fuel tank pricing, inventory; removes need to change out fuel tank or retrofit |
| ■ Standardized enclosure components * | ■ Ease of retrofit or upgrade to acoustic system; reduced parts inventory, costs |
| ■ Enclosure mounted directly to unit baseframe | ■ Simplified delivery and installation with enclosure and unit in single component design |
| ■ Electrostatically painted panels | ■ Maximum protection from weather elements |
| ■ 12 or 14 gauge steel based on kW rating | ■ Maximum sound attenuation, protection and product life |
| ■ Aluminum Enclosure optional | ■ Prevents corrosion in coastal regions |
| ■ Stainless steel door latch and hinge hardware | ■ Provides extended component life; maximum protection against rusting |
| ■ Stainless steel door latch strike plate | ■ Maximum protection against enclosure paint damage from door latch pin |
| ■ Door hinges utilize slip-pin design | ■ Provides quick door removal for full-unit access |
| ■ Polyethylene gasketing under door hinges | ■ Additional protection for enclosure paint finish |
| ■ Keyed door latches | ■ Protection for equipment and personnel |
| ■ Large removable access doors | ■ Ease of maintenance |
| ■ Relocation of access doors | ■ Provides improved access to MLCB on all units |
| ■ Redesigned door gasketing | ■ Improved sealing quality from sound and weather elements |
| ■ Weather resistant aluminum roof design with drip ledge | ■ Provides optimum moisture/rain runoff from unit |
| ■ Cabled and gasketed radiator access cover | ■ Provides improved radiator access and additional protection from weather elements |
| ■ Acoustic roof panels manufactured with mechanical retention pins | ■ Increased acoustic foam retention within unit |
| ■ Polyethylene washers under all panel fasteners | ■ Additional paint finish protection from stainless steel fastener |
| ■ Internally fastened enclosure panels (where possible) | ■ Provides streamlined unit appearance |
| ■ Additional roof panel stiffener | ■ Added overall compartment rigidity and acoustic foam panel retention |
| ■ Self-enclosed exhaust system | ■ Provides safe unit operation; no enclosure hot spots; streamlined unit appearance |
| ■ Discharge air duct has been designed with minimal fasteners | ■ Ease of removal and access to exhaust system |
| ■ Stainless steel exhaust band clamps | ■ Provides extended component life; ensures proper exhaust seal |
| ■ Drain holes within air ducts | ■ Enables maximum water run-off |
| ■ Rodent-proof, tamper proof enclosure design | ■ Safety and security for personnel and equipment |
| ■ Redesigned baseframe lifting lugs | ■ Ease of unit relocation; prevents compartment damage from lifting straps |
| ■ 150mph wind kit options | ■ Meets locally enforced wind requirements |

* Consult Generac Power Systems, Inc. installation drawings for specific configurations and dimensions.

GENSET OPTIONS

PAD ISOLATORS

ALL SPEEDS

WP -Pad prevents equipment rocking by compensating for mismatch of 4 rigid support points to typical wavy floor surface:
EQUIPMENT w/4 rigid supporty points
COMPRESSOR (TANK MOUNTED)

TO MINIMIZE DISTURBANCES FROM ENTERING THE FLOOR.

HIGH SPEED 1500 CPM AND UP

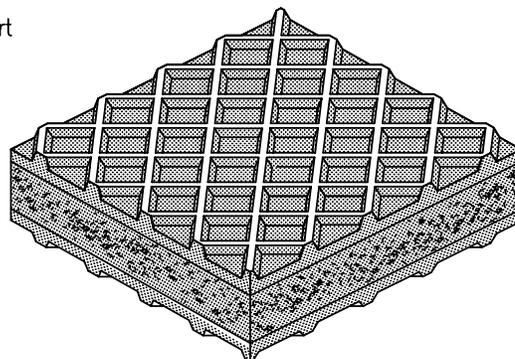
WP -Pad eliminates noise and reduces vibration transmitted from :
ENGINES
TRANSFORMERS
PUMPS and PIPING
STEAM GENERATORS
CRUSHERS

LOW SPEED 0 TO 250 CPM

WP -Pad limits impact shock transmission and simplifies installation of:
PUNCH PRESSES
SHEARS
VACUUM PUMPS
HAMMERS

LOW SPEED AND HIGH SPEED 0 TO 250 CPM AND 1500 CPM AND UP

TO MINIMIZE TRANSMISSION OF DISTURBANCES FROM THE FLOOR.
WP -Pad protects these sensitive instruments, machines and devices from low frequency shocks and high frequency vibrations present in the floor.
GRINDERS
SURFACE PLATES
MACHINE TOOLS
INSTRUMENTS



LOAD CAPACITY

Load Capacity to 60 Lbs./Sq.inch

THICKNESS

Standard Thickness - 1", others available

NON - SKID

Tread Surfaces Resist "Walking"

DURABLE

Cork and Neoprene are oil and ozone Resistant.

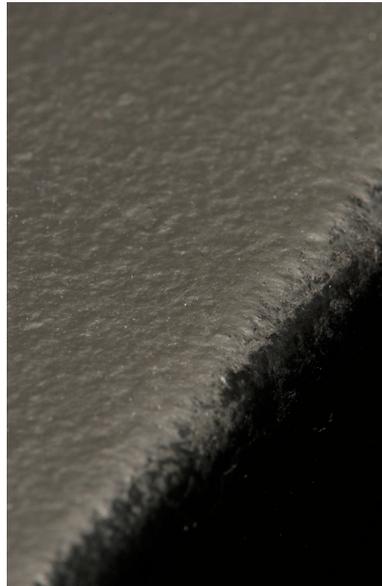
| MAXIMUM PAD SIZE 36" x 36" | | | | FACTORY CUT SIZES LISTED | | | |
|----------------------------|---------------------------------|---------------|---------------------------------|--------------------------|---------------------------------|---------------|---------------------------------|
| STANDARD | | CAPACITY | | STANDARD | | CAPACITY | |
| SIZE (Inches) | Max.Load Selection At 40 P.S.I. | SIZE (Inches) | Max.Load Selection At 40 P.S.I. | SIZE (Inches) | Max.Load Selection At 40 P.S.I. | SIZE (Inches) | Max.Load Selection At 40 P.S.I. |
| 2 x 2 | 160 | 3 x 9 | 1080 | 6 x 12 | 2880 | 12 x 18 | 8640 |
| 2 x 3 | 240 | 2 x 18 | 1440 | 9 x 9 | 3240 | 18 x 18 | 12960 |
| 2 x 4 | 320 | 3 x 12 | 1440 | 3 x 36 | 4320 | 12 x 36 | 17280 |
| 3 x 3 | 360 | 4 x 9 | 1440 | 6 x 18 | 4320 | 18 x 24 | 17280 |
| 2 x 6 | 480 | 6 x 6 | 1440 | 9 x 12 | 4320 | 24 x 24 | 23040 |
| 4 x 4 | 640 | 4 x 12 | 1920 | 4 x 36 | 5760 | 18 x 36 | 25920 |
| 3 x 6 | 720 | 3 x 18 | 2160 | 12 x 12 | 5760 | 24 x 36 | 34560 |
| 2 x 12 | 960 | 2 x 36 | 2880 | 9 x 18 | 6480 | 36 x 36 | 51840 |
| 4 x 6 | 960 | 4 x 18 | 2880 | 6 x 36 | 8640 | | |



Generator Set Standard

Spec Sheet

1 of 1



Generac's RhinoCoat™ finish system provides superior durability as a standard for all Generac industrial enclosures, tanks and frames.*

testing standard

Generac's RhinoCoat™ finished surfaces are subjected to numerous tests. These include:

- ASTM D - 1186 - 87..... 2.5+ MIL PAINT THICKNESS
- ASTM D - 3363 - 92a..... ADEQUATE MATERIAL HARDNESS
- ASTM D 522 - B..... RESISTANT TO CRACKING
- ASTM D 3359 - B..... EXCEPTIONAL ADHESION
- ASTM B117 D 1654..... RESISTANT TO SALT WATER CORROSION
- ASTM D1735 D 1654..... RESISTANT TO HUMIDITY
- ASTM 2794 93 (2004)..... EXCEPTIONAL IMPACT RESISTANCE
- SAE J1690 - UV SPECIFICATIONS..... UV PROTECTION

In addition to the testing standards above, Generac adds the following test requirements more specific to generator applications:

- RESISTANT TO TYPICAL OILS
- RESISTANT TO TYPICAL FUELS
- RESISTANT TO TYPICAL ANTIFREEZE
- RESISTANT TO DISTILLED WATER

primary codes and standards



*RhinoCoat powder coat paint is durable and corrosion resistant however it is not a rust preventative. Generac pretreats all powdercoated parts to assist with resistance to corrosion.

CIRCUIT BREAKER DATA

**EATON CIRCUIT BREAKERS
STANDARD (80% RATED) THERMAL-MAGNETIC**

| AMPS | VOLTS | ACCESSORIES | EATON # | SERIES | FRAME | GENERAC # |
|------|-------|----------------------------|--------------|--------|---------|------------|
| 15 | 600 | No Accessories | FG3015 | C | F-FRAME | 0H9294TA00 |
| | | Shunt Trip & Aux. Contacts | FG3015A12S03 | | | 0H9294TAB0 |
| 20 | 600 | No Accessories | FG3020 | C | F-FRAME | 0H9295TA00 |
| | | Shunt Trip & Aux. Contacts | FG3020A12S03 | | | 0H9295TAB0 |
| 25 | 600 | No Accessories | FG3025 | C | F-FRAME | 0J0248TA00 |
| | | Shunt Trip & Aux. Contacts | FG3025A12S03 | | | 0J0248TAB0 |
| 30 | 600 | No Accessories | FG3030 | C | F-FRAME | 0H9296TA00 |
| | | Shunt Trip & Aux. Contacts | FG3030A12S03 | | | 0H9296TAB0 |
| 35 | 600 | No Accessories | FG3035 | C | F-FRAME | 0H9297TA00 |
| | | Shunt Trip & Aux. Contacts | FG3035A12S03 | | | 0H9297TAB0 |
| 40 | 600 | No Accessories | FG3040 | C | F-FRAME | 0H9298TA00 |
| | | Shunt Trip & Aux. Contacts | FG3040A12S03 | | | 0H9298TAB0 |
| 45 | 600 | No Accessories | FG3045 | C | F-FRAME | 0H9299TA00 |
| | | Shunt Trip & Aux. Contacts | FG3045A12S03 | | | 0H9299TAB0 |
| 50 | 600 | No Accessories | FG3050 | C | F-FRAME | 0H9300TA00 |
| | | Shunt Trip & Aux. Contacts | FG3050A12S03 | | | 0H9300TAB0 |
| 60 | 600 | No Accessories | FG3060 | C | F-FRAME | 0H9301TA00 |
| | | Shunt Trip & Aux. Contacts | FG3060A12S03 | | | 0H9301TAB0 |
| 70 | 600 | No Accessories | FG3070 | C | F-FRAME | 0H9302TA00 |
| | | Shunt Trip & Aux. Contacts | FG3070A12S03 | | | 0H9302TAB0 |
| 80 | 600 | No Accessories | FG3080 | C | F-FRAME | 0J0841TA00 |
| | | Shunt Trip & Aux. Contacts | FG3080A12S03 | | | 0J0841TAB0 |
| 90 | 600 | No Accessories | FG3090 | C | F-FRAME | 0J0837TA00 |
| | | Shunt Trip & Aux. Contacts | FG3090A12S03 | | | 0J0837TAB0 |
| 100 | 600 | No Accessories | FG3100 | C | F-FRAME | 0H9314TA00 |
| | | Shunt Trip & Aux. Contacts | FG3100A12S03 | | | 0H9314TAB0 |
| 125 | 600 | No Accessories | FG3125 | C | F-FRAME | 0J0231TA00 |
| | | Shunt Trip & Aux. Contacts | FG3125A12S03 | | | 0J0231TAB0 |
| 150 | 600 | No Accessories | FG3150 | C | F-FRAME | 0H9315TA00 |
| | | Shunt Trip & Aux. Contacts | FG3150A12S03 | | | 0H9315TAB0 |
| 175 | 600 | No Accessories | FG3175 | C | F-FRAME | 0H9316TA00 |
| | | Shunt Trip & Aux. Contacts | FG3175A12S03 | | | 0H9316TAB0 |
| 200 | 600 | No Accessories | FG3200 | C | F-FRAME | 0J0232TA00 |
| | | Shunt Trip & Aux. Contacts | FG3200A12S03 | | | 0J0232TAB0 |

CIRCUIT BREAKER DATA

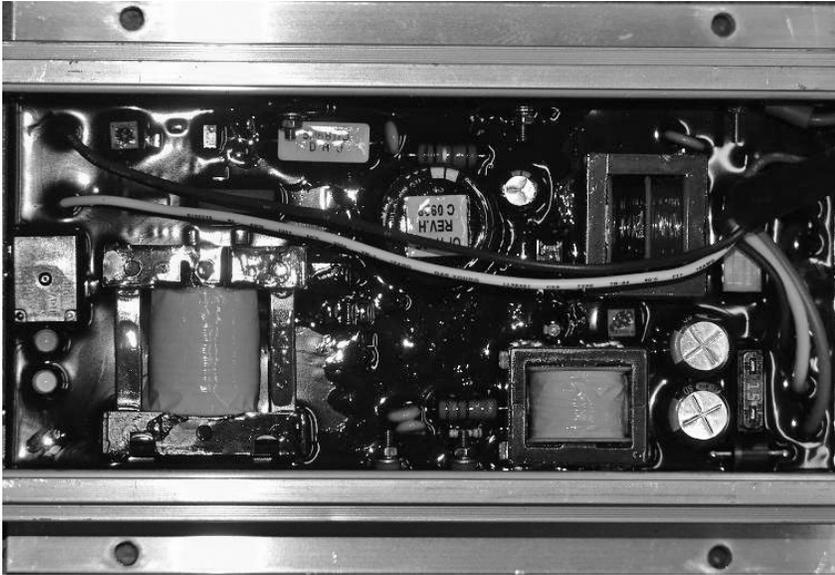
**EATON CIRCUIT BREAKERS
STANDARD (80% RATED) THERMAL-MAGNETIC**

| AMPS | VOLTS | ACCESSORIES | EATON # | SERIES | FRAME | GENERAC # |
|-------|-------|----------------------------|--------------------|--------|---------|------------|
| 225 | 600 | No Accessories | FG3225 | C | F-FRAME | 0H9317TA00 |
| | | Shunt Trip & Aux. Contacts | FG3225A12S03 | | | 0H9317TAB0 |
| 250 | 600 | No Accessories | JG3250 | C | J-FRAME | 0H9318TA00 |
| | | Shunt Trip & Aux. Contacts | JG3250A12S43 | | | 0H9318TAB0 |
| 300 | 600 | No Accessories | KG3300 | C | K-FRAME | 0H9319TA00 |
| | | Shunt Trip & Aux. Contacts | KG3300A12S43 | | | 0H9319TAB0 |
| 350 | 600 | No Accessories | KG3350 | C | K-FRAME | 0H9320TA00 |
| | | Shunt Trip & Aux. Contacts | KG3350A12S43 | | | 0H9320TAB0 |
| 400 | 600 | No Accessories | KG3400 | C | K-FRAME | 0H9321TA00 |
| | | Shunt Trip & Aux. Contacts | KG3400A12S43 | | | 0H9321TAB0 |
| 450 | 600 | No Accessories | LG3450 | C | L-FRAME | 0H9322TA00 |
| | | Shunt Trip & Aux. Contacts | LG3450A12S03 | | | 0H9322TAB0 |
| 500 | 600 | No Accessories | LG3500 | C | L-FRAME | 0H9323TA00 |
| | | Shunt Trip & Aux. Contacts | LG3500A12S03 | | | 0H9323TAB0 |
| 600 | 600 | No Accessories | LG3600 | C | L-FRAME | 0H9324TA00 |
| | | Shunt Trip & Aux. Contacts | LG3600A12S03 | | | 0H9324TAB0 |
| 700 | 600 | No Accessories | MDL3700 | C | M-FRAME | 0H9325TA00 |
| | | Shunt Trip & Aux. Contacts | MDL3700A06S02 | | | 0H9325TAB0 |
| 800 | 600 | No Accessories | MDL3800 | C | M-FRAME | 0H9326TA00 |
| | | Shunt Trip & Aux. Contacts | MDL3800A06S02 | | | 0H9326TAB0 |
| 900* | 600 | No Accessories | NG3900 | C | N-FRAME | 0H9327TA00 |
| | | Shunt Trip & Aux. Contacts | NG3900A12S03 | | | 0H9327TAB0 |
| 1000* | 600 | No Accessories | NG31000 | C | N-FRAME | 0H9328TA00 |
| | | Shunt Trip & Aux. Contacts | NG31000A12S03 | | | 0H9328TAB0 |
| 1200* | 600 | No Accessories | NG31200 | C | N-FRAME | 0H9329TA00 |
| | | Shunt Trip & Aux. Contacts | NG31200A12S03 | | | 0H9329TAB0 |
| 1400* | 600 | No Accessories | RD316T33WP03 | C | R-FRAME | 0H9360EAN0 |
| | | Shunt Trip & Aux. Contacts | RD316T33WP03A12S21 | | | 0H9360EANB |
| 1600* | 600 | No Accessories | RD316T33WP01 | C | R-FRAME | 0H9361EAN0 |
| | | Shunt Trip & Aux. Contacts | RD316T33WP01A12S21 | | | 0H9361EANB |
| 2000* | 600 | No Accessories | RD320T33WP10 | C | R-FRAME | 0H9367EAN0 |
| | | Shunt Trip & Aux. Contacts | RD320T33WP10A12S21 | | | 0H9367EANB |
| 2500* | 600 | No Accessories | RD325T33WP38 | C | R-FRAME | 0H9368EAN0 |
| | | Shunt Trip & Aux. Contacts | RD325T33WP38A12S21 | | | 0H9368EANB |

*LS-type electronic trip breaker.

2.5A & 10A Battery Chargers H-Panel & PM-DCP Panels

Accessories



Battery Charger shown from inside of Control Panel Enclosure. Connections are made via an attached harness.

The Generac 2.5A 12 volt and 10A 12/24 volt battery chargers are designed to work with the H and PM-DCP control panels to provide the ultimate in automatic battery voltage maintenance.

The 2.5 amp charger is self-regulating and produces instantaneous output current adjustments to keep the battery charged to an optimum level. Battery voltage is read on the control panel digital display.

The 10 amp charger has automatic float and equalize control. It precisely monitors the battery's voltage and automatically activates the correct charging mode. The charge rate is limited and controlled to efficiently and safely maintain ideal battery levels under varying conditions.

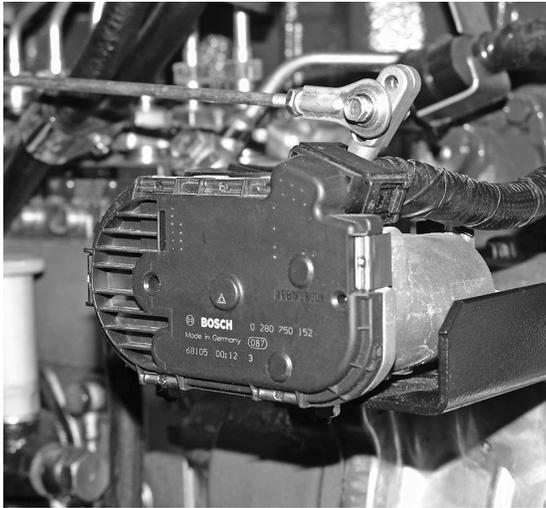
The equalize system uses a control circuit to limit charging current to 10 amps. When battery voltage drops below a preset level, charging current increases to 5 amps and then to the 10 amp charge rate if needed. When the battery reaches maximum charge, the charger switches to float mode to supply just enough current to maintain the battery at or above 13/26 volts. Battery voltage and charging current are read at the control panel digital display.

| Specifications | 2.5 Amp | 10 Amp |
|--|---------------------|--|
| Nominal Input | 120 VAC | 120 VAC |
| Operating AC Line Voltage Range | 108 to 132 Volts AC | 108 to 132 Volts AC |
| Input AC Line Frequency | 50/60 Hz | 50/60 Hz |
| Battery Fuse | N/A | 15 Amps |
| Nominal Charge Rate | 2.5 Amps | 10 Amps |
| Equalize Voltage | | 13.8/27.6 Volts |
| Float Voltage | 13.4 | 13.0/26.0 |
| Current @ Equalize to Float Transition | | 5 Amps |
| Battery Under-voltage shutdown | N/A | 11/22 Volts |
| LED Indicators | | |
| AC Line Voltage | N/A | Green LED |
| Battery Connected and Charging | N/A | Yellow LED |
| Battery Current Drain | 30 milliamp | 30 milliamp |
| AC Line Connection | Connector Plug | Connector Plug |
| Battery Connection | Connector Plug | Connector Plug |
| Control Connection | | AC Power Fail Relay Form C 2 Amp Rating |
| CUL Recognized | Yes | Yes |
| NFPA110 Compliant | No | Yes |



ENGINE ACCESSORIES

GENERAC ELECTRONIC GOVERNOR DIESEL ENGINES



- Regulation.....Isochronous
- Steady State Regulation.....±0.25%
- Factory installed and adjusted
- Fully adjustable via GenLink® software
- Fast response
- High reliability
- No maintenance required

ACTUATOR

DESCRIPTION:

Die cast enclosure housing the gear-driven rotary actuator. The interior components are sealed against dust, dirt and moisture. The gear drive is mechanically linked to the injection pump. Spring-return to no-fuel position upon loss of power.

| | |
|----------------------------------|-----------------------|
| DESIGN..... | Bosch |
| TYPE..... | Motor-Driven Actuator |
| OPERATING VOLTAGE..... | 12/24vdc |
| RESPONSE TIME..... | <100 msec |
| OPERATING TEMPERATURE RANGE..... | -40°F to 284°F |
| OUTPUT..... | Rotary |

CONTROLLER

DESCRIPTION:

Governor driver module located in the generator control panel. Sealed unit with waterproof connections. Feedback circuit from the actuator for fuel rack position. Generac DCP software-controlled speed governing, fully adjustable via GenLink®.

The Generac electronic governor system is standard on the following diesel gensets with Generac’s Digital Control Platform (G or H panel) control system:

- 2.4L 10-30kW
- 3.4L 35-50kW
- 4.5L 50-80kW
- 6.7L 100-130kW

ENGINE OPTIONS

COOLANT HEATER 120VAC, 1500W



SPECIFICATIONS

VOLTAGE: 120VAC

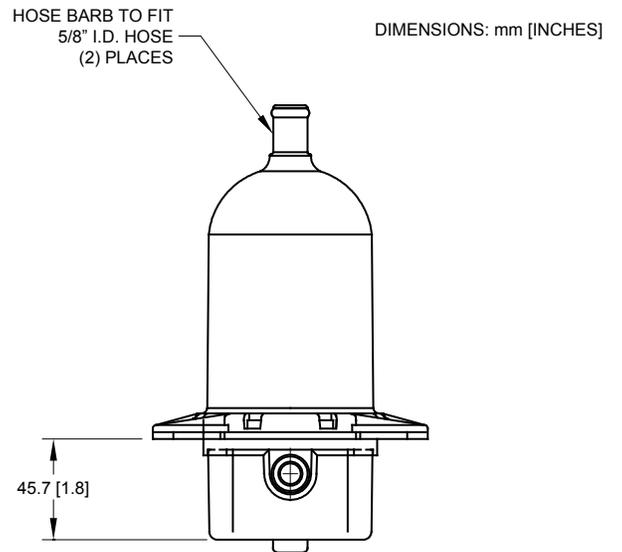
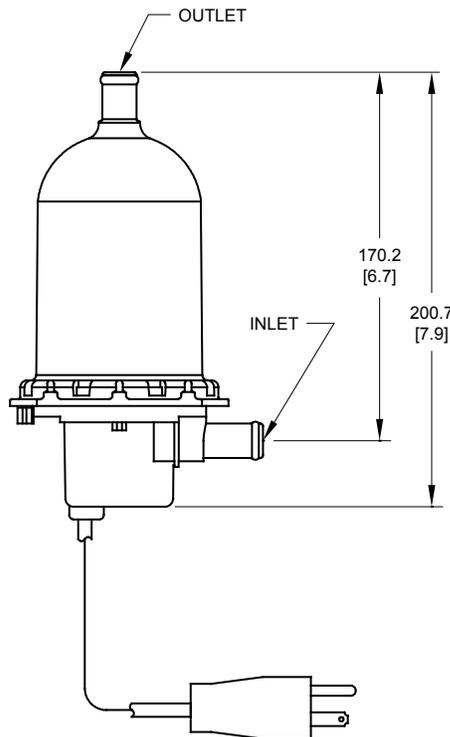
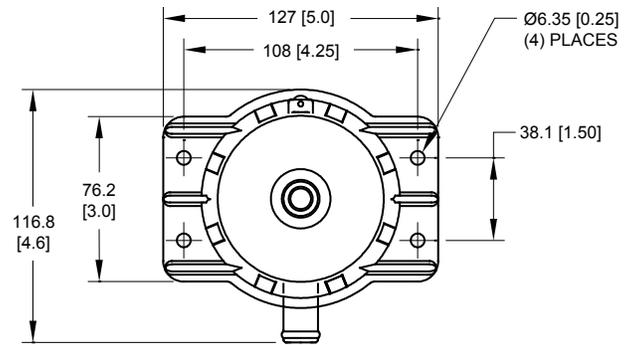
HEAT POWER: 1500W

FIXED THERMOSTAT: 80°-100°F

HEATING ELEMENT: INCOLOY 800

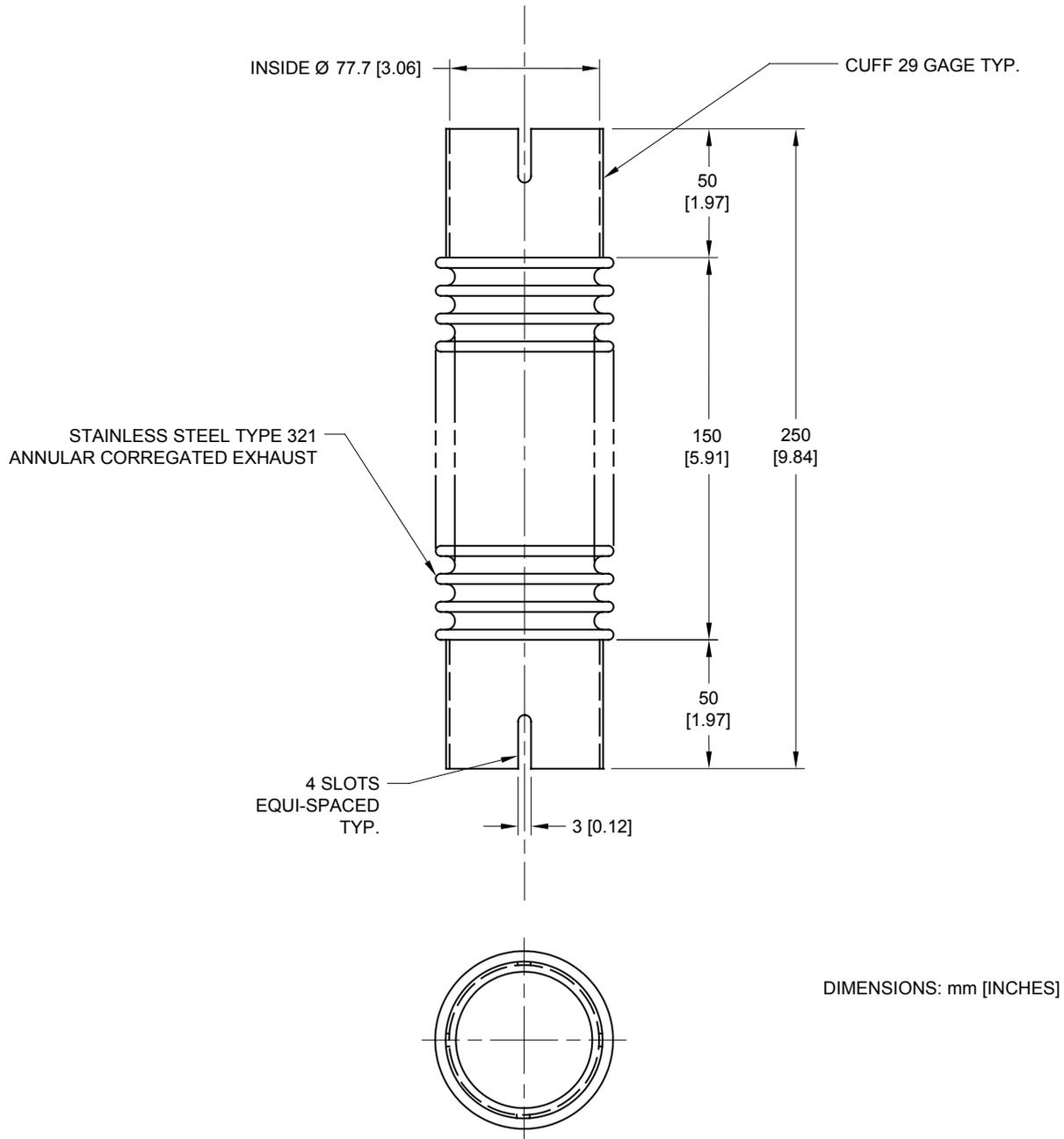
MAXIMUM PRESSURE: 90 PSI (620 kPa)

PLUG NEMA STD: 5-15P



EXHAUST OPTIONS

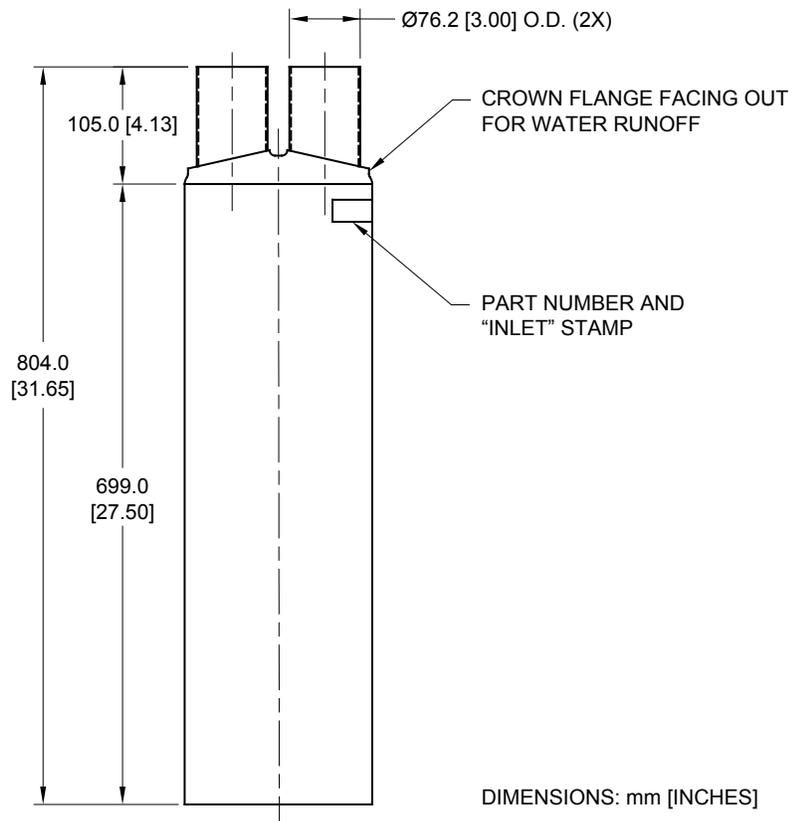
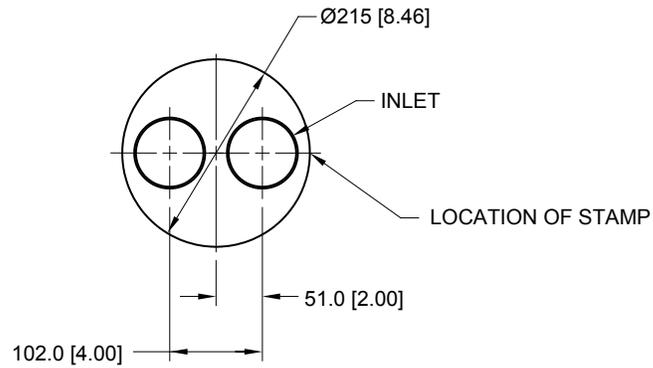
EXHAUST FLEX, 3"



EXHAUST OPTIONS

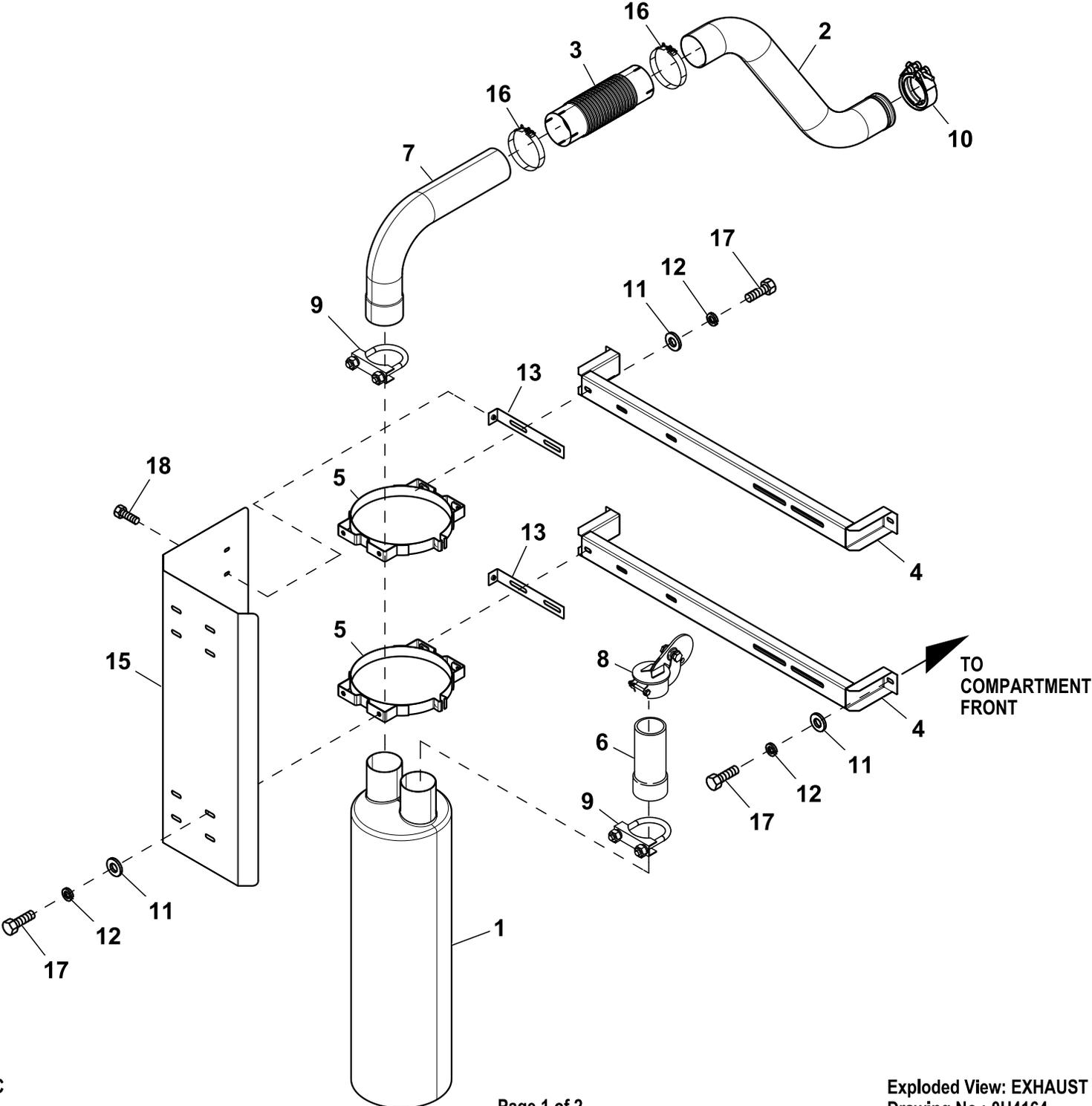
**MUFFLER
3.0" INLET / OUTLET**

- APPROXIMATE WEIGHT: 23 LBS.
- INSERTION LOSS: 20-25 dBA
- MATERIAL: ALUMINIZED STEEL
- FINISH: HIGH-TEMP BLACK PAINT



DIMENSIONS: mm [INCHES]

GROUP F



EXPLODED VIEW: EV EXH 4.5L G17**DRAWING #: 0H4164****GROUP F**

| ITEM | PART# | QTY. | DESCRIPTION |
|-------------|--------------|-------------|----------------------------------|
| 1 | 0C9652 | 1 | MUFFLER 3" INLET/OUTLET |
| 2 | 0H4162 | 1 | ASSY 4.5L G17 EXHAUST |
| 3 | 0A5215C | 1 | PIPE FLEX 3" |
| 4 | 0C2933 | 2 | BRACKET MUFFLER MTG |
| 5 | 0C4114 | 2 | CLAMP MUFFLER BAND |
| 6 | 0C9640 | 1 | TUBE STRAIGHT 'B' GROUP |
| 7 | 0C9645 | 1 | 3" TUBE 90 DEG ELBOW 'B' GROUP |
| 8 | 059902 | 1 | RAIN CAP 3.00 / 3.19 |
| 9 | 055978 | 2 | BOLT U 3/8-16 X 3.25 |
| (1)10 | 0H6303 | 1(REF) | CLIP |
| 11 | 022145 | 12 | WASHER FLAT 5/16-M8 ZINC |
| 12 | 022129 | 12 | WASHER LOCK M8-5/16 |
| 13 | 0C4170 | 2 | BRACKET EXHAUST SHIELD |
| 14 | 0G3011 | 1 | BLANKET EXHAUST (NOT SHOWN) |
| 15 | 0C3094 | 1 | HEAT SHIELD GEN 2 |
| 16 | 0C3433B | 2 | CLAMP BAND 3.0" |
| 17 | 042907 | 12 | SCREW HHC M8-1.25 X 16 G8.8 |
| 18 | 0C2454 | 2 | SCREW TH-FRM M6-1 X 16 N WA Z/JS |

NOTES (UNLESS OTHERWISE SPECIFIED):

(1) SUPPLIED WITH ENGINE KIT.

Warranty

GENERAC POWER SYSTEMS TWO-YEAR EXTENDED LIMITED WARRANTY FOR STANDBY POWER SYSTEMS

NOTE: ALL UNITS MUST HAVE A START-UP INSPECTION PERFORMED BY AN AUTHORIZED GENERAC DEALER.

For a period of two (2) years or two thousand (2,000) hours of operation from the date of start up, which ever occurs first, Generac Power Systems, Inc. (Generac) will, at its option, repair or replace any part(s) which, upon examination, inspection, and testing by Generac or an Authorized/Certified Generac Dealer, or branch thereof, is found to be defective under normal use and service, in accordance with the warranty schedule set forth below. Repair or replacement pursuant to this limited warranty shall not renew or extend the original warranty period. Any repaired product shall be warranted for the remaining original warranty period only. Any equipment that the purchaser/owner claims to be defective must be examined by the nearest Authorized/Certified Generac Dealer, or branch thereof. This warranty applies only to Generac Generators used in "Standby" applications, as Generac has defined Standby, provided said generator has been initially installed and/or inspected on-site by an Authorized/Certified Generac Dealer, or branch thereof. It is highly recommended that scheduled maintenance, as outlined by the generator owner's manual, be performed by an Authorized/Certified Generac Dealer, or branch thereof. This will verify service has been performed on the unit throughout the warranty period. This warranty is limited to and available only on Liquid-cooled units.

*****This Warranty only applies to units sold for use in the US and Canada*****

WARRANTY SCHEDULE

YEAR ONE AND TWO — Limited comprehensive coverage on mileage, labor, and parts listed.

• ALL COMPONENTS — ENGINE, ALTERNATOR AND TRANSFER SWITCH

GEARBOX EQUIPPED UNITS - LIMITED GEARBOX COVERAGE

YEARS ONE THROUGH FIVE — Parts and labor coverage on gearbox and components.

YEARS SIX THROUGH TEN — Parts only coverage on gearbox and components.

GUIDELINES:

1. Travel allowance is limited to 300 miles maximum, and 7.5 hours maximum (per occurrence), round trip, to the nearest authorized Generac Service Facility.
2. Warranty only applies to permanently wired and mounted units.
3. All warranty repairs, must be performed and/or addressed by an Authorized/Certified Generac Dealer, or branch thereof.
4. A Generac Transfer Switch is highly recommended to be used in conjunction with the generator set. If a Non-Generac Transfer Switch is substituted for use and directly causes damage to the generator set, no warranty coverage shall apply.
5. All warranty expense allowances are subject to the conditions defined in Generac's General Service Policy Manual.
6. Units that have been resold are not covered under the Generac Warranty, as this Warranty is not transferable.
7. Unit enclosure is only covered during the first year of the warranty provision.
8. Damage to any covered components or consequential damages caused by the use of a non-OEM part will not be covered by the warranty.
9. Engine coolant heaters (block-heaters), heater controls and circulating pumps are only covered during the first year of the warranty provision.
10. Generac may chose to Repair, Replace or Refund a piece of equipment.
11. Warranty Labor Rates are based on normal working hours. Additional costs for overtime, holiday or emergency labor costs for repairs outside of normal business hours will be the responsibility of the customer.
12. Warranty Parts shipment costs are reimbursed at ground shipment rates. Costs related to requests for expedited shipping will be the responsibility of the customer.
13. Batteries are warranted by the battery manufacturer.
14. Verification of required maintenance may be required for warranty coverage.

THIS WARRANTY SHALL NOT APPLY TO THE FOLLOWING:

Any unit built/manufactured prior to March 1, 2013.

1. Costs of normal maintenance (i.e. tune-ups, associated part(s), adjustments, loose/leaking clamps, installation and start-up).
2. Any failure caused by contaminated fuels, oils, coolants/antifreeze or lack of proper fuels, oils or coolants/antifreeze.
3. Units sold, rated or used for "Prime Power", "Trailer Mounted" or "Rental Unit" applications as Generac has defined Prime Power, Trailer Mounted or Rental Unit. Contact a Generac Distributor for Prime Power, Trailer Mounted or Rental Unit definition and warranty.
4. Failures caused by any external cause or act of God including, without limitation, collision, theft, vandalism, riot or wars, nuclear event, fire, lightning, earthquake, windstorm, hail, volcanic eruption, water or flood, tornado or hurricane.
5. Products that are modified or altered in a manner not authorized by Generac in writing.
6. Failures due, but not limited to, normal wear and tear, accident, misuse, abuse, negligence, or improper installation or sizing.
7. Any incidental, consequential or indirect damages caused by defects in materials or workmanship, or any delay in repair or replacement of the defective part(s).
8. Damage related to rodent and/or insect infestation.
9. Failure due to misapplication, misrepresentation, or bi-fuel conversion.
10. Telephone, facsimile, cellular phone, satellite, Internet, or any other communication expenses.
11. Rental equipment used while warranty repairs are being performed (i.e. rental generators, cranes, etc.).
12. Modes of transportation deemed abnormal (refer to Generac General Service Policy Manual).
13. Steel enclosures that are rusting due to improper installation, location in a harsh or saltwater environment or scratched where integrity of paint applied is compromised.
14. Any and all expenses incurred investigating performance complaints unless defective Generac materials and/or workmanship were the direct cause of the problem.
15. Starting batteries, fuses, light bulbs, engine fluids, and overnight freight cost for replacement part(s).

THIS WARRANTY IS IN PLACE OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, SPECIFICALLY, GENERAC MAKES NO OTHER WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to purchaser/owner.

GENERAC'S ONLY LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF PART(S) AS STATED ABOVE. IN NO EVENT SHALL GENERAC BE LIABLE FOR ANY INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF SUCH DAMAGES ARE A DIRECT RESULT OF GENERAC'S NEGLIGENCE. Any implied warranties which are allowed by law, shall be limited in duration to the terms of the express warranty provided herein. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to purchaser/owner. Purchaser/owner agrees to make no claims against Generac based on negligence. This warranty gives purchaser/owner specific legal rights. Purchaser/owner also may have other rights that vary from state to state.

Generac Power Systems, Inc. • P.O. Box 8 • Waukesha, WI 53187
Ph: (262) 544-4811 • Fax: (262) 544-4851

Garantía

GARANTÍA LIMITADA EXTENDIDA DE DOS AÑOS DE GENERAC POWER SYSTEMS PARA LOS SISTEMAS DE ALIMENTACIÓN DE RESERVA

NOTA: TODAS LAS UNIDADES DEBEN TENER UNA INSPECCIÓN PREVIA A LA PUESTA EN MARCHA EFECTUADA POR UN CONCESIONARIO AUTORIZADO DE GENERAC.

Durante un período de dos (2) años o dos mil (2000) horas de funcionamiento desde la puesta en marcha, lo que ocurra primero, Generac Power Systems, Inc. (Generac) reparará o sustituirá, a su opción, toda pieza que, tras el examen, inspección y prueba por parte de Generac, un concesionario autorizado o certificado de Generac o una sucursal de este, se determine que es defectuosa bajo condiciones de uso y mantenimiento normales, de acuerdo con el programa de garantía estipulado a continuación. La reparación o sustitución conforme a esta garantía limitada no renovará ni prolongará el período de garantía original. Todo producto reparado será garantizado solo por el período de garantía original restante. Todo equipo que el comprador o propietario reclame como defectuoso debe ser examinado por el concesionario autorizado o certificado de Generac más cercano o una sucursal de este. Esta garantía se aplica solamente a los generadores Generac usados en aplicaciones "de reserva", tal como Generac ha definido "de reserva", siempre que tal generador haya sido instalado y/o inspeccionado inicialmente en el sitio por un concesionario autorizado o certificado de Generac o una sucursal de este. Se recomienda encarecidamente que el mantenimiento programado recomendado, como se indica en el manual del propietario del generador, sea efectuado por un concesionario autorizado o certificado de Generac o una sucursal de este. Esto verificará que el mantenimiento se ha efectuado en la unidad durante todo el período de garantía. Esta garantía está limitada a las unidades refrigeradas por líquido y solo está disponible para ellas.

*****Esta garantía sólo es válida para unidades vendidas para su uso en EE.UU. y Canadá.*****

PROGRAMA DE GARANTÍA

AÑOS UNO Y DOS - Cobertura completa limitada sobre el millaje, mano de obra y piezas que se indican.

• TODOS LOS COMPONENTES - MOTOR, ALTERNADOR E INTERRUPTOR DE TRANSFERENCIA

UNIDADES QUE TIENEN CAJA DE ENGRANAJES - COBERTURA LIMITADA DE LA CAJA DE ENGRANAJES

AÑOS UNO A CINCO - Cobertura sobre piezas y mano de obra para la caja de engranajes y los componentes.

AÑOS SEIS A DIEZ - Solo cobertura sobre piezas para la caja de engranajes y los componentes.

DIRECTRICES:

1. La asignación para viajes está limitada a 300 millas como máximo y 7,5 horas como máximo (por caso), viaje de ida y vuelta, a la instalación de servicio de Generac autorizada más cercana.
2. La garantía corresponde solamente a las unidades conectadas y montadas en forma permanente.
3. Todas las reparaciones por garantía deben ser efectuadas y/o dirigidas por un concesionario autorizado o certificado de Generac o una sucursal de este.
4. Se recomienda encarecidamente usar un interruptor de transferencia de Generac en conjunto con el equipo generador. Si se sustituye por un interruptor de transferencia que no sea de Generac y este causa daños directamente al equipo generador, no se aplicará ninguna cobertura de garantía.
5. Todas las asignaciones para gastos por garantía están sujetas a las condiciones definidas en el Manual de política de mantenimiento general de Generac.
6. Las unidades que hayan sido revendidas no están cubiertas por la garantía de Generac dado que esta garantía no es transferible.
7. El gabinete de la unidad está cubierto solo durante el primer año de prestación de la garantía.
8. Los daños a cualquier componente o los daños emergentes causados por el uso de una pieza que no sea OEM no estarán cubiertos por la garantía.
9. Los calentadores de la refrigeración del motor (calentadores del bloque), los controles del calentador y las bombas de circulación solo están cubiertas durante el primer año de prestación de la garantía.
10. Generac puede elegir reparar, sustituir o reembolsar una pieza del equipo.
11. Las tarifas de mano de obra de la garantía se basan en horas de trabajo normales. Los costes adicionales por horas extra y feriados y los costes de mano de obra de emergencia por reparaciones fuera del horario de trabajo normal serán responsabilidad del cliente.
12. Los costes de envío de piezas por garantía se reembolsarán con las tarifas de envío terrestre. Los costes relativos a solicitudes de envío urgente serán responsabilidad del cliente.
13. Las baterías están garantizadas por el fabricante de las baterías.
14. Puede requerirse la verificación del mantenimiento requerido para la cobertura de la garantía.

ESTA GARANTÍA NO SE APLICA A LO SIGUIENTE:

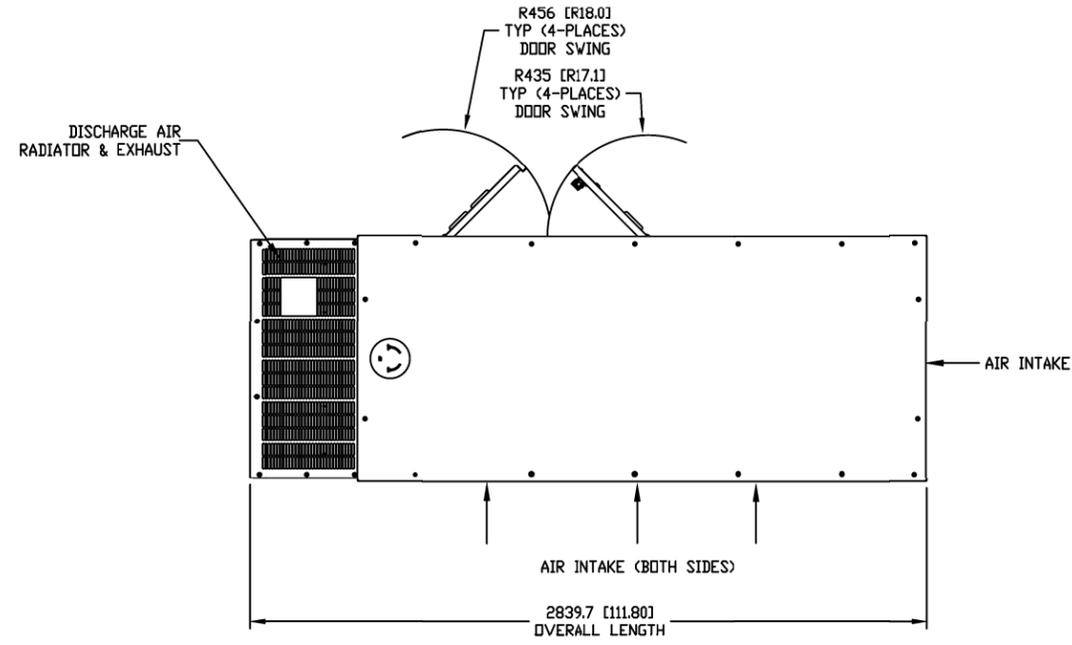
Toda unidad fabricada/construida antes del 1 de marzo de 2013.

1. Los costes del mantenimiento normal (es decir: afinaciones, pieza(s) relacionada(s), ajustes, abrazaderas sueltas o con fugas, instalación y puesta en marcha).
2. Todo fallo causado por combustibles, aceites, refrigerantes y anticongelantes contaminados o la falta de combustibles, aceites o refrigerantes y anticongelantes apropiados.
3. Las unidades vendidas, calificadas para o usadas en aplicaciones de "Alimentación eléctrica principal", "Montada en remolque" o "Unidad en alquiler" tal como Generac ha definido como Alimentación principal, Montada en remolque o Unidad en alquiler. Comuníquese con un distribuidor de Generac para conocer las definiciones y la garantía correspondientes a Alimentación eléctrica principal, Montada en remolque o Unidad en alquiler.
4. Los fallos causados por una causa externa o fuerza mayor, tal como colisión, robo, vandalismo, disturbios o guerras, holocausto nuclear, incendio, rayos, terremoto, tormenta de viento, granizo, erupción volcánica, agua o inundación, tornado o huracán.
5. Los productos que sean modificados o alterados en forma no autorizada por Generac por escrito.
6. Fallos debidos, pero no limitados a: desgaste y daños normales, accidente, uso indebido, abuso, negligencia o instalación incorrecta.
7. Todos los daños accesorios, emergentes o indirectos causados por defectos en los materiales o mano de obra o toda demora en la reparación o sustitución de la(s) pieza(s) defectuosa(s).
8. Daños relacionados con plagas de roedores y/o insectos.
9. Fallos debidos a aplicaciones incorrectas, distorsiones o conversión a dos combustibles.
10. Gastos de teléfono, facsímil, teléfono celular, satélite, Internet o cualquier otro gasto de comunicaciones.
11. Equipos arrendados usados mientras se efectúan reparaciones de garantía (es decir, arriendo de generadores, grúas, etc.).
12. Modos de transporte considerados anormales (consulte el Manual de política de mantenimiento general de Generac).
13. Gabinetes de acero que se están corroyendo debido a instalación incorrecta, ubicación en un entorno agresivo o salino o rayado donde esté comprometida la integridad de la pintura aplicada.
14. Todos los gastos incurridos investigando reclamos por rendimiento salvo que la mano de obra y/o los materiales defectuosos de Generac sean la causa directa del problema.
15. Baterías de arranque, fusibles, bombillas, fluidos del motor y costes de flete nocturno de pieza(s) de repuesto.

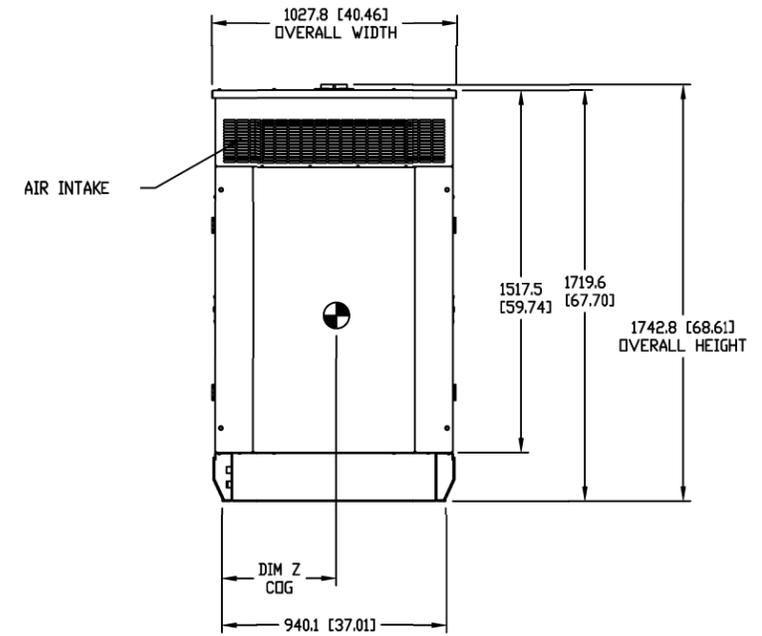
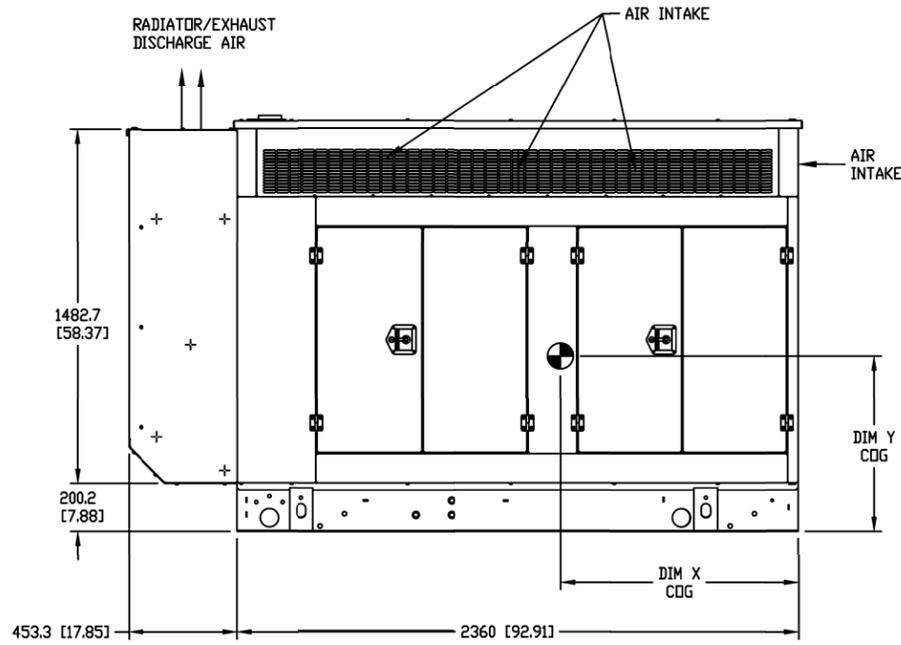
ESTA GARANTÍA SUSTITUYE CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLÍCITA. ESPECÍFICAMENTE, GENERAC NO OTORGA NINGUNA GARANTÍA DE COMERCIALIZACIÓN O APTITUD PARA UN PROPÓSITO EN PARTICULAR. Algunos estados no permiten limitaciones de la duración de una garantía implícita: por lo tanto, la limitación precedente puede no aplicarse al comprador o propietario.

LA ÚNICA RESPONSABILIDAD DE GENERAC SERÁ REPARAR O SUSTITUIR LA(S) PIEZA(S) COMO SE ESTIPULA PRECEDENTEMENTE. GENERAC NO SERÁ RESPONSABLE EN NINGÚN CASO POR NINGÚN DAÑO ACCESORIO O EMERGENTE, AUN CUANDO TAL DAÑO SEA RESULTADO DIRECTO DE LA NEGLIGENCIA DE GENERAC. La duración de todas las garantías implícitas permitidas por la ley, estará limitada a las condiciones de la garantía expresa estipulada en la presente. Algunos estados no permiten la exclusión o limitación de daños accesorios o emergentes, de manera que las limitaciones precedentes pueden no aplicarse al comprador o propietario. El comprador o propietario acuerda no efectuar reclamos contra Generac basados en negligencia. Esta garantía otorga al comprador o propietario derechos legales específicos. El comprador o propietario también puede tener otros derechos que varían en diferentes estados.

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FOR ALL STUB-UP, WEIGHT, AND COG DETAILS, SEE CORRESPONDING OPEN SET DRAWING PER UNIT CONFIGURATION.



DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

DIMENSIONS ARE IN MILLIMETERS [INCHES]

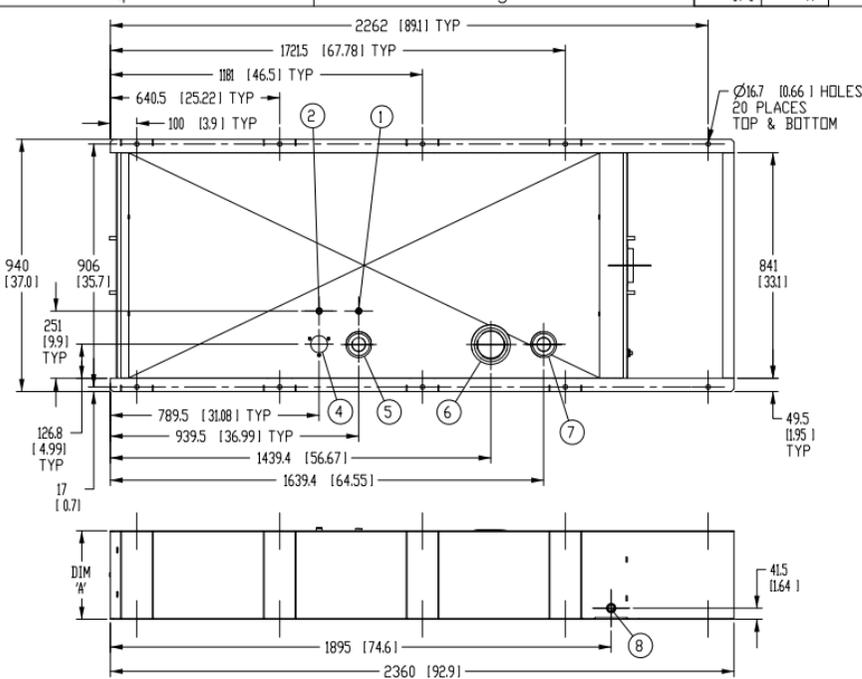
INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS. © GENERAC POWER SYSTEMS 2012

ELECTRONICALLY APPROVED
INSIDE WINDCHILL



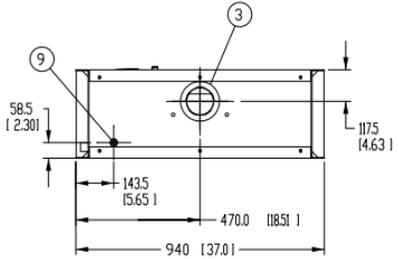
| | | | | |
|--|---------|---------|--------------|--|
| TITLE | | | | |
| L2A ENCLOSURE D4.5L, 60HZ: SD080, PD072 SD060, PD054 | | | | |
| ISSUE DATE: | | 6/2/14 | | |
| SIZE | CAGE NO | DWG NO | REV | |
| B | N/A | 0J4189C | D | |
| SCALE | 0.035 | WT-KG | SHEET 1 of 1 | |



| I/N | TANK FITTING | FUNCTION |
|-----|--------------------|------------------------|
| 1 | 3/8" NPT COUPLING | FUEL SUPPLY |
| 2 | 3/8" NPT COUPLING | FUEL RETURN |
| 3 | 4" NPT WELD FLANGE | EMERGENCY VENT |
| 4 | | FUEL VENT |
| 5 | 2" NPT WELD FLANGE | FUEL FILL |
| 6 | 4" NPT WELD FLANGE | EMERGENCY VENT (INNER) |
| 7 | 2" NPT WELD FLANGE | VENT |
| 8 | 3/4" NPT COUPLING | DRAIN |
| 9 | Ø22 MM HOLE | LEAK DETECTOR |

CAPACITY SHOWN: LITER [GALLONS]
 WEIGHT SHOWN: KILOGRAMS [POUNDS]
 LENGTH SHOWN: MM [INCH]

UL #142 LISTED



| TANK P/N | 0J18430ST03 | 0J18440ST03 | 0J18450ST03 |
|----------------------|-------------|-------------|-------------|
| DIM 'A' | 330 [13] | 635 [25] | 940 [37] |
| TOTAL TANK CAPACITY | 318 [84] | 734 [194] | 1154 [305] |
| USABLE TANK CAPACITY | 299 [79] | 716 [189] | 1134 [300] |
| DRY WEIGHT (EST) | 237 [522] | 344 [758] | 445 [982] |

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DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.



| | | | |
|------------------------------------|----------------|--------------------------|-------------------------|
| TITLE INSTALL B-GROUP BASETANKS | | | |
| MATERIAL SEE ABOVE | | GENERAC SPECIFICATION | PAINT SURFACE FINISH |
| ISSUE DATE: 02/04/11 | | | |
| SIZE B | CAGE NO N/A | DWG NO 0J4211 | REV A |
| SCALE 0.075 | WT-KG 0.00 | SHEET 1 OF 1 | |

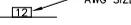
INSTALLATION DRAWING

GROUP G

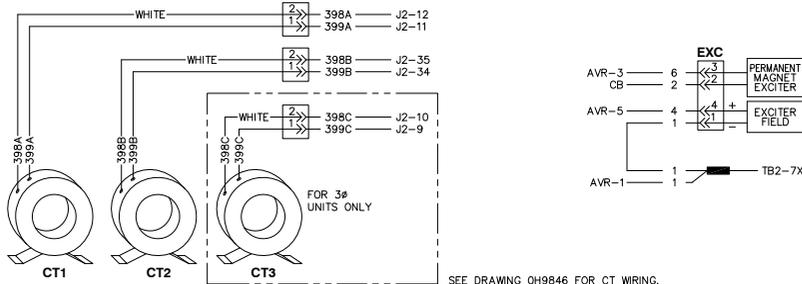
LEGEND

| | |
|---------------------------------------|-----------------------------------|
| AH1 - ALARM HORN | IP - INJECTOR PUMP |
| ALT - DC CHARGE ALTERNATOR | J_ - ENGINE CONTROL MODULE CONN. |
| AVR - AUTO VOLTAGE REGULATOR | LD - LEAK DETECTOR |
| BCC - BATTERY CHARGER CONNECTOR | MLCB - MAIN LINE CIRCUIT BREAKER |
| BCH - BATTERY CHARGER | MOD - MODEM CONNECTOR |
| CB - CIRCUIT BREAKER DPE | MPU1 - MAGNETIC PICKUP |
| CO - CROSSOVER CONNECTOR | NB - NEUTRAL BLOCK |
| COM - COMMUNICATION CONNECTOR | OP51 - OIL PRESSURE SENDER |
| CT_ - CURRENT TRANSFORMER | OTS_ - OIL TEMPERATURE SENDER |
| DB - DIODE BRIDGE | R_ - RESISTOR |
| ECM - ELECTRONIC CONTROL MODULE | RB_ - RELAY BOARD |
| ES1 - EMERGENCY STOP SWITCH | RB_LA - RELAY BOARD CONNECTOR |
| EXC - EXCITER | SC - STARTER CONTACTOR |
| F_ - FUSE | SM - STARTER MOTOR |
| FLS_ - FUEL LEVEL SENDER | SWI - OFF/AUTO/MANUAL SWITCH |
| GA_ - GOVERNOR ACTUATOR | SWC - SWITCH CONNECTOR |
| GD - GOVERNOR DRIVER | SW - SWITCH |
| GFCI - GROUND FAULT CIRCUIT INTERRUPT | WLS_ - COOLANT LEVEL SENDER |
| GND - GROUND BAR CONNECTION | WTS_ - COOLANT TEMPERATURE SENDER |
| IFT - INTERFACE TRANSFORMER | |

NOTE: ALL WIRES 18 AWG
300V UL LISTED UNLESS
SHOWN OTHERWISE



COMPONENTS LOCATED IN ALTERNATOR CONNECTION BOX



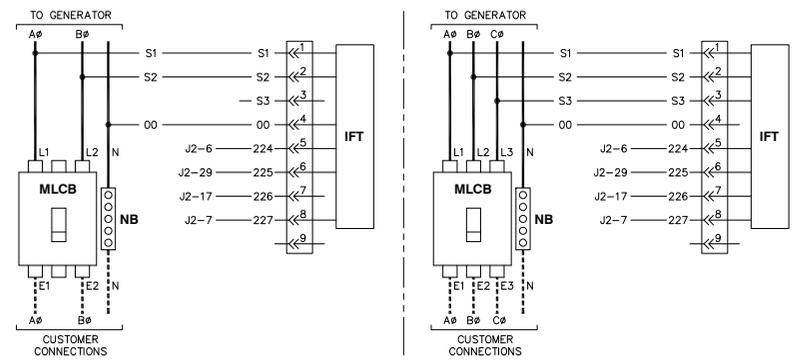
SEE DRAWING OH9846 FOR CT WIRING.

COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE

CONNECTIONS FOR 1Ø UNIT

NOTE: ALL WIRES IN THIS SECTION ARE 600V RATED

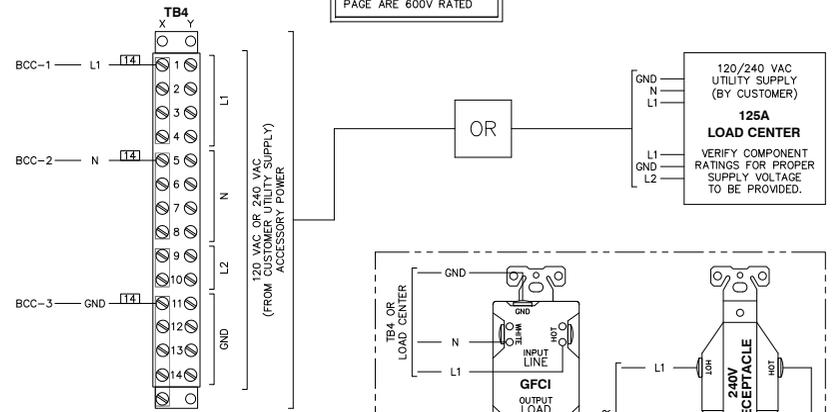
CONNECTIONS FOR 3Ø UNIT



GROUP G

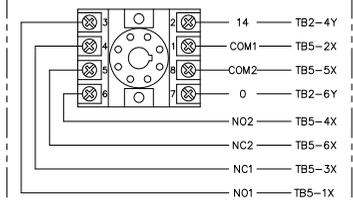
COMPONENTS LOCATED IN HIGH VOLTAGE CUSTOMER CONNECTION MODULE

NOTE: ALL WIRES ON THIS PAGE ARE 600V RATED

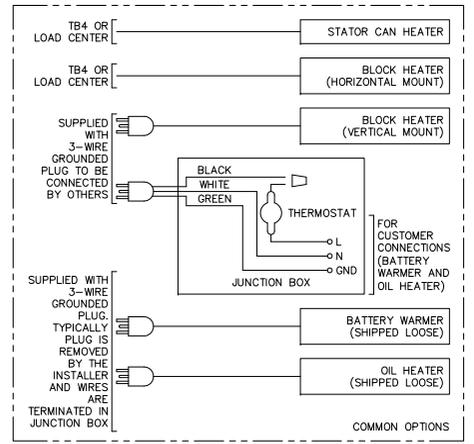


NOTE: FOR FIELD WIRING TO CUSTOMER CONNECTIONS (TERMINAL STRIP) MAXIMUM WIRE SIZE: #10 AWG RECOMMENDED TIGHTENING TORQUE: 14 LB-IN

RUN RELAY

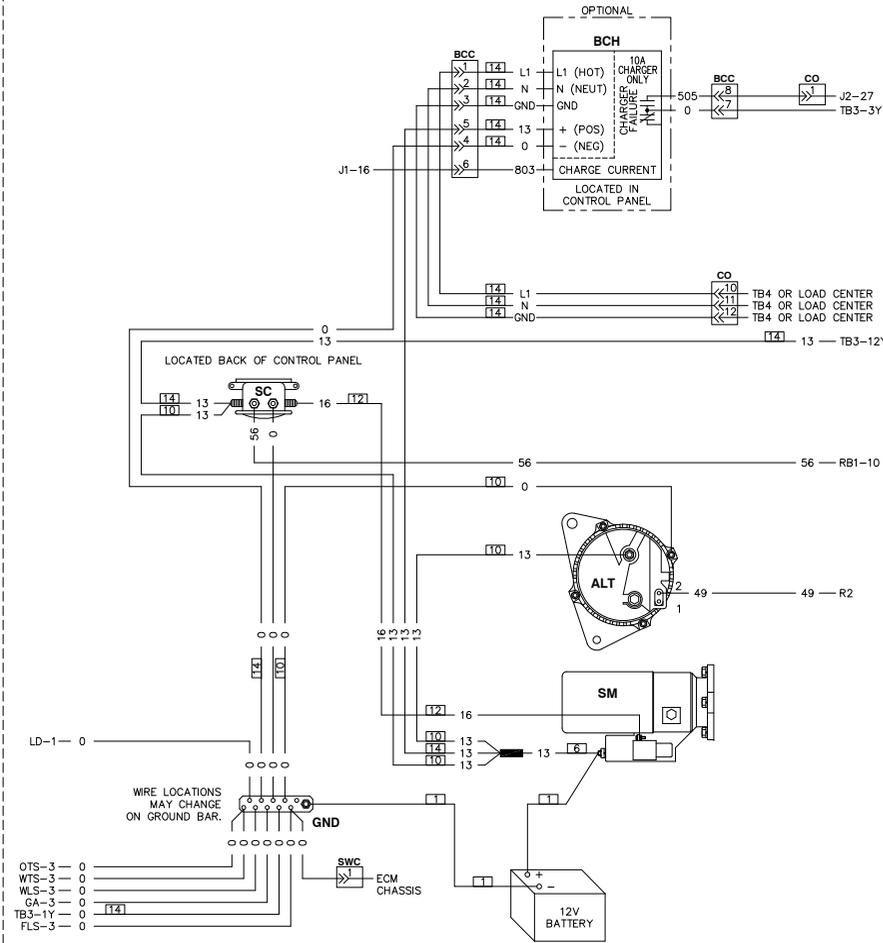


NOTE: FOR FIELD WIRING TO CUSTOMER CONNECTIONS (TERMINAL STRIPS AND RELAY BOARD) MAXIMUM WIRE SIZE: #14 AWG RECOMMENDED TIGHTENING TORQUE: 12 LB-IN



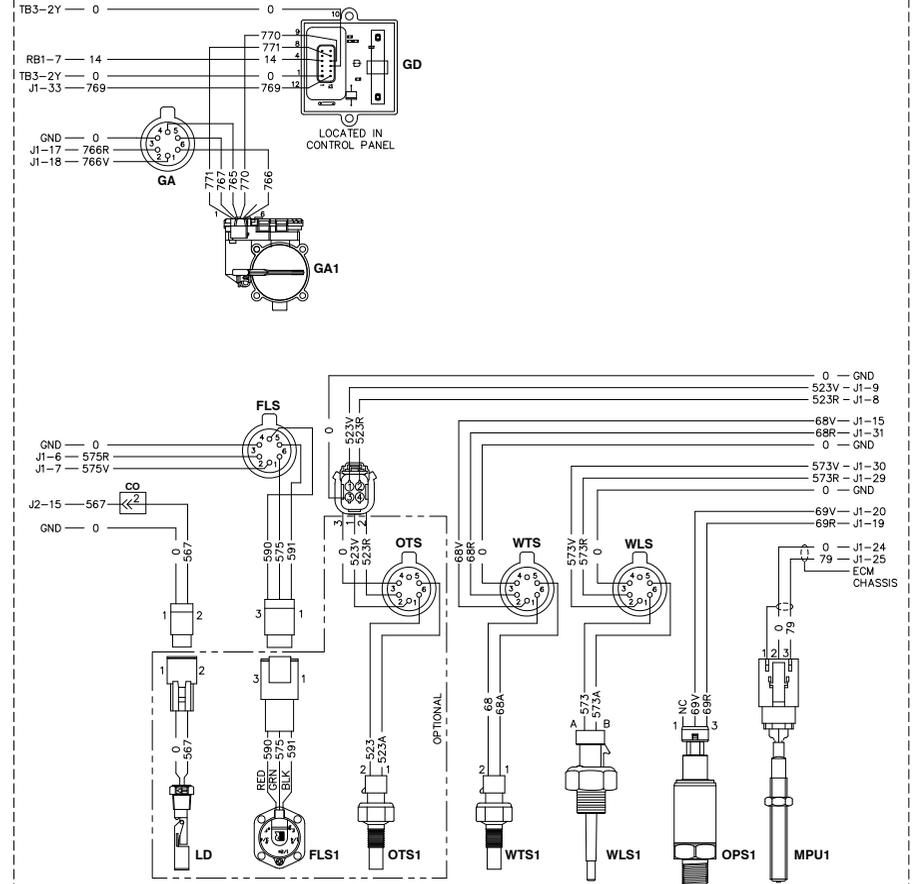
GROUP G

COMPONENTS LOCATED ON ENGINE

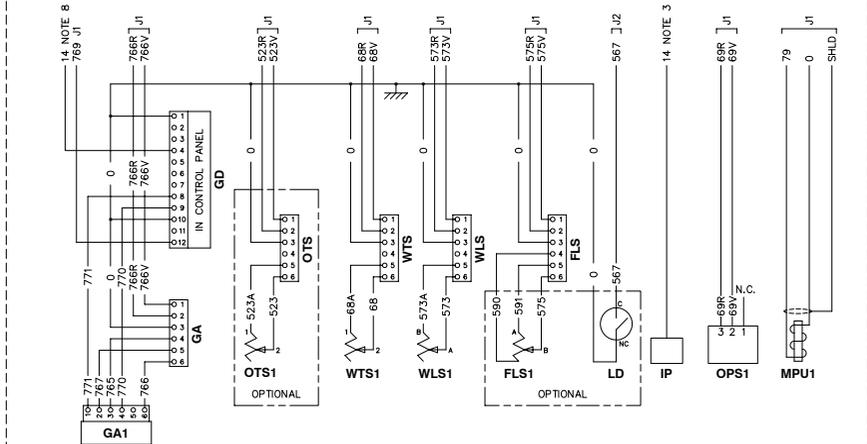
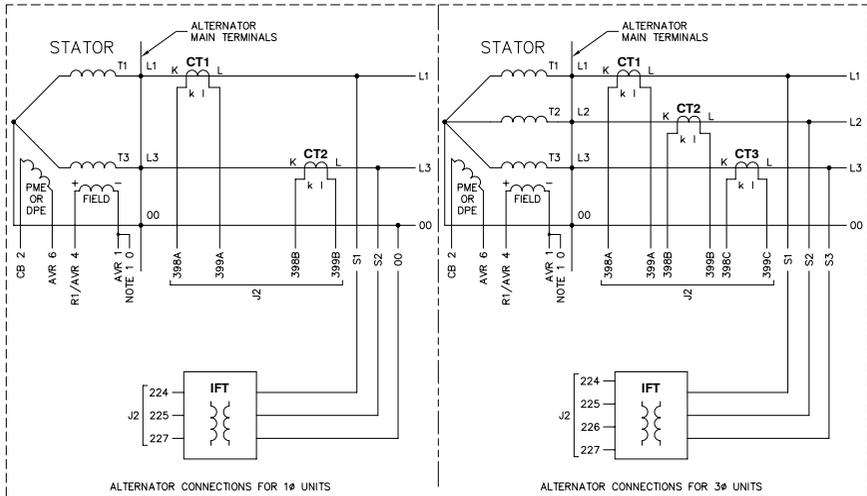


GROUP G

COMPONENTS LOCATED ON ENGINE



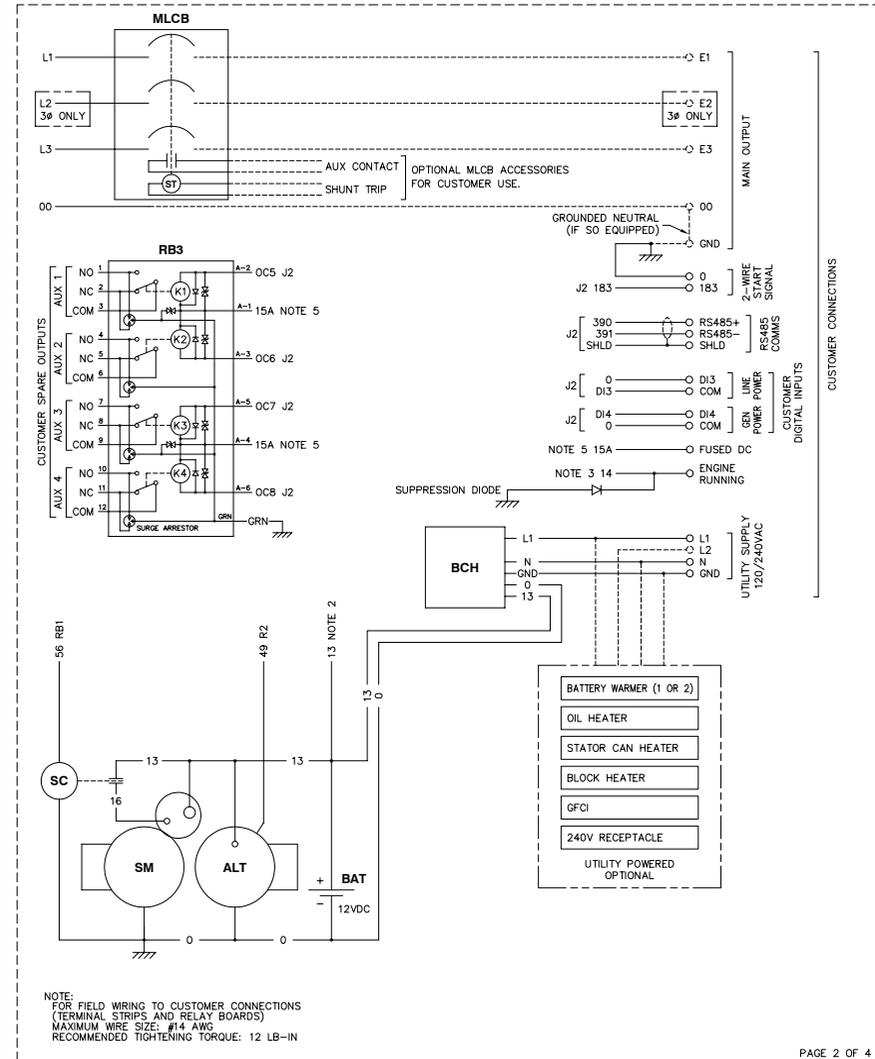
GROUP G



SCHEMATIC - DIAGRAM
D4.5L/D6.7L G17 I2V
DRAWING #: 0H9863

REVISION: -A-
DATE: 7/12/10

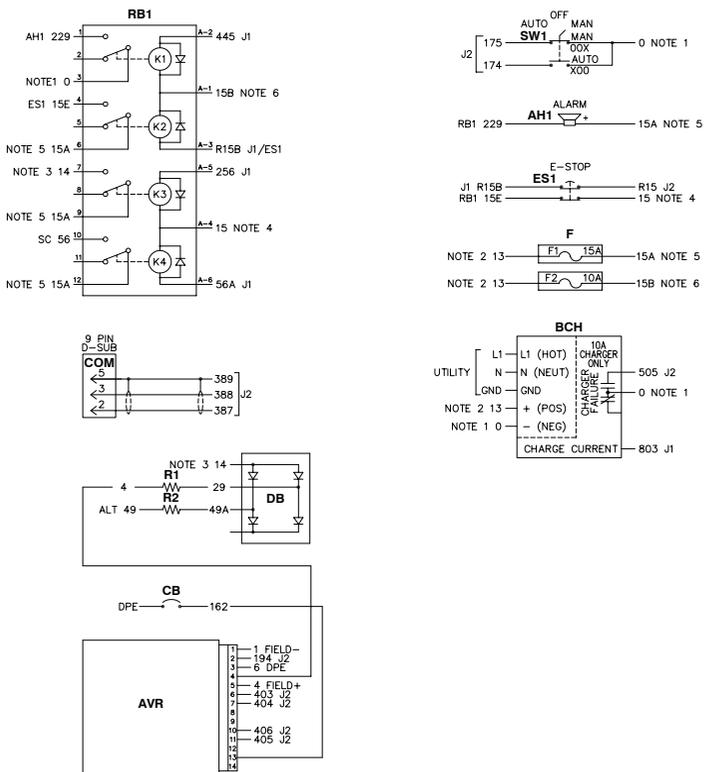
GROUP G



SCHEMATIC - DIAGRAM
D4.5L/D6.7L G17 I2V
DRAWING #: 0H9863

REVISION: -A-
DATE: 7/12/10

GROUP G



| LEGEND | | | |
|-------------------------------|---------------------------------------|----------------------------------|----------------------------------|
| 00 - NEUTRAL | DB - DIODE BRIDGE | IP - INJECTION PUMP | RB - RELAY BOARD |
| AH1 - ALARM HORN | DPE - EXCITER | JL - ENGINE CONTROL MODULE CONN. | SC - STARTER CONTACTOR |
| ALT - DC CHARGE ALTERNATOR | ES1 - EMERGENCY STOP SWITCH | LD - LEAK DETECTOR | SM - STARTER MOTOR |
| AVR - AUTO VOLTAGE REGULATOR | F - FUSE | MLCB - MAIN LINE CIRCUIT BREAKER | SW1 - OFF/AUTO/MANUAL SWITCH |
| BAT - BATTERY | FLS - FUEL LEVEL SENDER | MPUI - MAGNETIC PICKUP | WLS - COOLANT LEVEL SENSOR |
| BCH - BATTERY CHARGER | GA - GOVERNOR ACTUATOR | OPSI - OIL PRESSURE SENDER | WTS - COOLANT TEMPERATURE SENDER |
| CB - CIRCUIT BREAKER | GD - GOVERNOR DRIVER | OTS - OIL TEMPERATURE SENDER | |
| COM - COMMUNICATION CONNECTOR | GFCI - GROUND FAULT CIRCUIT INTERRUPT | PME - PERMANENT MAGNET EXCITER | |
| CT - CURRENT TRANSFORMER | IFT - INTERFACE TRANSFORMER | R - RESISTOR | |

PAGE 3 OF 4

REVISION: -A-
DATE: 7/12/10

SCHEMATIC - DIAGRAM
D4.5L/D6.7L G17 12V
DRAWING #: 0H9863

GROUP G

AVR CONNECTOR

| PIN | WIRE | TO | FUNCTION |
|-----|------|----------|-----------------------|
| 1 | 194 | FIELD | - FIELD |
| 2 | 194 | J2-31 | +12VDC |
| 3 | 6 | DPE | DPE OUTPUT |
| 4 | 4 | R1/FIELD | + FIELD |
| 5 | 4 | R1/FIELD | + FIELD |
| 6 | 403 | J2-8 | GATE TRIGGER B |
| 7 | 404 | J2-20 | GATE TRIGGER A |
| 10 | 406 | J2-30 | ZERO CROSSING I/P |
| 11 | 405 | J2-19 | GROUND (ISO) |
| 13 | 162 | CB | DPE OUTPUT (AFTER CB) |

GD CONNECTOR

| PIN | WIRE | TO | FUNCTION |
|-----|------|-------|-------------------|
| 1 | 0 | GND | NOTE 1 |
| 4 | 14 | RB1-7 | NOTE 3 |
| 8 | 771 | GAT-1 | THROTTLE DRIVE LO |
| 9 | 770 | GAT-4 | THROTTLE DRIVE HI |
| 10 | 0 | GND | NOTE 1 |
| 12 | 769 | J1-33 | THROTTLE PWM |

ENGINE CONTROL MODULE CONNECTIONS

J1

| PIN | WIRE | TO | FUNCTION |
|-----|------|------------|---------------------------|
| 3 | 810 | MOD-2 | MODEM SIGNAL RETURN |
| 6 | 575R | FLS-2 | FUEL LEVEL RTN |
| 7 | 575V | FLS-1 | FUEL LEVEL + |
| 8 | 523R | OTS-2 | OIL TEMPERATURE RTN |
| 9 | 523V | OTS-1 | OIL TEMPERATURE + |
| 10 | R15B | RB1A-5/ES1 | OVERSPEED/WATCHDOG |
| 11 | 256 | RB1A-5 | FUEL RELAY |
| 12 | 0 | GND | NOTE 1 |
| 14 | 811 | MOD-3 | MODEM DATA CARRIER DETECT |
| 15 | 68V | WTS-1 | COOLANT TEMP + |
| 16 | 803 | BCH | BAT CHARGER CURRENT |
| 17 | 766R | GA-2 | THROTTLE POS RTN |
| 18 | 766V | GA-1 | THROTTLE POS + |
| 19 | 69R | OPSI-3 | OIL PRESS RTN |
| 20 | 69V | OPSI-2 | OIL PRESS + |
| 23 | 56A | RB1A-6 | STARTER RELAY |
| 24 | 0 | MPUI-2 | MPUI SIGNAL (-) |
| 25 | 29 | MPUI-3 | MPUI SIGNAL (+) |
| 28 | 812 | MOD-4 | MODEM ENABLE |
| 29 | 573R | WLS-2 | COOLANT LVL RTN |
| 30 | 573V | WLS-1 | COOLANT LVL + |
| 31 | 68R | WTS-2 | COOLANT TEMP RTN |
| 32 | 809 | MOD-1 | MODEM TXV POWER |
| 33 | 769 | GD-12 | THROTTLE PWM |
| 34 | 445 | RB1A-2 | ALARM RELAY |
| 35 | 15B | F2 | NOTE 6 |

J2

| PIN | WIRE | TO | FUNCTION |
|-----|------|----------|-----------------------|
| 1 | 391 | CUST CON | RS485- (XFER SW) |
| 2 | 388 | COM-3 | RS232 TX (GENLINK) |
| 3 | D13 | CUST CON | SPARE IN V/LINE PWR |
| 4 | 183 | CUST CON | REMOTE START |
| 5 | 174 | SW1 | AUTO START |
| 6 | 224 | IFT | V SENSE GEN A PH |
| 7 | 227 | IFT | V SENSE RTN |
| 8 | 403 | AVR-6 | AVR GATE TRIGGER B |
| 9 | 398C | C13 | GEN C PH CURRENT - |
| 10 | 398C | C13 | GEN C PH CURRENT + |
| 11 | 399A | C11 | GEN A PH CURRENT - |
| 12 | 398A | C11 | GEN A PH CURRENT + |
| 13 | 390 | CUST CON | RS485+ (XFER SW) |
| 14 | 387 | COM-2 | RS232 RX (GENLINK) |
| 15 | 567 | LD | LEAK DETECTOR |
| 16 | R15 | ES1 | EMERGENCY STOP |
| 17 | 226 | IFT | V SENSE GEN C PH |
| 19 | 405 | AVR-11 | AVR GROUND |
| 20 | 404 | AVR-7 | AVR GATE TRIGGER A |
| 21 | OC8 | RB3A-6 | SPARE OUTPUT 4 |
| 22 | OC6 | RB3A-3 | SPARE OUTPUT 2 |
| 23 | OC5 | RB3A-2 | SPARE OUTPUT 1 |
| 24 | SHLD | CUST CON | RS485 DRAIN (XFER SW) |
| 25 | 389 | COM-5 | RS232 COM (GENLINK) |
| 26 | D14 | CUST CON | SPARE IN 4/GEN PWR |
| 27 | 505 | BCH | BAT CHARGER FAIL |
| 28 | 175 | SW1 | MANUAL START |
| 29 | 225 | IFT | V SENSE GEN B PH |
| 30 | 406 | AVR-10 | AVR ZERO CROSSING I/P |
| 31 | 194 | AVR-2 | AVR +12VDC |
| 33 | OC7 | RB3A-5 | SPARE OUTPUT 3 |
| 34 | 398B | C12 | GEN B PH CURRENT - |
| 35 | 398B | C12 | GEN B PH CURRENT + |

NOTES:

- 1) WIRE# 0 IS CHASSIS GROUND (BATTERY-) UNLESS NOTED OTHERWISE.
- 2) WIRE# 13 IS UNFUSED +12VDC (BATTERY+).
- 3) WIRE# 14 IS FUSED +12VDC WHEN GENERATOR IS CRANKING OR RUNNING.
- 4) WIRE# 15 IS FUSED +12VDC WHEN E-STOP IS NOT ACTIVATED.
- 5) WIRE# 15A IS FUSED +12VDC FOR GENERAL USE.
- 6) WIRE# 15B IS FUSED +12VDC FOR THE ENGINE CONTROL MODULE.

PAGE 4 OF 4

REVISION: -A-
DATE: 7/12/10

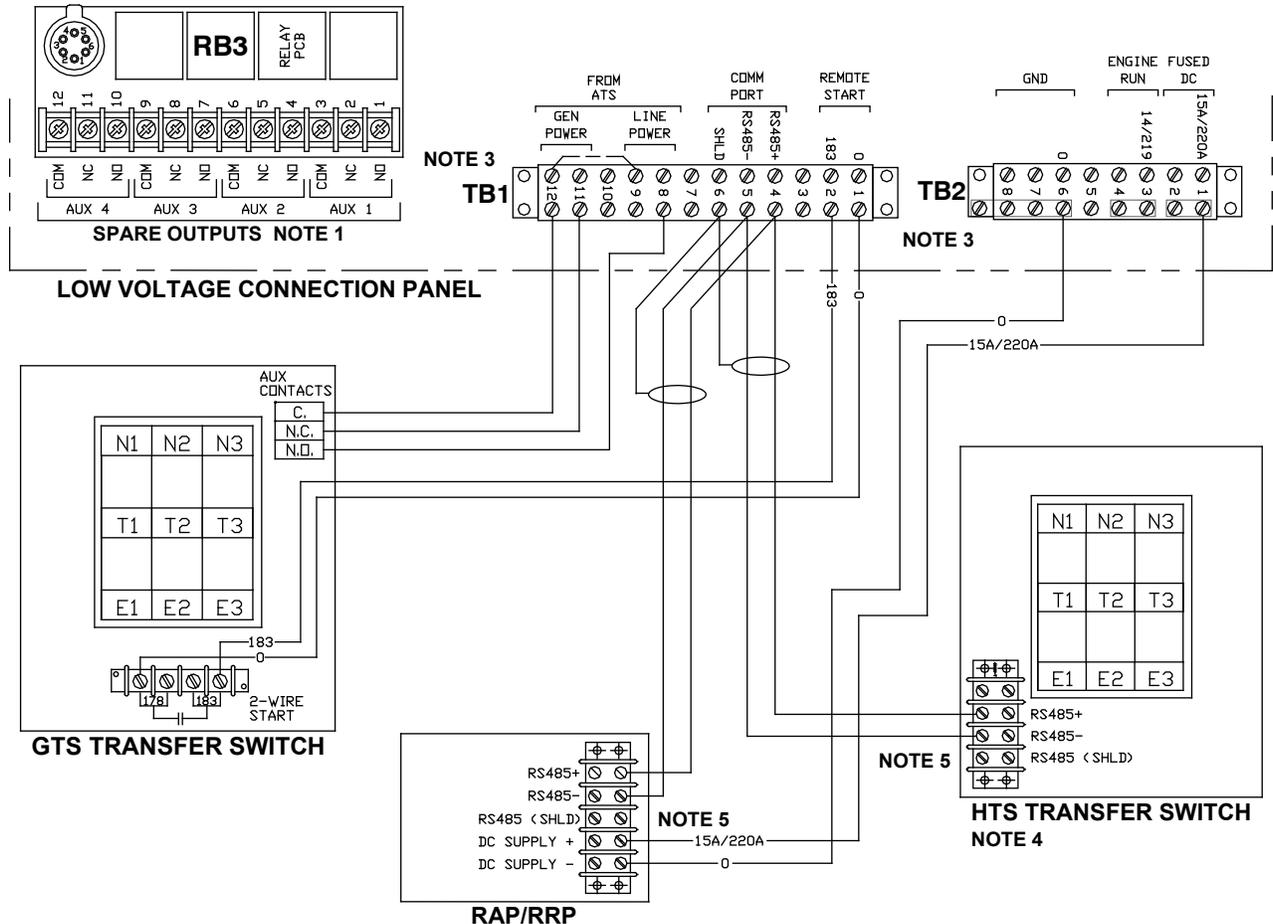
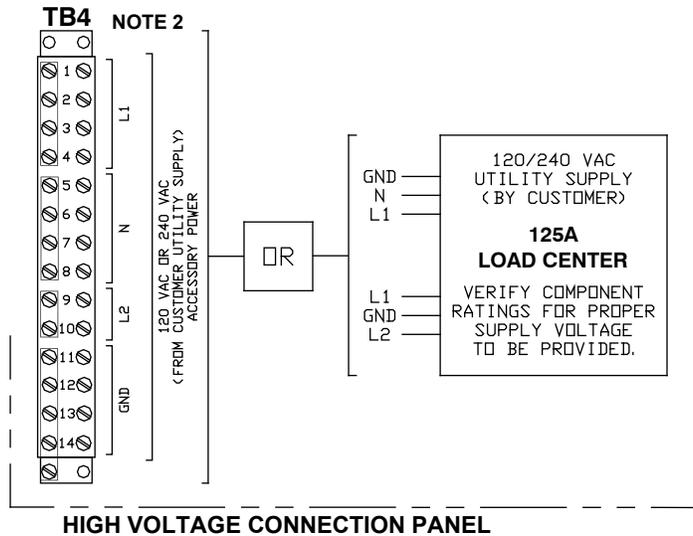
SCHEMATIC - DIAGRAM
D4.5L/D6.7L G17 12V
DRAWING #: 0H9863

SYSTEM INTERCONNECTION

CONTROL INTERCONNECTIONS H-PANEL

NOTES:

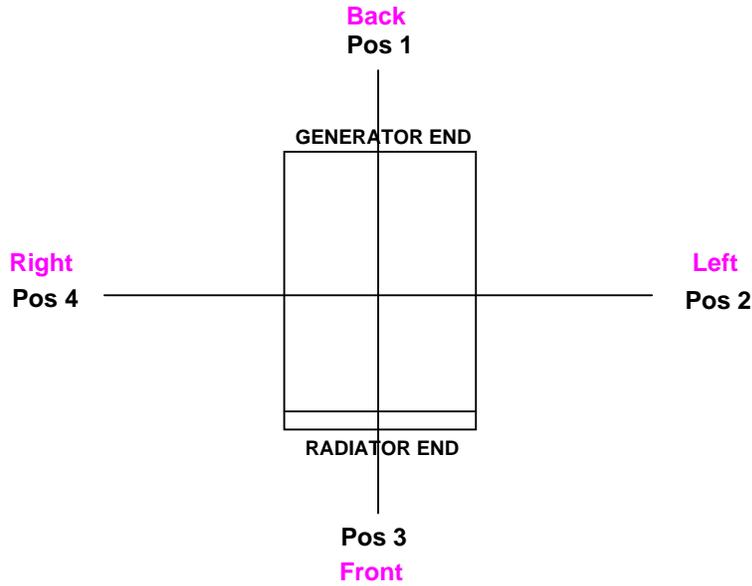
- 1) SPARE OUTPUTS ARE STANDARD ON INDUSTRIAL PRODUCT ONLY. GENLINK™ REQUIRED FOR PROGRAMMING.
- 2) TB4 MAX WIRE SIZE: #10 AWG, RECOMMENDED TIGHTENING TORQUE: 14 LB-IN
- 3) TB1, TB2 & RB3 MAX WIRE SIZE: #14 AWG RECOMMENDED TIGHTENING TORQUE: 12 LB-IN
- 4) REFER TO H-PANEL MANUAL FOR INSTRUCTIONS ON ENABLING HTS TRANSFER SWITCH. REFER TO HTS TRANSFER SWITCH MANUAL FOR DIP SWITCH SETTINGS FOR MULTIPLE HTS APPLICATIONS.
- 5) CONNECT THE RS485 OVERALL SHIELD AT GENSET CONNECTION TERMINAL ONLY.



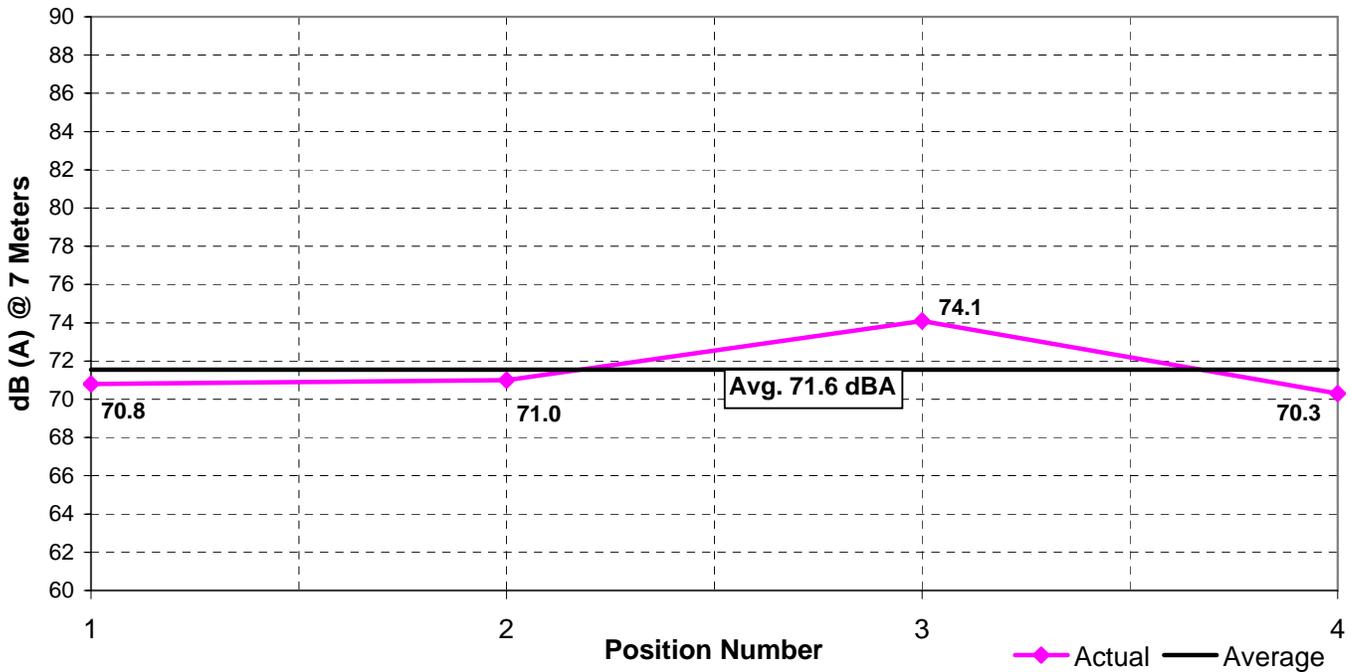
Sound Test Results

Genset: SD060 4.5L Iveco

Enclosure: Sound Attenuated, Level 2



Measured Sound Levels - 60 Hz



Notes:

1. All positions 23 ft (7M) from side faces of generator set.
2. Generator operating at full load.
3. Test conducted on a 100 foot diameter asphalt surface.
4. Non-enclosed sets do not include exhaust sound during testing.

EXHAUST EMISSIONS DATA

**STATEMENT OF EXHAUST EMISSIONS
2014 FPT DIESEL FUELED GENERATOR**

The measured emissions values provided here are proprietary to Generac and its authorized dealers. This information may only be disseminated upon request, to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc. The data provided shall not be meant to include information made public by Generac.

| | | | |
|-----------------------------|---------------------|-----------------------------|--|
| Generator Model: | SD060 | EPA Certificate Number: | FFPXL04.5DTD-001 |
| kW _e Rating: | 60 | CARB Certificate Number: | Not Applicable |
| Engine Family: | FFPXL04.5DTD | Emission Standard Category: | Tier 3 |
| Engine Model: | F4GE9455A*J | Certification Type: | Stationary Emergency CI (40 CFR Part 60 Subpart IIII) |
| Rated Engine Power (BHP)*: | 93 | | |
| Fuel Consumption (gal/hr)*: | 5.05 | | |
| Aspiration: | Turbocharged | | |
| Rated RPM: | 1800 | | |

*Engine Power and Fuel Consumption are declared by the Engine Manufacturer of Record and the U.S. EPA.

| Emissions based on engine power of specific Engine Model. | | | |
|---|------------|------------|--------------|
| (These values are actual composite weighted exhaust emissions results over the EPA 5-mode test cycle.) | | | |
| | CO | NOx + NMHC | PM |
| | 1.3 | 4.3 | 0.34 |
| | 1.0 | 3.2 | 0.25 |
| | | | Grams/kW-hr |
| | | | Grams/bhp-hr |

- The stated values are actual exhaust emission test measurements obtained from an engine representative of the type described above.
- Values based on 5-mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA protocol, which is typically accepted by SCAQMD and other regional authorities.
- No emissions values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems, Inc. reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and local agencies must be consulted by the permit application/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems cannot be construed as a guarantee of installability of the generating set.

Certification of Quality

Generac Power Systems certifies that the products we manufacture have been built and tested in accordance with strict internal and external standards for quality. Our quality management system has been registered with the internationally recognized ISO 9001:2008 standard and our products comply with external standards that include, but are not limited to CSA, NEMA, EGSA, ISO and UL.

The Generac Quality Management System (GQMS) ensures the highest standards of quality at every level of production, from raw materials to the finished product. This includes receiving inspection, in-process checks, product and process audits, testing, final inspections and shipping standards.

Tests of our products are performed in accordance with our internal procedures and controlled through the GQMS to ensure accuracy and effectiveness. The testing process and product designs comply with external standards which may include, but are not limited to: ISO 8528-5, ISO 3046, NFPA 99, NFPA 110, BS 5514, SAE J1349 and DIN 6271.

Generac Power Systems has over one million square feet of manufacturing space and over 2000 employees dedicated to designing and manufacturing power generation equipment in our multiple State of Wisconsin, USA factories. All of our installed and mobile generators are built with pride by our skilled American workforce to ensure our customers receive the quality that they expect from Generac.

We are committed to producing quality products for both our internal and external customers. We will continuously improve our processes and diligently measure all aspects of our business.

Daniel Waschow

Vice President of Quality
Generac Power Systems, Inc.
Waukesha, Wisconsin USA



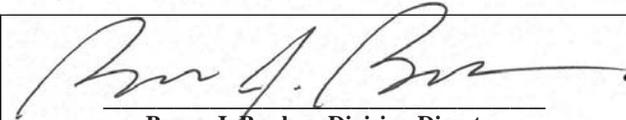
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2014 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: FPT Industrial S.p.A.
(U.S. Manufacturer or Importer)
Certificate Number: EFPXL04.5DTD-001

Effective Date:
05/20/2013

Expiration Date:
12/31/2014


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
05/20/2013
Revision Date:
N/A

Model Year: 2014
Manufacturer Type: Original Engine Manufacturer
Engine Family: EFPXL04.5DTD

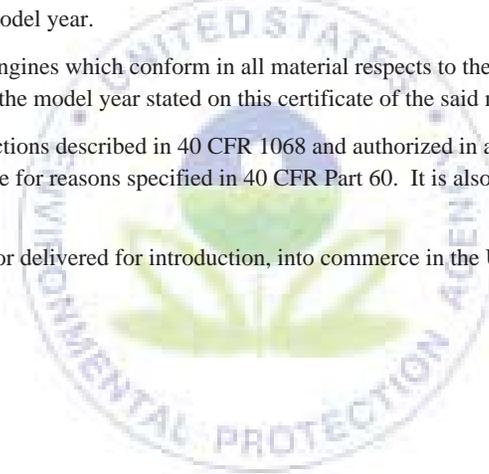
Mobile/Stationary Indicator: Stationary
Emissions Power Category: 56<=kW<75
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: No Non-After Treatment Devices Installed

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.





CERTIFICATE



This is to certify that

Generac Power Systems, Inc.

S45 W29290 Hwy. 59
Waukesha, WI 53189
United States of America

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope:

Design, Manufacturing and Distribution of Generators and Power Products.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2008

| | |
|--------------------------------|---------------|
| Certificate registration no. | 10012920 QM08 |
| Date of original certification | 2013-12-09 |
| Date of certification | 2013-12-09 |
| Valid until | 2016-12-08 |



UL DQS Inc.

Ganesh Rao
Managing Director



**Annex to Certificate
Registration No. 10012920 QM08**

Generac Power Systems, Inc.

S45 W29290 Hwy. 59
Waukesha, WI 53189
United States of America



Location

10012922
Generac Power Systems, Inc.
211 Murphy Dr.
Eagle, WI 53119
United States of America

10012923
Generac Power Systems, Inc.
757 N. Newcomb St.
Whitewater, WI 53190
United States of America

10012924
Generac Power Systems, Inc.
900 N. Parkway
Jefferson, WI 53549
United States of America

This annex (edition: 2013-12-09) is only valid in connection with the above-mentioned certificate.

ASCO[®] SERIES 300SE Power Transfer Switch

The ASCO Service Entrance Power Transfer Switch combines automatic power switching with the necessary disconnecting, grounding, and bonding required for use as service entrance equipment. The power transfer switch meets all National Electrical Code requirements for service entrance use. Transfer switches generally are installed at facilities that have a single utility feed and a single emergency power source.

ASCO SERIES 300SE products use two types of construction.

Products 400 amperes or less, utilize a single enclosure including a service (utility source) disconnect circuit breaker, as well as the power transfer switch, grounding and bonding provisions.

Products 600 amperes and above, utilize a multi-section switchboard construction including a service equipment section containing the service (utility source) disconnect circuit breaker, grounding, and bonding provisions. A second section contains the power transfer switch.

Product Features:

- Suitable for use as service entrance equipment. Listed to UL 891 (standard for switchboards) for 600 - 3000 amps, sizes and UL 1008 (standard for panel-boards) for 70 - 400 amps.
- Automatic Transfer Switch is listed to UL 1008 for total system loads
- Sizes available from 70 - 3000 amps, 600 VAC, 50 or 60 Hz, single or three phase
- Silver plated copper ground and neutral bus solderless screw type terminals
- Ground fault trip protection provided on sizes 1000 amps and above
- Available with solid or switched neutral

600 - 3000 Amp Construction

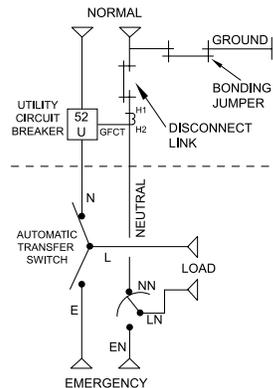


Fig. 16: ASCO SERIES 300 SE Rated 800 amperes Type 1 enclosure with Service Entrance Equipment

70 - 400 Amp Construction

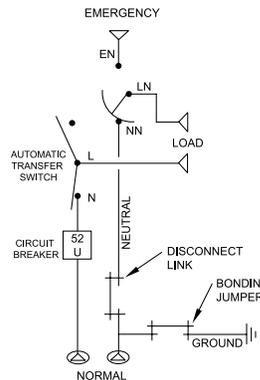


Fig. 17: ASCO SERIES 300 SE rated 200 amperes in Type 1 enclosure with single source breakers

ASCO[®] SERIES 300SE Transfer Switch Ordering Information

To order an ASCO SERIES 300SE Power Transfer Switch, complete the following catalog number:

| 3AUS + B + 3 + 400 + N + 1 + X + C + 11CD + 240V/60 | | | | | | | | | | | |
|---|------------------------------------|--------------------------------|--|----------------|----------------|------------|--|-----------|---|---------------------------------------|---|
| Product | Neutral Code | Phase Poles | Amperes Continuous Rating | Voltage Code | | Controller | Options | Enclosure | | Optional Accessories | Specific Volt & Freq |
| | | | | A ³ | B ³ | | | Blank | Open Type | | |
| 3AUS | B ¹ Switched Neutral | 2 poles, 1Ø 3 poles, 3Ø | 70, 100, 150, 200 ⁶ , 225 ⁶ , 250, 400, 600, 800, 1000, 1200, 1600, 2000 2500, 3000 | A ³ | 115 | 1 | Insert "X" If optional accessories are required | C | Type 1 (Standard) | 11BG Programmable Engine Exerciser | This information is necessary to allow correct control settings prior to shipment |
| | | | | C | 208 | | | F | Type 3R | 14AA/14BA Auxiliary Contacts (2 sets) | |
| | | | | D | 220 | | | G | Type 4 ² | 44G Strip Heater w/Thermostat | |
| | | | | E | 230 | | | H | Type 4X | 72A Serial Module | |
| | | | | F | 240 | | | L | Type 12 ² | 72E Connectivity Module | |
| | | | | H | 380 | | | M | Type 3R Secure | 73A Surge Suppressor | |
| | | | | J | 400 | | | N | Type 4 Secure | | |
| | | | | K | 415 | | | P | Type 4X ⁶ Secure Double Door SS | | |
| | | | | L | 440 | | | R | Type 3RX ^{7,8} Secure Double Door SS | | |
| | | | | M | 460 | | | | | | |

- Notes:**
1. Specify neutral code "C" for 250 and 400 amperes only.
 2. Available 70-1000 ampacity. Use Type 3R for 1200-3000 amp applications.
 3. 115-120 volt available 150-400 amps only.
 4. A solid neutral is standard on 3AUS.
 5. For switch sizes 70 - 225 amperes only.
 6. 200, 225 amp rated switch suitable for use with copper cable only.
 7. Type 316 Stainless Steel is standard. It provides an improved reduction in corrosion of salt and some chemicals. It is the preferred choice for marine environments.
 8. Available only on switches rated 1200, 2000, 2600, and 3000 Amps.

ASCO® SERIES 300SE Transfer Switch Dimensions and Shipping Weights

UL Type 1 Enclosure⁴

| Switch Rating Amps | Phase Poles | Neutral Code | Dimensions, In. (mm) | | | Approx. Shipping Weight Lb. (kg) |
|---------------------------------------|-------------|--------------|----------------------|-------------|-------------|----------------------------------|
| | | | Width | Height | Depth | |
| 70, 100, 150, 200, 225 | 2 | STD | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 400 (185) |
| | 2 | B | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 408 (188) |
| | 3 | STD | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 408 (188) |
| | 3 | B | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 416 (192) |
| 250, 400 | 2 | STD | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 400 (185) |
| | 2 | C | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 408 (188) |
| | 3 | STD | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 408 (188) |
| | 3 | C | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 416 (192) |
| 600 ¹ , 800 ¹ | 2 | STD | 38 (965) | 91 (2311) | 28 (711) | 800 (370) |
| | 2 | B | 38 (965) | 91 (2311) | 28 (711) | 820 (378) |
| | 3 | STD | 38 (965) | 91 (2311) | 28 (711) | 820 (378) |
| | 3 | B | 38 (965) | 91 (2311) | 28 (711) | 846 (390) |
| 1000 ¹ , 1200 ¹ | 2 | STD | 38 (965) | 91 (2311) | 48 (1218) | 1085 (501) |
| | 2 | B | 38 (965) | 91 (2311) | 48 (1218) | 1105 (510) |
| | 3 | STD | 38 (965) | 91 (2311) | 48 (1218) | 1105 (510) |
| | 3 | B | 38 (965) | 91 (2311) | 48 (1218) | 1134 (523) |
| 1600 ¹ , 2000 ¹ | 3 | STD | 38 (965) | 91 (2311) | 48 (1218) | 2590 (1198) |
| | 3 | B | 38 (965) | 91 (2311) | 48 (1218) | 2640 (1218) |
| 2500 ¹ , 3000 ¹ | 3 | STD | 38 (965) | 91 (2311) | 72 (1829) | 4590 (2118) |
| | 3 | B | 38 (965) | 91 (2311) | 72 (1829) | 4655 (2148) |

UL Type 3R Enclosure⁴

| Switch Rating Amps | Phase Poles | Neutral Code | Dimensions, In. (mm) | | | Approx. Shipping Weight Lb. (kg) |
|--|-------------|--------------|----------------------|------------|----------|----------------------------------|
| | | | Width | Height | Depth | |
| 70, 100, 150, 200, 225 must specify | 2 | STD | 36(914) | 48(1219) | 16 (406) | 180 (83) |
| | 2 | B | 36(914) | 48(1219) | 16 (406) | 188 (87) |
| | 3 | STD | 36(914) | 48(1219) | 16 (406) | 188 (87) |
| | 3 | B | 36(914) | 48(1219) | 16 (406) | 196 (90) |
| 250, 400 | 2 | STD | 36(914) | 48(1219) | 16 (406) | 440 (203) |
| | 2 | C | 36(914) | 48(1219) | 16 (406) | 448 (207) |
| | 3 | STD | 36(914) | 48(1219) | 16 (406) | 448 (207) |
| | 3 | C | 36(914) | 48(1219) | 16 (406) | 485 (225) |
| 600 ¹ , 800 ¹ | 2 | STD | 41(1041) | 95.5(2426) | 34(864) | 990 (458) |
| | 2 | B | 41(1041) | 95.5(2426) | 34(864) | 1010 (467) |
| | 3 | STD | 41(1041) | 95.5(2426) | 34(864) | 1010 (467) |
| | 3 | B | 41(1041) | 95.5(2426) | 34(864) | 1036 (479) |
| 1000 ¹ , 1200 ¹ | 2 | STD | 41(1041) | 95.5(2426) | 62(1575) | 1305 (604) |
| | 2 | B | 41(1041) | 95.5(2426) | 62(1575) | 1325 (613) |
| | 3 | STD | 41(1041) | 95.5(2426) | 62(1575) | 1325 (613) |
| | 3 | B | 41(1041) | 95.5(2426) | 62(1575) | 1354 (626) |
| 1600 ¹ , 2000 ¹ | 3 | STD | 41(1041) | 95.5(2426) | 62(1575) | 2890 (1337) |
| | 3 | B | 41(1041) | 95.5(2426) | 62(1575) | 2940 (1360) |
| 2500 ¹ , 3000 ¹ | 3 | STD | 41(1041) | 96(2438) | 85(2159) | 5350 (2474) |
| | 3 | B | 41(1041) | 96(2438) | 85(2159) | 5415 (2504) |

- Notes:** 1. Unit is designed for top and bottom cable entry for all services and load.
 2. Enclosures for 600 – 3000 amps are freestanding.
 3. When temperatures below 32° F can be experienced, special precautions should be taken, such as the inclusion of strip heaters, to prevent condensation and freezing of this condensation. This is

- particularly important when environmental enclosures (Type 3R, 4 & 12) are ordered for installation outdoors. See Optional Accessories page for space heater options (acc. 44G).
 4. Dimensional data is approximate and subject to change. Certified dimensions available upon request.

Extended Warranties for SERIES 300SE Transfer Switches

| Catalog No. | Description |
|-------------|--|
| 2EXW300SE | Two-Year Extended Warranty (Parts & Labor) |
| 3EXW300SE | Three-Year Extended Warranty (Parts & Labor) |
| 4EXW300SE | Four-Year Extended Warranty (Parts & Labor) |
| 5EXW300SE | Five-Year Extended Warranty (Parts & Labor) |

SERIES 300SE AIC Rating

| Switch Rating | AIC Rating | Voltage |
|-----------------------------|------------|---------|
| 70, 100, 150, 200, 225 | 25,000 | 480 |
| 250, 400 | 35,000 | 480 |
| 600 | 50,000 | 480 |
| 800, 1000, 1200, 1600, 2000 | 65,000 | 480 |
| 2500, 3000 | 100,000 | 480 |

SERIES 300SE External Power Connections Sizes UL-Listed Solderless Screw-Type Terminals

| Switch Rating | Ranges of AL-CU Wire Sizes (Unless Specified Copper Only) |
|---|---|
| 70, 100, 150, 200 [*] , 225 [*] | One #14 to 4/0 AWG |
| 250, 400 | Two 1/0 AWG to 250 MCM or One #4 AWG to 600 MCM |
| 600 | Two 1/0 AWG to 600 MCM |
| 800, 1000, 1200 | Four 1/0 to 600 MCM |
| 1600, 2000 | Six 1/0 to 600 MCM |
| 2500 | Twelve 3/0 to 600 MCM |
| 3000 | Twelve 3/0 to 600 MCM |

- Note:** All SERIES 300SE switches are furnished with a solid neutral plate (unless switched neutral configuration is specified) and terminal lugs.
^{*} 200 and 225 amp rated switch for use with copper cable only.

SD060

4.5L

Industrial Diesel Generator Set

EPA Certified Stationary Emergency

Standby Power Rating
60 kW 75 kVA 60 Hz

Prime Power Rating*
54 kW 68 kVA 60 Hz

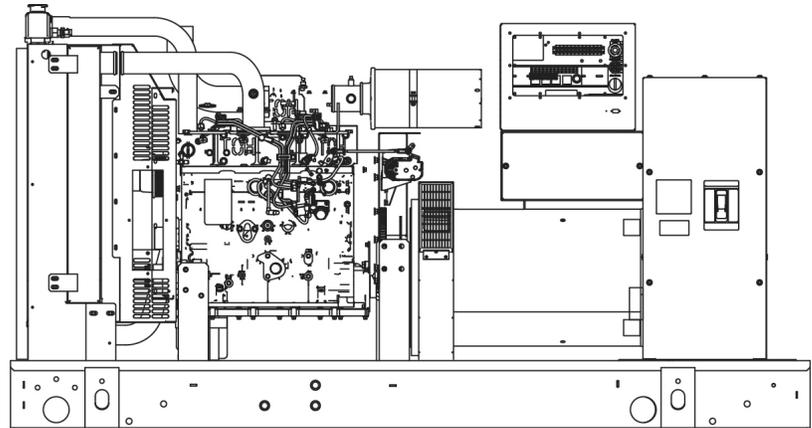


Image used for illustration purposes only

*EPA Certified Prime ratings are not available in the U.S. or its Territories

Codes and Standards

Generac products are designed to the following standards:



UL2200, UL508, UL142, UL498



NFPA70, 99, 110, 37



NEC700, 701, 702, 708



ISO9001, 8528, 3046, 7637, Pluses #2b, 4



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41

American National Standards Institute



IBC 2009, CBC 2010, IBC 2012, ASCE 7-05,
ASCE 7-10, ICC-ES AC-156 (2012)

Powering Ahead

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SD060

Standard Features

ENGINE SYSTEM

General

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel flexible exhaust connection
- Critical Exhaust Silencer (enclosed only)
- Factory Filled Oil
- Radiator Duct Adapter (open set only)

Fuel System

- Fuel lockoff solenoid
- Primary fuel filter

Cooling System

- Closed Coolant Recovery System
- UV/Ozone resistant hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene glycol antifreeze
- 120 VAC Coolant Heater

Engine Electrical System

- Battery charging alternator
- Battery cables
- Battery tray
- Solenoid activated starter motor
- Rubber-booted engine electrical connections

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- 12 leads (3-phase, non 600 V)
- Class H insulation material
- Vented rotor
- 2/3 pitch
- Skewed stator
- Auxiliary voltage regulator power winding
- Amortisseur winding
- Brushless Excitation
- Sealed Bearings
- Automated manufacturing (winding, insertion, lacing, varnishing)
- Rotor dynamically spin balanced (get tolerance)
- Full load capacity alternator
- Protective thermal switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of circuits - high/low voltage
- Separation of circuits - multiple breakers
- Silencer Heat Shield
- Wrapped Exhaust Piping
- Silencer housed in discharge hood (enclosed only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby rated Units)
- 1 Year Limited Warranty (Prime rated units)
- Silencer mounted in the discharge hood (enclosed only)

ENCLOSURE (if selected)

- Rust-proof fasteners with nylon washers to protect finish
- High performance sound-absorbing material
- Gasketed doors
- Stamped air-intake louvers
- Air discharge hoods for radiator-upward pointing
- Stainless steel lift off door hinges
- Stainless steel lockable handles
- Rhino Coat™ - Textured polyester powder coat

TANKS (if selected)

- UL 142
- Double wall
- Vents
- Sloped top
- Sloped bottom
- Factory pressure tested (2 psi)
- Rupture basin alarm
- Fuel level
- Check valve in supply and return lines
- Rhino Coat™ - Textured polyester powder coat
- Stainless hardware

CONTROL SYSTEM



Control Panel

- Digital H Control Panel - Dual 4x20 Display
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable PLC
- RS-232/485
- All-Phase Sensing DVR
- Full System Status
- Utility Monitoring
- Low Fuel Pressure Indication
- 2-Wire Start Compatible
- Power Output (kW)
- Power Factor
- kW Hours, Total & Last Run

- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance algorithm
- Sealed Boards
- Password parameter adjustment protection
- Single point ground

- 15 channel data logging
- 0.2 msec high speed data logging
- Alarm information automatically comes up on the display

Alarms

- Oil Pressure (Pre-programmable Low Pressure Shutdown)
- Coolant Temperature (Pre-programmed High Temp Shutdown)
- Coolant Level (Pre-programmed Low Level Shutdown)
- Low Fuel Pressure Alarm
- Engine Speed (Pre-programmed Over speed Shutdown)
- Battery Voltage Warning
- Alarms & warnings time and date stamped
- Alarms & warnings for transient and steady state conditions
- Snap shots of key operation parameters during alarms & warnings
- Alarms and warnings spelled out (no alarm codes)

SD060

Configurable Options

ENGINE SYSTEM

- General
- Oil Make-Up System
 - Oil Heater
 - Industrial Exhaust Silencer

Fuel System

- Flexible fuel lines
- Primary fuel filter

Engine Electrical System

- 10A UL battery charger
- 2.5A UL battery charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical coating
- Permanent Magnet Excitation

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

GENERATOR SET

- Gen-Link Communications Software (English Only)
- IBC Seismic Certification
- 8 Load Position Load Center
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty

ENCLOSURE

- Weather Protected
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- 150 MPH Wind Kit
- 12 VDC Enclosure Lighting Kit
- 120 VAC Enclosure Lighting Kit
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch

TANKS (Size on last page)

- Electrical Fuel Level
- Mechanical Fuel Level
- 8" Vent Extension
- 13" Vent Extension
- 19" Vent Extension

CONTROL SYSTEM

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> 21-Light Remote Annunciator <input type="checkbox"/> Remote Relay Panel (8 or 16) <input type="checkbox"/> Oil Temperature Sender with Indication Alarm <input type="checkbox"/> Remote E-Stop (Break Glass-Type, Surface Mount) | <ul style="list-style-type: none"> <input type="checkbox"/> Remote E-Stop (Red Mushroom-Type, Surface Mount) <input type="checkbox"/> Remote E-Stop (Red Mushroom-Type, Flush Mount) <input type="checkbox"/> Remote Communication - Modem | <ul style="list-style-type: none"> <input type="checkbox"/> Remote Communication - Ethernet <input type="checkbox"/> 10A Run Relay <input type="checkbox"/> Ground fault indication and protection functions |
|--|---|---|

Engineered Options

ENGINE SYSTEM

- Coolant heater ball valves
- Block Heaters
- Fluid containment pans

ALTERNATOR SYSTEM

- 3rd Breaker System

GENERATOR SET

- Special Testing

ENCLOSURE

- Motorized Dampers
- Door switched for intrusion alert
- Enclosure ambient heaters

TANKS

- Overfill protection valve
- UL2085 Tank
- ULC S-601 Tank
- Stainless Steel Tank
- Special Fuel Tanks (MIDEQ and FL DEP/DERM, etc.)
- Vent Extensions

Rating Definitions

Standby – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications.

Power ratings in accordance with ISO 8528-1, Second Edition dated 2005-06-01, definitions for Prime Power (PRP) and Emergency Standby Power (ESP).

SD060

application and engineering data

ENGINE SPECIFICATIONS

General

| | |
|--------------------------|--------------------------|
| Make | Generac |
| EPA Emissions Compliance | Stationary Emergency |
| EPA Emissions Reference | See Emissions Data Sheet |
| Cylinder # | 4 |
| Type | In-Line |
| Displacement - L (cu in) | 4.5 (274.6) |
| Bore - mm (in) | 105 (4.1) |
| Stroke - mm (in) | 132 (5.2) |
| Compression Ratio | 17.5:1 |
| Intake Air Method | Turbocharged |
| Cylinder Head Type | 2 Valve |
| Piston Type | Aluminum |
| Crankshaft Type | Forged Steel |

Engine Governing

| | |
|-------------------------------------|------------------------|
| Governor | Electronic Isochronous |
| Frequency Regulation (Steady State) | ± 0.25% |

Lubrication System

| | |
|------------------------------|-------------|
| Oil Pump Type | Gear |
| Oil Filter Type | Full Flow |
| Crankcase Capacity - L (qts) | 13.6 (14.4) |

Cooling System

| | |
|---------------------------------|-------------------------|
| Cooling System Type | Closed |
| Water Pump Flow | Belt Driven Centrifugal |
| Fan Type | Pusher |
| Fan Speed (rpm) | 2538 |
| Fan Diameter mm (in) | 660.4 (26) |
| Coolant Heater Wattage | 1500 |
| Coolant Heater Standard Voltage | 120 V /240 V |

Fuel System

| | |
|----------------------------|------------------------------|
| Fuel Type | Ultra Low Sulfur Diesel Fuel |
| Fuel Specifications | ASTM |
| Fuel Filtering (microns) | 5 |
| Fuel Inject Pump | Stanadyne |
| Fuel Pump Type | Engine Driven Gear |
| Injector Type | Mechanical |
| Fuel Supply Line - mm (in) | 12.7 (0.5) NPT |
| Fuel Return Line - mm (in) | 12.7 (0.5) NPT |

Engine Electrical System

| | |
|-----------------------------|------------------------------|
| System Voltage | 12 VDC |
| Battery Charging Alternator | 20 A |
| Battery Size | See Battery Index 0161970SBY |
| Battery Voltage | 12 VDC |
| Ground Polarity | Negative |

ALTERNATOR SPECIFICATIONS

| | |
|-------------------------------------|------------------------|
| Standard Model | 390 |
| Poles | 4 |
| Field Type | Revolving |
| Insulation Class - Rotor | H |
| Insulation Class - Stator | H |
| Total Harmonic Distortion | < 3% |
| Telephone Interference Factor (TIF) | < 50 |
| Standard Excitation | Synchronous Brushless |
| Bearings | One-Pre Lubed & Sealed |
| Coupling | Direct, Flexible Disc |
| Load Capacity - Standby | 100% |
| Prototype Short Circuit Test | Yes |

| | |
|------------------------------------|---------|
| Voltage Regulator Type | Digital |
| Number of Sensed Phases | 3 |
| Regulation Accuracy (Steady State) | ± 0.25% |

SD060

operating data

POWER RATINGS

| | Standby | |
|---------------------------------|---------|-----------|
| Single-Phase 120/240 VAC @1.0pf | 60 kW | Amps: 250 |
| Three-Phase 120/208 VAC @0.8pf | 60 kW | Amps: 208 |
| Three-Phase 120/240 VAC @0.8pf | 60 kW | Amps: 180 |
| Three-Phase 277/480 VAC @0.8pf | 60 kW | Amps: 90 |
| Three-Phase 346/600 VAC @0.8pf | 60 kW | Amps: 72 |

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

| Alternator | kW | 480 VAC | | | | | | 208/240 VAC | | | | | |
|------------|-----|---------|-----|-----|-----|-----|-----|-------------|-----|-----|-----|-----|-----|
| | | 10% | 15% | 20% | 25% | 30% | 35% | 10% | 15% | 20% | 25% | 30% | 35% |
| Standard | 60 | 42 | 63 | 83 | 104 | 125 | 146 | 32 | 47 | 62 | 78 | 94 | 110 |
| Upsize 1 | 80 | 59 | 88 | 117 | 147 | 176 | 205 | 44 | 66 | 88 | 110 | 132 | 154 |
| Upsize 2 | 100 | 79 | 118 | 157 | 197 | 236 | 200 | 59 | 89 | 118 | 148 | 177 | 206 |

FUEL CONSUMPTION RATES*

| Fuel Pump Lift - ft (m) | | Diesel - gph (lph) | |
|--|--|--------------------|------------|
| 3 (1) | | Percent Load | gph (lph) |
| Total Fuel Pump Flow (Combustion + Return) | | 25% | 1.4 (5.3) |
| 13.6 gph | | 50% | 2.7 (10.2) |
| | | 75% | 3.8 (14.4) |
| | | 100% | 4.8 (18.2) |

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

| | Standby | |
|--|--------------------------|--------------|
| Coolant Flow per Minute | gpm (lpm) | 32.7 (123.8) |
| Coolant System Capacity | gal (L) | 4.5 (17.44) |
| Heat Rejection to Coolant | BTU/hr | 123,000 |
| Inlet Air | cfm (m ³ /hr) | 6360 (180) |
| Max. Operating Radiator Air Temp | F° (C°) | 122 (50) |
| Max. Ambient Temperature (before derate) | F° (C°) | 104 (40) |
| Maximum Radiator Backpressure | in H ₂ O | 0.5 |

COMBUSTION AIR REQUIREMENTS

| | Standby |
|---------------------|---------------------------|
| Flow at Rated Power | cfm (m ³ /min) |
| | 247 (7.0) |

ENGINE

| | Standby | |
|--------------------------|----------------|------------|
| Rated Engine Speed | rpm | 1800 |
| Horsepower at Rated kW** | hp | 93 |
| Piston Speed | ft/min (m/min) | 1559 (475) |
| BMEP | psi | 154 |

EXHAUST

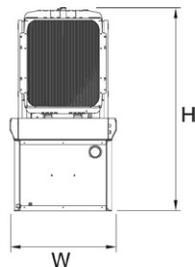
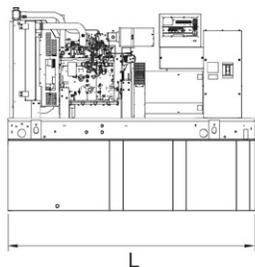
| | Standby | |
|-----------------------------------|---------------------------|-------------|
| Exhaust Flow (Rated Output) | cfm (m ³ /min) | 534 (15.1) |
| Max. Backpressure (Post Silencer) | inHg (Kpa) | 1.5 (5.1) |
| Exhaust Temp (Rated Output) | °F (°C) | 930 (498.8) |
| Exhaust Outlet Size (Open Set) | mm (in) | 76.2 (3.0) |

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

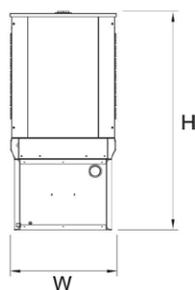
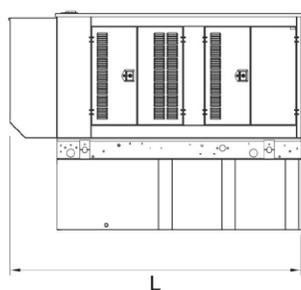
SD060

dimensions and weights*



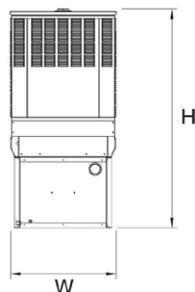
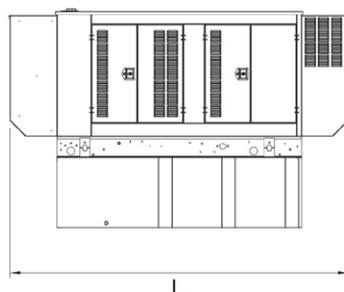
OPEN SET

| RUN TIME HOURS | USABLE CAPACITY GAL (L) | L x W x H in (mm) | WT lbs (kg) - Tank & Open Set |
|----------------|-------------------------|--|-------------------------------|
| NO TANK | - | 93 (2362.2) x 40 (1016) x 49 (1244.6) | 2425 (1100) |
| 16 | 79 (299) | 93 (2362.2) x 40 (1016) x 62 (1574.8) | 2947 (1201) |
| 39 | 189 (715.4) | 93 (2362.2) x 40 (1016) x 74 (1879.6) | 3183 (1444) |
| 63 | 300 (1135.6) | 93 (2362.2) x 40 (1016) x 86 (2184.4) | 3407 (1545) |
| 73 | 350 (1325) | 110 (2794) x 40 (1016) x 86 (2184.4) | NA |
| 106 | 510 (1930.5) | 117 (2971.8) x 47 (1193.8) x 86 (2184.4) | 3790 (1719) |
| 123 | 589 (2229.6) | 128 (3251.2) x 49 (1244.6) x 86 (2184.4) | 4269 (1936) |



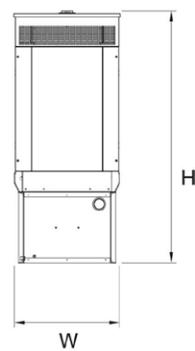
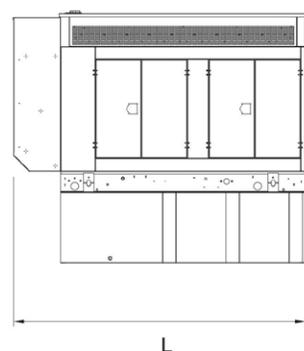
STANDARD ENCLOSURE

| RUN TIME HOURS | USABLE CAPACITY GAL (L) | L x W x H in (mm) | WT lbs (kg) - Enclosure Only | |
|----------------|-------------------------|--|------------------------------|----------|
| | | | Steel | Aluminum |
| NO TANK | - | 112 (2844.8) x 41 (1041.4) x 56 (1422.4) | 425 (193) | 155 (70) |
| 16 | 79 (299) | 112 (2844.8) x 41 (1041.4) x 69 (1752.6) | | |
| 39 | 189 (715.4) | 112 (2844.8) x 41 (1041.4) x 81 (2057.4) | | |
| 63 | 300 (1135.6) | 112 (2844.8) x 41 (1041.4) x 93 (2362.2) | | |
| 73 | 350 (1325) | 112 (2844.8) x 41 (1041.4) x 93 (2362.2) | | |
| 106 | 510 (1930.5) | 117 (2971.8) x 47 (1193.8) x 93 (2362.2) | | |
| 123 | 589 (2229.6) | 128 (3251.2) x 49 (1244.6) x 93 (2362.2) | | |



LEVEL 1 ACOUSTIC ENCLOSURE

| RUN TIME HOURS | USABLE CAPACITY GAL (L) | L x W x H in (mm) | WT lbs (kg) - Enclosure Only | |
|----------------|-------------------------|--|------------------------------|-----------|
| | | | Steel | Aluminum |
| NO TANK | - | 130 (3302) x 41 (1041.4) x 56 (1422.4) | 450 (204) | 285 (129) |
| 16 | 79 (299) | 130 (3302) x 41 (1041.4) x 69 (1752.6) | | |
| 39 | 189 (715.4) | 130 (3302) x 41 (1041.4) x 81 (2057.4) | | |
| 63 | 300 (1135.6) | 130 (3302) x 41 (1041.4) x 93 (2362.2) | | |
| 73 | 350 (1325) | 130 (3302) x 41 (1041.4) x 93 (2362.2) | | |
| 106 | 510 (1930.5) | 130 (3302) x 47 (1193.8) x 93 (2362.2) | | |
| 123 | 589 (2229.6) | 130 (3302) x 49 (1244.6) x 93 (2362.2) | | |



LEVEL 2 ACOUSTIC ENCLOSURE

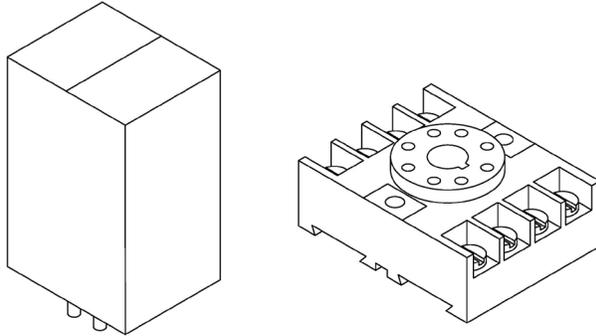
| RUN TIME HOURS | USABLE CAPACITY GAL (L) | L x W x H in (mm) | WT lbs (kg) - Enclosure Only | |
|----------------|-------------------------|---|------------------------------|-----------|
| | | | Steel | Aluminum |
| NO TANK | - | 112 (2844.8) x 41 (1041.4) x 69 (1752.6) | 625 (284) | 395 (180) |
| 16 | 79 (299) | 112 (2844.8) x 41 (1041.4) x 82 (2082.8) | | |
| 39 | 189 (715.4) | 112 (2844.8) x 41 (1041.4) x 94 (2387.6) | | |
| 63 | 300 (1135.6) | 112 (2844.8) x 41 (1041.4) x 106 (2692.4) | | |
| 73 | 350 (1325) | 112 (2844.8) x 41 (1041.4) x 106 (2692.4) | | |
| 106 | 510 (1930.5) | 117 (2971.8) x 47 (1193.8) x 106 (2692.4) | | |
| 123 | 589 (2229.6) | 128 (3251.2) x 49 (1244.6) x 106 (2692.4) | | |

*All measurements are approximate and for estimation purposes only. Sound dBA can be found on the sound data sheet. Enclosure Only weight is added to Tank & Open Set weight to determine total weight.

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

Engine Run Relay

Accessories



- For use with Generac PMDCP, H-100, E panel or C panel control systems
- 10 Amp Contact Rating
- 12 or 24 Volt DC input
- Contact open or closure on engine run

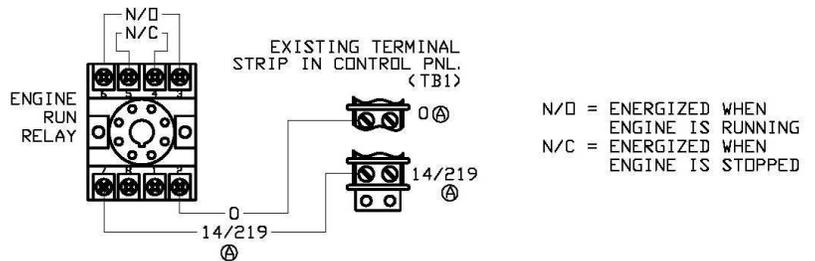
Contacts

| | |
|----------|--------------|
| Type | DPDT |
| Material | Silver |
| Rating | UL |
| | 10A @ 240VAC |
| | 10A @ 30VDC |

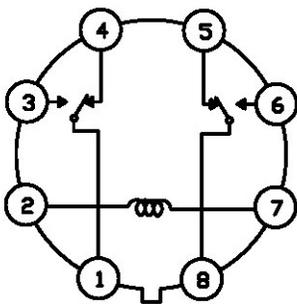
Coils

| | |
|---------------|----------|
| Input Voltage | 24VDC |
| Resistance | 400 Ohms |
| Nominal Power | 1.5 W |

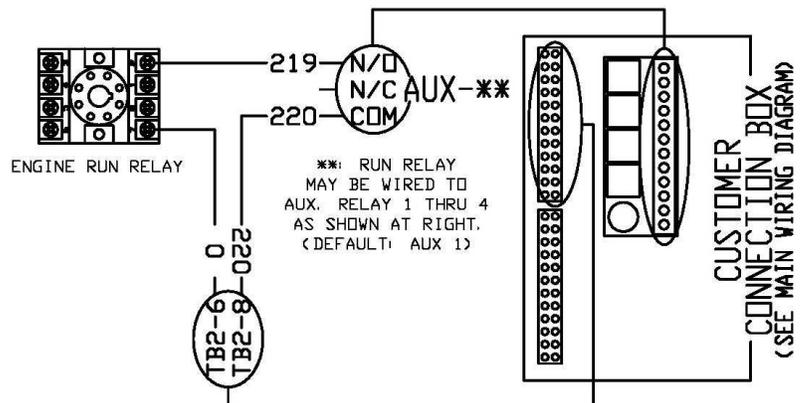
Wiring Diagram, Engine Run Relay with C panel, E panel, H-100 Panel



PIN DETAIL



Wiring Diagram, Engine Run Relay with PMDCP



H-100 Control Panel

Controls



DESCRIPTION

- Digital controls for all safety shutdowns
- Isochronous governor control
- Digital 3 ϕ sensing voltage regulator
- Sealed Digital Circuit Board
- 2 Amp static battery charger
- Mates with HTS transfer switch and any 2-wire start ATS
- Alarm and event logging
- Built-in diagnostics
- Internal PLC
- Optional modem with dialout

STANDARD FEATURES

The Quiet-Test™ H-100 Control Panel is a digital microprocessor electronic controller that integrates all engine and transfer switch functions into a single control system.

- Two 4 line x 20 displays
- Full system status
- 3 phase sensing digital voltage regulator
- Remote ports
 - RS232
 - RS485
 - Canbus
- Water proof connections
- All engine sensors are 4-20 ma for minimal interference
- Built in PLC

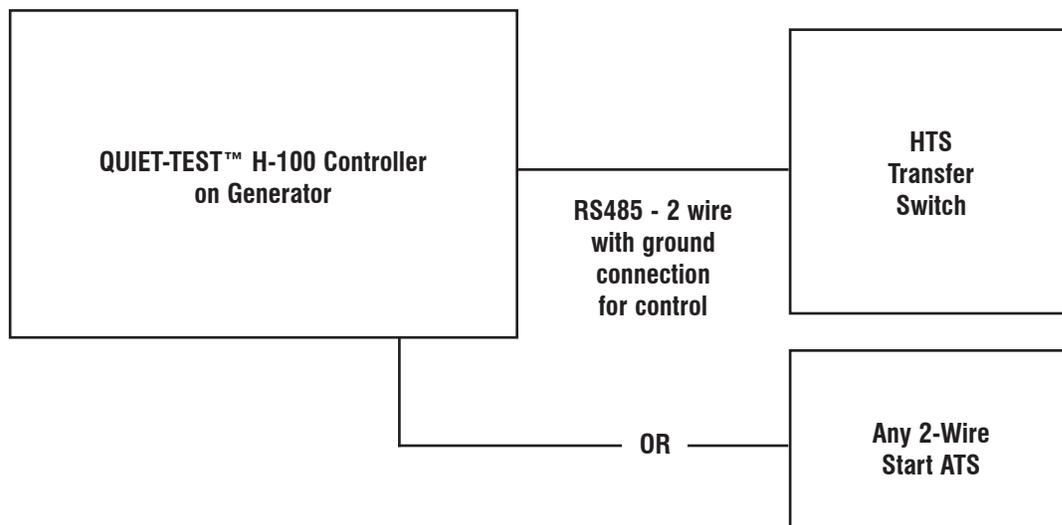
In addition, the generator set parameters can be manipulated and monitored without standing in front of the control panel with GenLink® software. The Generac H-100 control also monitors and controls transfer switch functions when used with the HTS Transfer Switch.

- Monitors utility voltage
- Monitors generator voltage
- Timer for line interrupt delay
- Timer for engine warmup
- Timer for minimum engine run time
- Timer for return to utility position
- Timer for engine cooldown
- Built in exerciser timer (7 day)
- Additional 2 wire start controls for any 2 wire transfer switch.

H-100 Control Panel

- Full range stand-by operation
- Full system status
 - 3 phase AC volts
 - 3 phase amps
 - kW
 - Power factor
 - Reactive power
 - Oil pressure
 - Water temperature
 - Water level
 - Oil temperature (optional)
 - Fuel pressure
 - Engine speed
 - Battery voltage
 - Alternator frequency
 - Time
 - Date
 - Transfer switch status
 - Run hours
 - Service reminders
 - Trending
 - Fault history (alarm log)
 - I²t function for full generator protection
 - Built in PLC for special applications
- Shutdowns
 - Overvoltage
 - Overspeed
 - Low oil pressure
 - High coolant temperature
 - Low coolant level
- Remote communication
 - RS232
 - Optional modem
 - Canbus
- Configurable to NFPA 110, level 1 or 2
- Programmable auto crank
- Emergency Stop
- On Off Manual Switch
- Not in Auto flashing light
- Audible alarm for fault condition
- Transfer switch logic communicates with HTS transfer switch
- Weekly exerciser (programmable)
- Selectable Low speed exercise
- Digital voltage regulator with 3 phase sensing (3 phase units)
- Isochronous governor
- Waterproof electrical connectors
- Temperature Range -40° to 70° C

TYPICAL CONTROL CONNECTION



21 Light Remote Annunciator and Remote Relay Panels

Accessories

- Model 0054650 Gray Remote Annunciator Panel without Relays
- Model 0054660 Gray Remote Relay Panel without LED's and Keypad (Relays Only)
- Model 0054640 Gray Remote Annunciator Panel with 8 Relays
- Model 0056370 Tan Flush Mount Enclosure w/o Annunciator
- Model 0066950 Gray Flush Mount Enclosure w/o Annunciator



Description:

The remote Annunciator Panel provides remote monitoring and annunciation of up to 18 generator parameters using LED's located on the annunciator keypad. It also provides two system level warnings which are System Ready and Communications OK.

The Relay panel has up to 8 selectable functions on form A relays, and multiple relay panels can be connected for all 18 generator parameters.

The specific faults can be selected using either the DIP switches located on the annunciator circuit board or through a computer via the RS232 connection on the circuit board. All relays are energized on power up and open during a fault condition.

Communication is via a RS485 serial data link and power is supplied by the generator battery (+12 VDC or +24 VDC)

The remote Annunciator Panel complies with NFPA 99 and NFPA 110.

Environmental Specifications:

| | |
|---|--|
| Operating Temperature | -25 °C to 60 °C |
| Humidity | 0 to 95% Non Condensing |
| Power Supply | Generator Battery, +12 or +24 Volts DC |
| Power Usage..... | 6 watts typical |
| Communication Line | RS485 fully isolated twisted pair cable with shield |
| Maximum Cable Length..... | 4000 feet |
| Relay Output | One NO contact (Energized when annunciator is powered and no faults are present) |
| Relay Contact Rating | 30 VDC, 1 amp |
| Enclosure Rating | NEMA 1 |
| Alarm Horn (Remote Annunciator Panels Only) | 90 dB @ 10 cm |

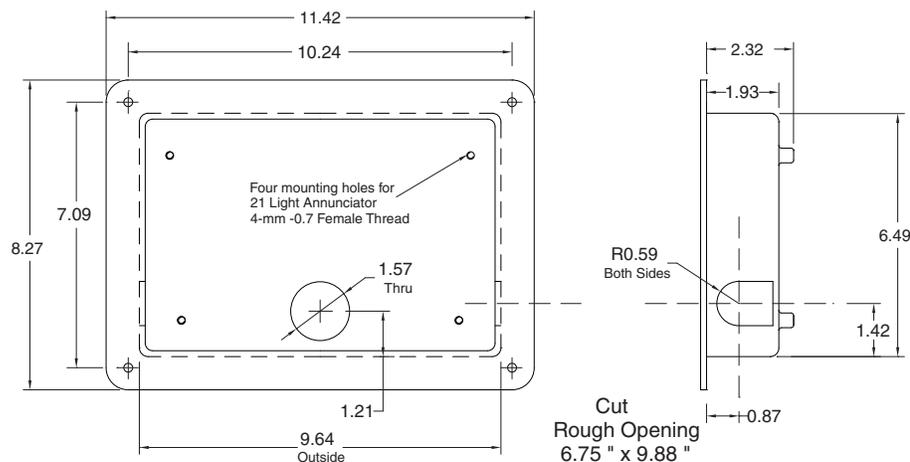
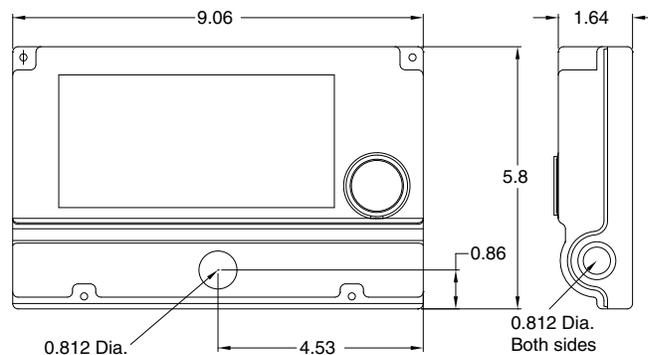
21 Light Remote Annunciator and Remote Relay Panels

| Function | Color | Alarm | Latched |
|----------------------|--------|-------|---------|
| Pre-low Oil Pressure | Yellow | Yes | Yes |
| Pre- High Water Temp | Yellow | Yes | Yes |
| Pre Low Water Temp | Yellow | Yes | Yes |
| Pre- Low Fuel | Yellow | Yes | Yes |
| Battery Chrg AC Fail | Yellow | Yes | No |
| Low Battery Voltage | Yellow | Yes | No |
| High Battery Voltage | Yellow | No | No |
| Not in Auto | Red | Yes | No |
| RPM Sensor Loss | Red | Yes | Yes |
| Overcrank | Red | Yes | Yes |
| Over speed | Red | Yes | Yes |
| Low Oil Pressure | Red | Yes | Yes |
| Hi Water Temp | Red | Yes | Yes |
| Lo Water Level | Red | Yes | Yes |
| Emergency Stop | Red | Yes | No |
| Gen Running | Yellow | No | No |
| Gen Power (ATS) | Yellow | No | No |
| Line Power (ATS) | Green | No | No |
| Systems Ready | Green | Yes | No |
| Communications OK | Green | Yes | No |
| Spare | Green | No | No |

Spare Keypad Switch - Can be used to implement a remote start function. (Model 005464 only)

Surface Mount Annunciator

The 21 Light Annunciator can mount to a flat surface with connections through the 0.812 Dia knockout on the back surface or through 0.812 knockouts on sides as shown.



Flush Mount Annunciator

This Flush Mount Box is recessed into the wall opening and the surface mount annunciator mounts to the (4) 4 mm screw holes on the back surface. After wire connections are made the front annunciator cover is attached.

ALTERNATOR DATA

60kW ALTERNATOR 60 Hz

Alternator Ratings (Series Wye Testing)

| | | |
|-------------------------------|---------------|---------|
| kW | 60 | |
| kVA | 75 | |
| Type | Brushless/PMG | |
| Connections | 12 Lead | |
| Efficiency @ 1.0 Power Factor | 208/240 | 480/600 |
| 20% Load | 87.7 | 89 |
| 40% Load | 87.8 | 89.1 |
| 60% Load | 88.1 | 89.4 |
| 80% Load | 88.4 | 89.7 |
| 100% Load | 88.6 | 89.9 |
| 100% @ 0.8 PF | 88.1 | 89.4 |

Machine Parameters Continued

| | |
|----------------------------|---------------|
| Waveform Distortion | <5% |
| Telephone Influence Factor | <50 |
| Synchronous Speed | 1800 rpm |
| Maximum Overspeed | 3300 rpm |
| Number of Bearings | 1 Sealed Ball |
| Insulation System | Class H |
| Excitation System | Class H |

Temperature Rise vs Output (0.8 pf)

| kW Rating | Temp Rise ° C | Temperature Rise is based |
|-----------|---------------|---------------------------|
| 49 | 80 ° | 40° C Ambient |
| 54 | 105 ° | |
| 60 | 120 ° | |

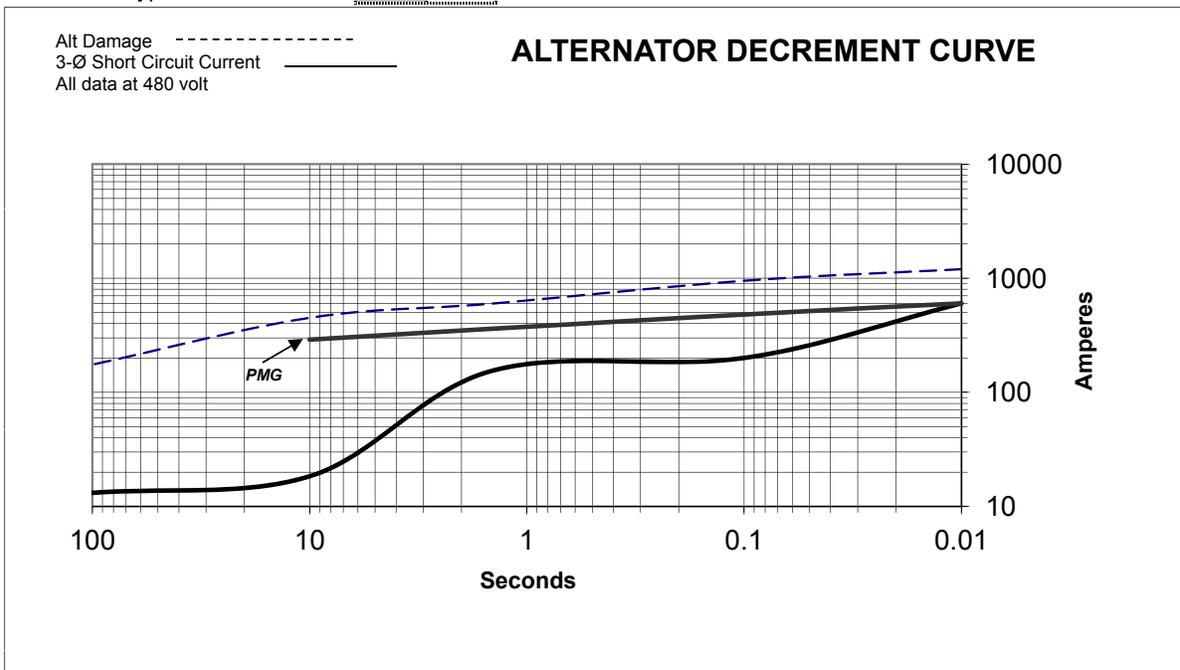
Machine Parameters @ Max kW Ratings

| | |
|-------------------------------|------|
| Subtransient Reactance p.u. | 0.15 |
| Transient Reactance | 0.23 |
| Synchronous Reactance | 3.85 |
| Negative Sequence Reactance | 0.3 |
| Zero Sequence Reactance | 0.11 |
| Short Circuit Ratio | 0.33 |
| Excitation Voltage | 190 |
| Excitation Current @ Rated kW | 4.2A |
| Lamination Type | 390 |

Instantaneous Voltage Dip

| Voltage | 10% | 15% | 20% | 25% | 30% | 35% |
|----------|-----|-----|-----|-----|-----|-----|
| 208, 240 | 32 | 47 | 62 | 78 | 94 | 110 |
| 480 | 42 | 63 | 83 | 104 | 125 | 146 |
| 600 | | | | | | |

Options - - - - - Antifungal Coating
Alternator Heater



GENprotect™

Seamless protection for industrial power generators.

GENprotect Operation

The design choice of an onsite power system using a Generac Industrial Power Generator assures your emergency power source is protected from unexpected power distribution faults. Typically, a generator will include some type of over-current device, such as a circuit breaker, or be protected by inherent design with the controller protecting the alternator through a protection algorithm. Generac's GENprotect generator protection system monitors the system current output and protects the alternator with extended security against fault scenarios that could occur within the site's downstream distribution system.

It is a common misconception that the alternator's main circuit breaker protects the alternator from a short circuit event. The main output breaker protects the cabling and provides a convenient disconnect. The characteristic trip curve for the industry standard thermal magnetic breaker (MCCB, molded case thermal magnetic or solid state) does not coordinate with the thermal damage limitation for an on-site generator. If circuit breakers are used for generator protection, a solid-state circuit breaker with full adjustments (Long Time, Short Time and Instantaneous, LSI) is required to coordinate the breaker protection curve within the generator thermal damage curve. Historically, this limitation was often accepted in system design since failures of the main generator feeder are extremely rare. Most short circuit events happen at a branch circuit, equipment level, where the fault is easily cleared by the smaller down stream breakers.

Given the mission critical nature of today's back-up power applications, it is more desirable to protect the system against even relatively rare failure modes. As generator controllers have become more powerful it is feasible for manufactures to supply coordinated short circuit protection integral to the generator control system, negating the need for a main-line circuit breaker.

Generac's GENprotect alternator protection algorithm monitors the generator output. If this monitoring senses short circuit current in excess of rated amps, GENprotect steps in to provide a controlled and safe approach to breaker coordination and alternator protection. GENprotect first limits the alternator short circuit current level to 300%. By limiting the available fault current, GENprotect extends the time the alternator can maintain fault current resulting in consistent breaker coordination. Without this functionality a line to neutral fault may be at 800% of rated current and need to be cleared within 1.4 seconds.

The second function GENprotect performs is I²T thermal protection for the alternator. Since a short circuit event can heat the alternator so rapidly, it is not possible to protect the alternator by monitoring temperature. Instead GENprotect calculates the heat energy of the fault current. When this energy reaches the limits of NEMA MG1, GENprotect trips the generator off-line. This configuration ensures the alternator is protected and the power system is ensured 10 seconds of 300% fault current for breaker coordination.

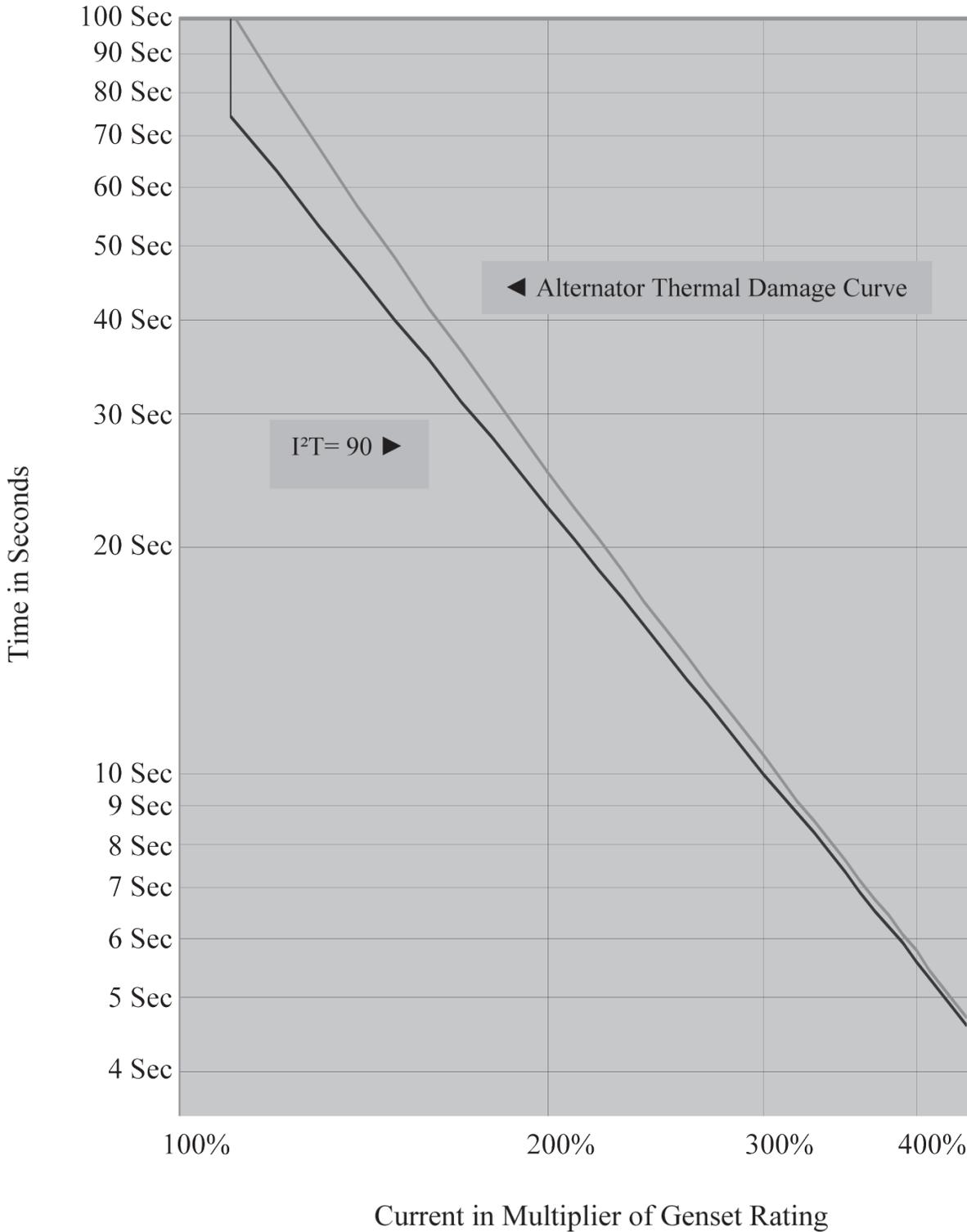
DESCRIPTION

- GENprotect is an alternator protection algorithm approved by UL.
- Protects alternator from damage due to shorts and electrical faults.
- Provides breaker coordination and alternator protection.
- Allows for use of multiple circuit breaker choices, including "no" breaker.



GENERAC® | **INDUSTRIAL POWER**

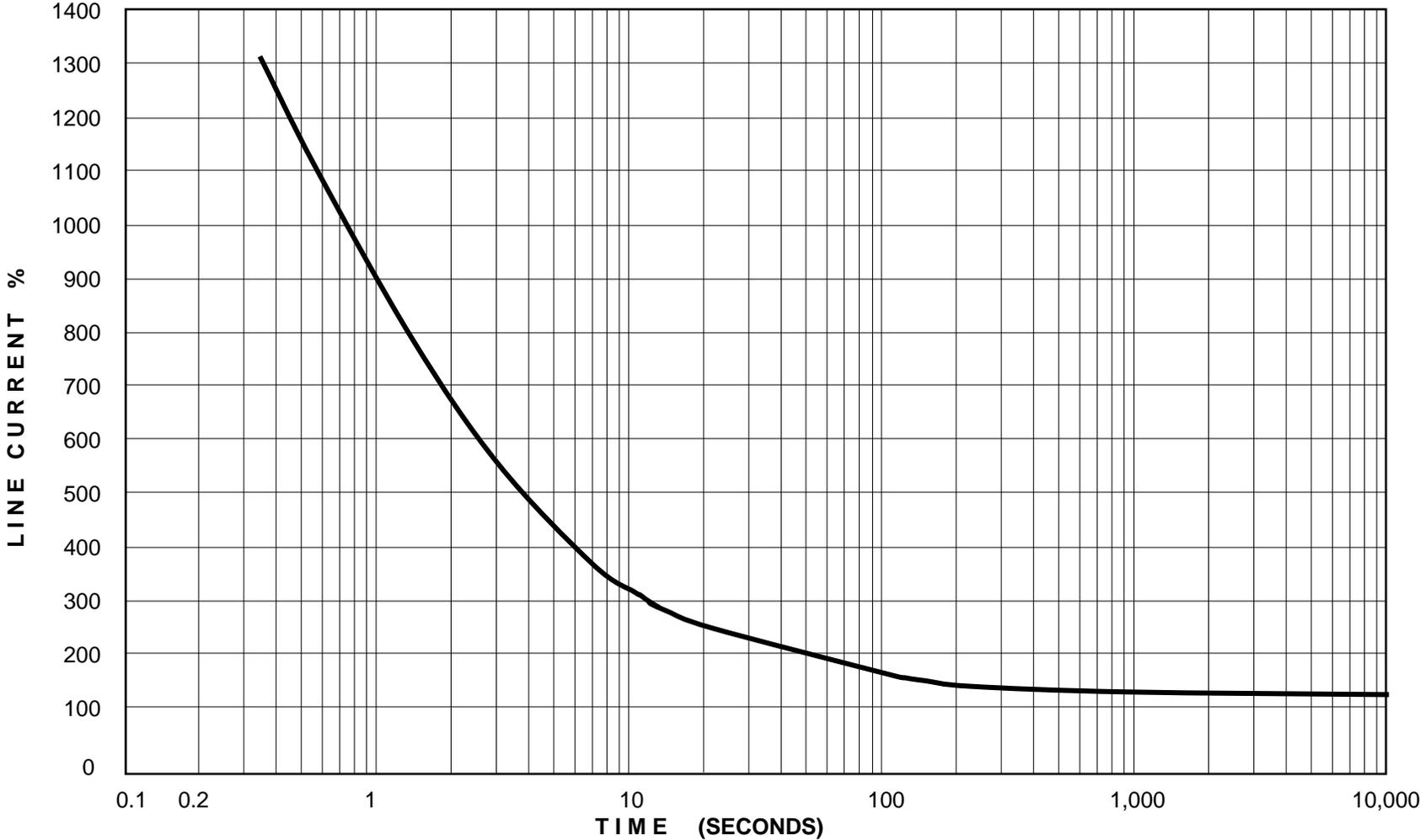
Generac I²T Trip Curve



The above Figure shows the Generac GENprotect thermal protection curve for use in protection and coordination studies. The alternator Thermal Damage Curve is shown just to the right of the GENprotect protection curve. If the alternator load is greater than the thermal damage protection curve for the alternator, the generator set will trip off-line. For example, an overload current of 110% for 75 seconds causes an overload alarm and will trip the generator off-line, shutting down the engine. GENprotect will provide generator protection over a full range of time and current, from instantaneous faults to overloads lasting several minutes. An advantage of GENprotect over a MCCB is that GENprotect allows for downstream breakers to clear faults without tripping the generator off-line, providing selective coordination with the first level of downstream breakers.

**25 – 130 KW
390 mm**

THERMAL DAMAGE CURVE



GENERATOR SIZE: 25-35-40-50-60-80-100-125-130 KW
LAMINATION SIZE: 390 mm
CALCULATIONS BASED ON WINDING TEMPERATURE OF 475° F BY EMBEDDED THERMOCOUPLE

Battery Options

Industrial Genset Battery Index

• Warranty by Exide Corp. • Exide e-mail: tbgna@exide.com • 800-782-7848 National Hotline • Dry Batteries Available**

Industrial Spark-Ignited Gensets - Available Batteries

| Engine | System Voltage | Battery Quantity | Generac Part # | | | | |
|-----------|----------------|------------------|--------------------|-------------------|--------------------|-------------------|-------------------|
| | | | 058208 (Group 24F) | 077483 (Group 26) | 058665 (Group 27F) | 061119 (Group 31) | 061104 (Group 8D) |
| G2.4 | 12 | 1 | | X | | | |
| G5.4 | 12 | 1 | X | | X or D | X or D | |
| G6.8 | 12 | 1 | | | X or D | X or D | |
| G8.0/G9.0 | 12 | 1 | | | X or D | X or D | |
| G12.9 | 24 | 2 | | | | | X or D |
| G21.9 | 24 | 2 | | | | | X or D |

X = Battery available with electrolyte and installed in genset.
D = Battery available dry and installed in genset.

Industrial Diesel Gensets - Available Batteries

| Engine | System Voltage | Battery Quantity | Generac Part # | | | |
|-------------------------|----------------|---------------------|--------------------|--------------------|-------------------|-------------------|
| | | | 058208 (Group 24F) | 058665 (Group 27F) | 061119 (Group 31) | 061104 (Group 8D) |
| D2.4 Generac | 12 | 1 | | X or D | X or D | |
| D3.4 Generac | 12 | 1 | | X or D | X or D | |
| D4.5 FPT | 12 | 1 | | | X or D | |
| D6.7 FPT 100 & 130kW | 12 | 1 or 2 [†] | | | X or D | |
| D6.7 FPT 150 & 175kW | 12 | 2 [†] | | | X or D | |
| D8.7 FPT | 24 | 2 | | | X or D | |
| D10.3 FPT | 24 | 2 | | | X or D | X or D |
| D12.9 FPT | 24 | 2 | | | X or D | X or D |
| D12.5 Perkins | 24 | 2 | | | | X or D |
| D15.2 Perkins | 24 | 2 | | | | X or D |
| D16.0 Volvo | 24 | 2 | | | X or D | X or D |
| D18.1 Perkins | 24 | 2 | | | | X or D |

X = Battery available with electrolyte and installed in genset.

D = Battery available dry and installed in genset.

[†] = Single or dual-paralleled battery options are available on 100 & 130kW. Single-battery option not available on 150 & 175kW.

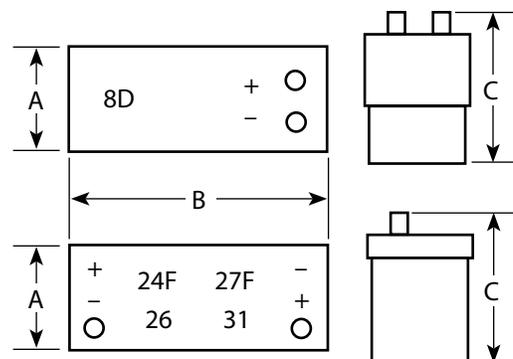
Battery Specifications

| Part Number | Group Number* | Nominal CCA @ 0° F | Dimensions (inches) Nominal | | |
|-------------|---------------|--------------------|-----------------------------|-------|------|
| | | | A | B | C |
| 058208 | 24F | 525 | 6.75 | 10.63 | 9.00 |
| 077483 | 26 | 525 | 6.75 | 8.25 | 7.75 |
| 058665 | 27F | 700 | 6.75 | 12.50 | 9.00 |
| 061119 | 31 | 925 | 6.75 | 13.00 | 9.40 |
| 061104 | 8D | 1155 | 11.12 | 20.75 | 9.88 |

All batteries are 12 volt, 6 cell construction, lead calcium type.
For 24 volt systems, batteries are wired in series.

* BCI Group Size reference.

** Add an "A" suffix to the Generac part number for dry batteries, which are shipped without electrolyte.





DESCRIPTION

GENERAC POWER SYSTEMS' generator enclosures provide year-round weather protection for your power equipment. Engineered with functionality and value in mind, the enclosure design benefits are unique in that the enclosures utilize dimensionally matched components for either a weather protective configuration or a sound attenuated/acoustic configuration. With common components used between designs, modifications and on-site upgrades can be accomplished with ease.

The enclosure design offers several benefits over the “standard enclosures” of other manufacturers. Generac’s enclosures have been created with the goal of maximizing the customer’s product performance satisfaction while maintaining the functionality of reducing exterior noise levels and discouraging product tampering.

Although others may require a “premium” for a self-enclosed exhaust system, rugged steel panel construction or protective polyethylene washers under all exterior panel fasteners, Generac includes these and several other features on every enclosure configuration. Be sure to compare. Generac Enclosures offer additional design enhancement extras that other “standard enclosures” do not.

Generator Enclosures

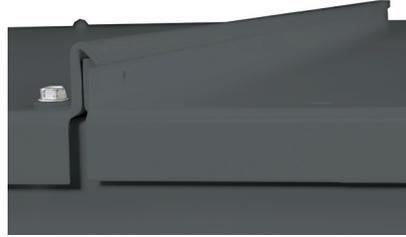
Post-free twin doors

Provides large, unobstructed service access



Heavy-gauge, stainless steel, partial pin hinges with nylon spacers

Durable, corrosion-free, removable doors



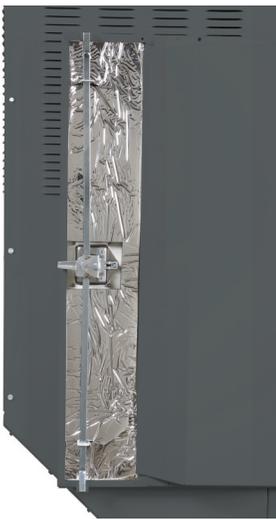
Gasket-free, interconnected roof panel joint

Drip-free, maintenance-free



Two-point door latch system

Ensures proper seal preventing water ingress and sound egress



Dense, closed-cell foam insulation with reflective silver Mylar layer

Improved sound attenuation without damaging effects from radiant heat exposure

Lockable turn and tuck stainless steel latch handle

Corrosion-free, non-protruding and secure



Generator Enclosures

| FEATURES: | BENEFITS: |
|---|---|
| ■ Dimensional Matching of acoustic and non-acoustic enclosure designs | ■ Reduces variation in fuel tank pricing, inventory; removes need to change out fuel tank or retrofit |
| ■ Standardized enclosure components * | ■ Ease of retrofit or upgrade to acoustic system; reduced parts inventory, costs |
| ■ Enclosure mounted directly to unit baseframe | ■ Simplified delivery and installation with enclosure and unit in single component design |
| ■ Electrostatically painted panels | ■ Maximum protection from weather elements |
| ■ 12 or 14 gauge steel based on kW rating | ■ Maximum sound attenuation, protection and product life |
| ■ Aluminum Enclosure optional | ■ Prevents corrosion in coastal regions |
| ■ Stainless steel door latch and hinge hardware | ■ Provides extended component life; maximum protection against rusting |
| ■ Stainless steel door latch strike plate | ■ Maximum protection against enclosure paint damage from door latch pin |
| ■ Door hinges utilize slip-pin design | ■ Provides quick door removal for full-unit access |
| ■ Polyethylene gasketing under door hinges | ■ Additional protection for enclosure paint finish |
| ■ Keyed door latches | ■ Protection for equipment and personnel |
| ■ Large removable access doors | ■ Ease of maintenance |
| ■ Relocation of access doors | ■ Provides improved access to MLCB on all units |
| ■ Redesigned door gasketing | ■ Improved sealing quality from sound and weather elements |
| ■ Weather resistant aluminum roof design with drip ledge | ■ Provides optimum moisture/rain runoff from unit |
| ■ Cabled and gasketed radiator access cover | ■ Provides improved radiator access and additional protection from weather elements |
| ■ Acoustic roof panels manufactured with mechanical retention pins | ■ Increased acoustic foam retention within unit |
| ■ Polyethylene washers under all panel fasteners | ■ Additional paint finish protection from stainless steel fastener |
| ■ Internally fastened enclosure panels (where possible) | ■ Provides streamlined unit appearance |
| ■ Additional roof panel stiffener | ■ Added overall compartment rigidity and acoustic foam panel retention |
| ■ Self-enclosed exhaust system | ■ Provides safe unit operation; no enclosure hot spots; streamlined unit appearance |
| ■ Discharge air duct has been designed with minimal fasteners | ■ Ease of removal and access to exhaust system |
| ■ Stainless steel exhaust band clamps | ■ Provides extended component life; ensures proper exhaust seal |
| ■ Drain holes within air ducts | ■ Enables maximum water run-off |
| ■ Rodent-proof, tamper proof enclosure design | ■ Safety and security for personnel and equipment |
| ■ Redesigned baseframe lifting lugs | ■ Ease of unit relocation; prevents compartment damage from lifting straps |
| ■ 150mph wind kit options | ■ Meets locally enforced wind requirements |

* Consult Generac Power Systems, Inc. installation drawings for specific configurations and dimensions.

GENSET OPTIONS

PAD ISOLATORS

ALL SPEEDS

WP -Pad prevents equipment rocking by compensating for mismatch of 4 rigid support points to typical wavy floor surface:
EQUIPMENT w/4 rigid supporty points
COMPRESSOR (TANK MOUNTED)

TO MINIMIZE DISTURBANCES FROM ENTERING THE FLOOR.

HIGH SPEED 1500 CPM AND UP

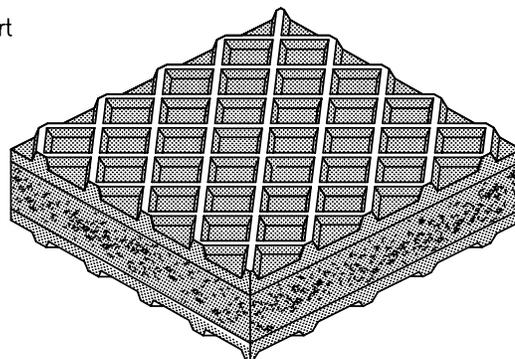
WP -Pad eliminates noise and reduces vibration transmitted from :
ENGINES
TRANSFORMERS
PUMPS and PIPING
STEAM GENERATORS
CRUSHERS

LOW SPEED 0 TO 250 CPM

WP -Pad limits impact shock transmission and simplifies installation of:
PUNCH PRESSES
SHEARS
VACUUM PUMPS
HAMMERS

LOW SPEED AND HIGH SPEED 0 TO 250 CPM AND 1500 CPM AND UP

TO MINIMIZE TRANSMISSION OF DISTURBANCES FROM THE FLOOR.
WP -Pad protects these sensitive instruments, machines and devices from low frequency shocks and high frequency vibrations present in the floor.
GRINDERS
SURFACE PLATES
MACHINE TOOLS
INSTRUMENTS



LOAD CAPACITY

Load Capacity to 60 Lbs./Sq.inch

THICKNESS

Standard Thickness - 1", others available

NON - SKID

Tread Surfaces Resist "Walking"

DURABLE

Cork and Neoprene are oil and ozone Resistant.

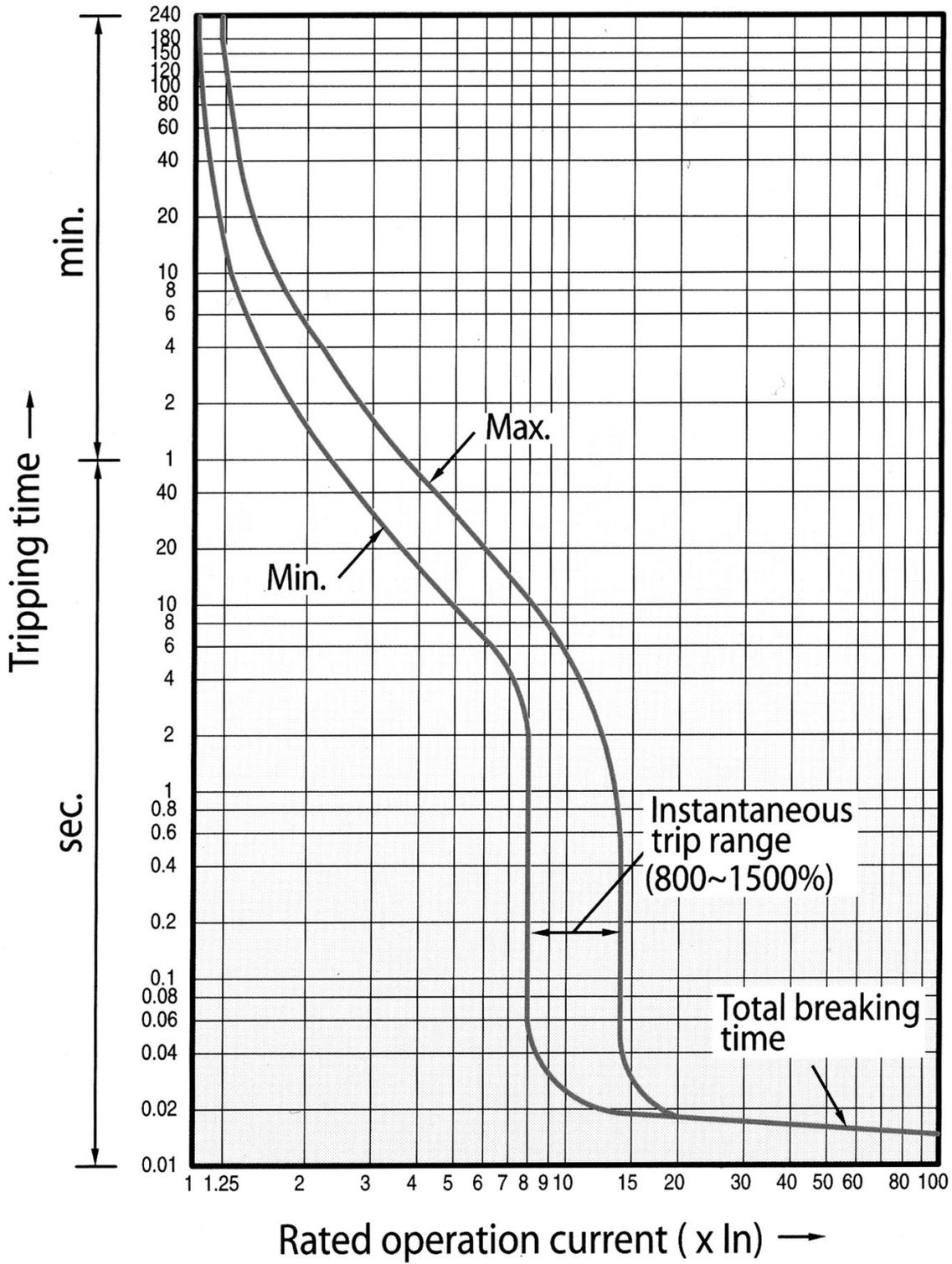
| MAXIMUM PAD SIZE 36" x 36" | | | | FACTORY CUT SIZES LISTED | | | |
|----------------------------|---------------------------------|---------------|---------------------------------|--------------------------|---------------------------------|---------------|---------------------------------|
| STANDARD | | CAPACITY | | STANDARD | | CAPACITY | |
| SIZE (Inches) | Max.Load Selection At 40 P.S.I. | SIZE (Inches) | Max.Load Selection At 40 P.S.I. | SIZE (Inches) | Max.Load Selection At 40 P.S.I. | SIZE (Inches) | Max.Load Selection At 40 P.S.I. |
| 2 x 2 | 160 | 3 x 9 | 1080 | 6 x 12 | 2880 | 12 x 18 | 8640 |
| 2 x 3 | 240 | 2 x 18 | 1440 | 9 x 9 | 3240 | 18 x 18 | 12960 |
| 2 x 4 | 320 | 3 x 12 | 1440 | 3 x 36 | 4320 | 12 x 36 | 17280 |
| 3 x 3 | 360 | 4 x 9 | 1440 | 6 x 18 | 4320 | 18 x 24 | 17280 |
| 2 x 6 | 480 | 6 x 6 | 1440 | 9 x 12 | 4320 | 24 x 24 | 23040 |
| 4 x 4 | 640 | 4 x 12 | 1920 | 4 x 36 | 5760 | 18 x 36 | 25920 |
| 3 x 6 | 720 | 3 x 18 | 2160 | 12 x 12 | 5760 | 24 x 36 | 34560 |
| 2 x 12 | 960 | 2 x 36 | 2880 | 9 x 18 | 6480 | 36 x 36 | 51840 |
| 4 x 6 | 960 | 4 x 18 | 2880 | 6 x 36 | 8640 | | |

Circuit Breakers 40-600 Amp

Accessories

| GENERAC CIRCUIT BREAKER INFORMATION | | | | | | | |
|---|---|---|------------------------------|------------------------------|-----------------------------|-----------------------|------------------|
| C.B. Amps | Lug Part # Generac C.B. | Lug Description | Wire Size per 310-16* | Frame | Interrupt Rating Amps | Rating Temp | Type |
| 40 | OF8451 | Single Hole 0.656 Dia # 6 to 300 MCM Cu/Al Single Conductor Only Mounting Bolt 70 in lbs. Wire lug is 375 in lbs. | #8 | 200 Amp Frame | 18,000 | 40 Degrees Centigrade | Thermal Magnetic |
| 50 | | | #8 | | | | |
| 60 | | | #6 | | | | |
| 70 | | | #4 | | | | |
| 80 | | | #4 | | | | |
| 90 | | | #3 | | | | |
| 100 | | | #3 | | | | |
| 125 | | | #1 | | | | |
| 150 | | | 1/0 | | | | |
| 175 | | | 2/0 | | | | |
| 200 | | | 3/0 | | | | |
| 225 | 0A7822 | (1) - 600 MCM to # 4 Cu/Al or (2) - 250 MCM to (2) - 1/0 Mounting 70 in lb. Wire lug is 375 in lb | 4/0 | 400 Amp Frame | 25,000 | 40 Degrees Centigrade | Thermal Magnetic |
| 250 | | | 250 MCM | | | | |
| 300 | | | 350MCM | | | | |
| 350 | | | 500MCM | | | | |
| 400 | | | 600MCM | | | | |
| 450 | OF9721 Std lug | (3) - 2/0 - 400 MCM Cu/Al 480 in lb. | 700 MCM or 2 - 4/0 | 600 Amp UL Rated Frame | 35,000 | 40 Degrees Centigrade | Thermal Magnetic |
| 500 | | | 2 - 250 MCM | | | | |
| 600 | OF8452 Optional Lug - 450-600A | (2) - 500-750 mcm Cu/Al Optional Lug | 2 - 350 MCM or 3-3/0 | | | | |
| All circuit breakers are CUL 489 Listed for 120,208,240,480 volts. Wire size is based on amp ratings at 75 ° C from table 310.16, 2008 NEC All lugs are rated 75 ° C | | | Derate by Temperature | | | | |
| | | | Temperature ° C | | Rated Trip Current % | | |
| | | | 20 | | 110 | | |
| | | | 30 | | 105 | | |
| | | | 40 | | 100 | | |
| | | | 50 | | 95 | | |

COORDINATION TRIP CURVE

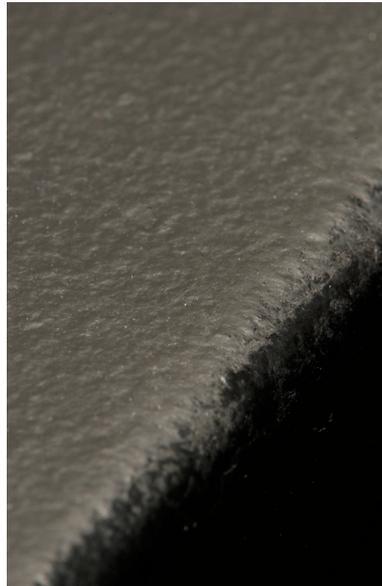




Generator Set Standard

Spec Sheet

1 of 1



Generac's RhinoCoat™ finish system provides superior durability as a standard for all Generac industrial enclosures, tanks and frames.*

testing standard

Generac's RhinoCoat™ finished surfaces are subjected to numerous tests. These include:

- ASTM D - 1186 - 87..... 2.5+ MIL PAINT THICKNESS
- ASTM D - 3363 - 92a..... ADEQUATE MATERIAL HARDNESS
- ASTM D 522 - B..... RESISTANT TO CRACKING
- ASTM D 3359 - B..... EXCEPTIONAL ADHESION
- ASTM B117 D 1654..... RESISTANT TO SALT WATER CORROSION
- ASTM D1735 D 1654..... RESISTANT TO HUMIDITY
- ASTM 2794 93 (2004)..... EXCEPTIONAL IMPACT RESISTANCE
- SAE J1690 - UV SPECIFICATIONS..... UV PROTECTION

In addition to the testing standards above, Generac adds the following test requirements more specific to generator applications:

- RESISTANT TO TYPICAL OILS
- RESISTANT TO TYPICAL FUELS
- RESISTANT TO TYPICAL ANTIFREEZE
- RESISTANT TO DISTILLED WATER

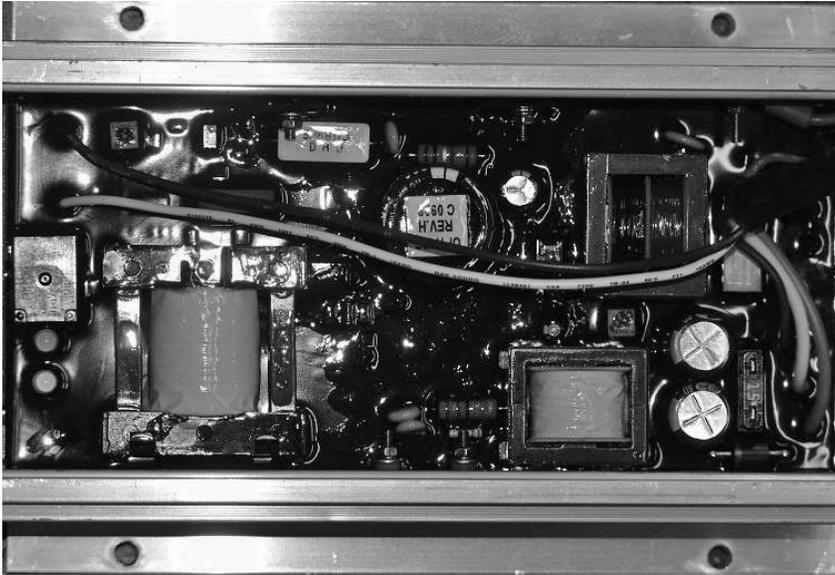
primary codes and standards



*RhinoCoat powder coat paint is durable and corrosion resistant however it is not a rust preventative. Generac pretreats all powdercoated parts to assist with resistance to corrosion.

2.5A & 10A Battery Chargers H-Panel & PM-DCP Panels

Accessories



Battery Charger shown from inside of Control Panel Enclosure. Connections are made via an attached harness.

The Generac 2.5A 12 volt and 10A 12/24 volt battery chargers are designed to work with the H and PM-DCP control panels to provide the ultimate in automatic battery voltage maintenance.

The 2.5 amp charger is self-regulating and produces instantaneous output current adjustments to keep the battery charged to an optimum level. Battery voltage is read on the control panel digital display.

The 10 amp charger has automatic float and equalize control. It precisely monitors the battery's voltage and automatically activates the correct charging mode. The charge rate is limited and controlled to efficiently and safely maintain ideal battery levels under varying conditions.

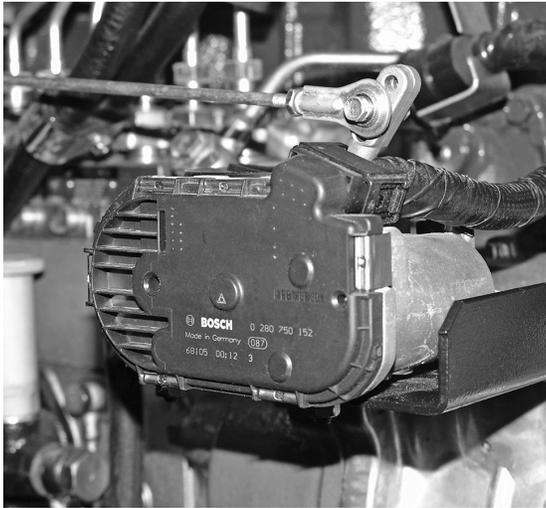
The equalize system uses a control circuit to limit charging current to 10 amps. When battery voltage drops below a preset level, charging current increases to 5 amps and then to the 10 amp charge rate if needed. When the battery reaches maximum charge, the charger switches to float mode to supply just enough current to maintain the battery at or above 13/26 volts. Battery voltage and charging current are read at the control panel digital display.

| Specifications | 2.5 Amp | 10 Amp |
|--|---------------------|--|
| Nominal Input | 120 VAC | 120 VAC |
| Operating AC Line Voltage Range | 108 to 132 Volts AC | 108 to 132 Volts AC |
| Input AC Line Frequency | 50/60 Hz | 50/60 Hz |
| Battery Fuse | N/A | 15 Amps |
| Nominal Charge Rate | 2.5 Amps | 10 Amps |
| Equalize Voltage | | 13.8/27.6 Volts |
| Float Voltage | 13.4 | 13.0/26.0 |
| Current @ Equalize to Float Transition | | 5 Amps |
| Battery Under-voltage shutdown | N/A | 11/22 Volts |
| LED Indicators | | |
| AC Line Voltage | N/A | Green LED |
| Battery Connected and Charging | N/A | Yellow LED |
| Battery Current Drain | 30 milliamp | 30 milliamp |
| AC Line Connection | Connector Plug | Connector Plug |
| Battery Connection | Connector Plug | Connector Plug |
| Control Connection | | AC Power Fail Relay Form C 2 Amp Rating |
| CUL Recognized | Yes | Yes |
| NFPA110 Compliant | No | Yes |



ENGINE ACCESSORIES

GENERAC ELECTRONIC GOVERNOR DIESEL ENGINES



- Regulation.....Isochronous
- Steady State Regulation.....±0.25%
- Factory installed and adjusted
- Fully adjustable via GenLink® software
- Fast response
- High reliability
- No maintenance required

ACTUATOR

DESCRIPTION:

Die cast enclosure housing the gear-driven rotary actuator. The interior components are sealed against dust, dirt and moisture. The gear drive is mechanically linked to the injection pump. Spring-return to no-fuel position upon loss of power.

| | |
|----------------------------------|-----------------------|
| DESIGN..... | Bosch |
| TYPE..... | Motor-Driven Actuator |
| OPERATING VOLTAGE..... | 12/24vdc |
| RESPONSE TIME..... | <100 msec |
| OPERATING TEMPERATURE RANGE..... | -40°F to 284°F |
| OUTPUT..... | Rotary |

CONTROLLER

DESCRIPTION:

Governor driver module located in the generator control panel. Sealed unit with waterproof connections. Feedback circuit from the actuator for fuel rack position. Generac DCP software-controlled speed governing, fully adjustable via GenLink®.

The Generac electronic governor system is standard on the following diesel gensets with Generac’s Digital Control Platform (G or H panel) control system:

- 2.4L 10-30kW
- 3.4L 35-50kW
- 4.5L 50-80kW
- 6.7L 100-130kW

ENGINE OPTIONS

**COOLANT HEATER
120VAC, 1500W**



SPECIFICATIONS

VOLTAGE: 120VAC

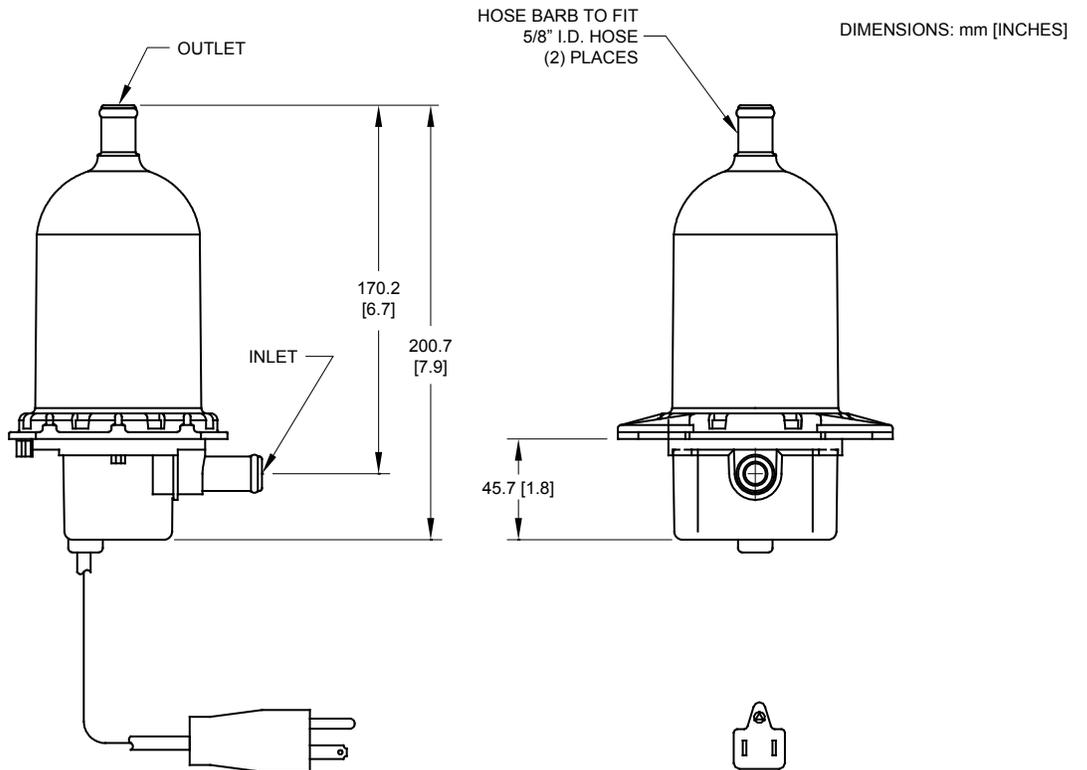
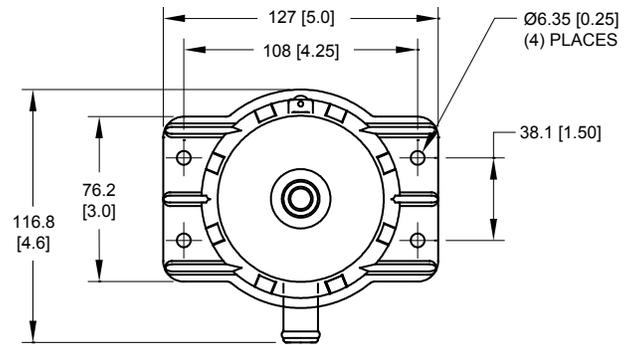
HEAT POWER: 1500W

FIXED THERMOSTAT: 80°-100°F

HEATING ELEMENT: INCOLOY 800

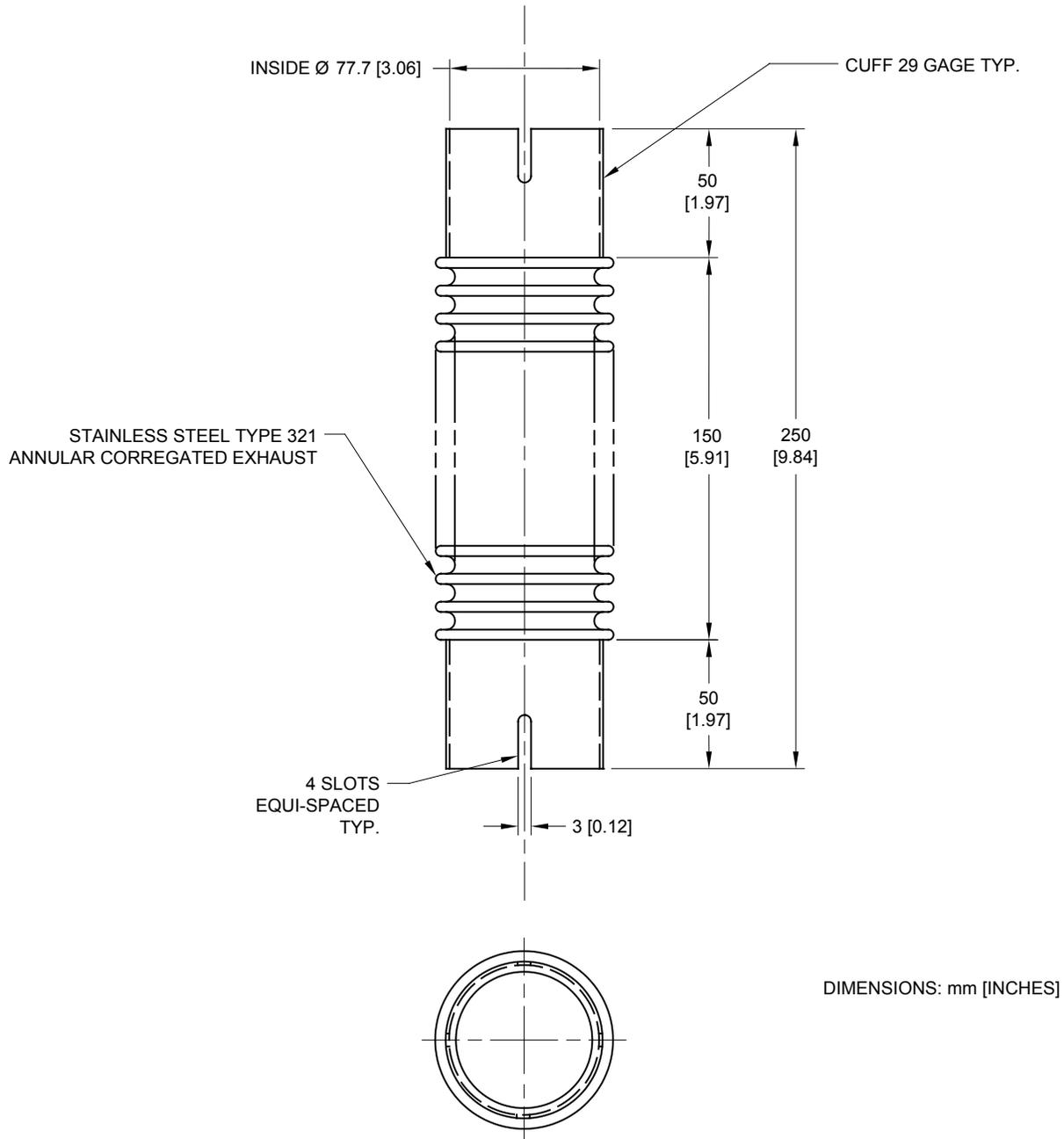
MAXIMUM PRESSURE: 90 PSI (620 kPa)

PLUG NEMA STD: 5-15P



EXHAUST OPTIONS

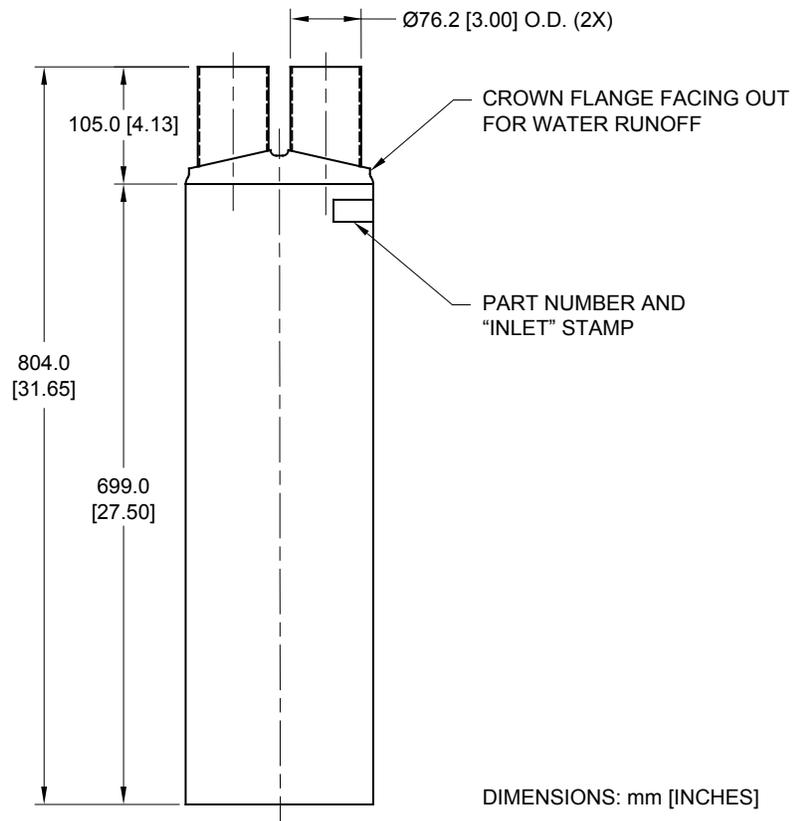
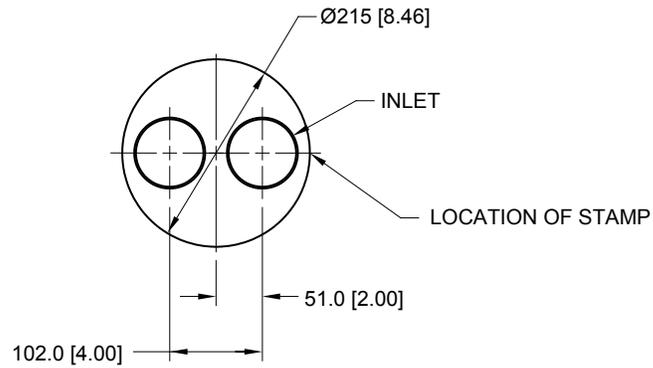
EXHAUST FLEX, 3"



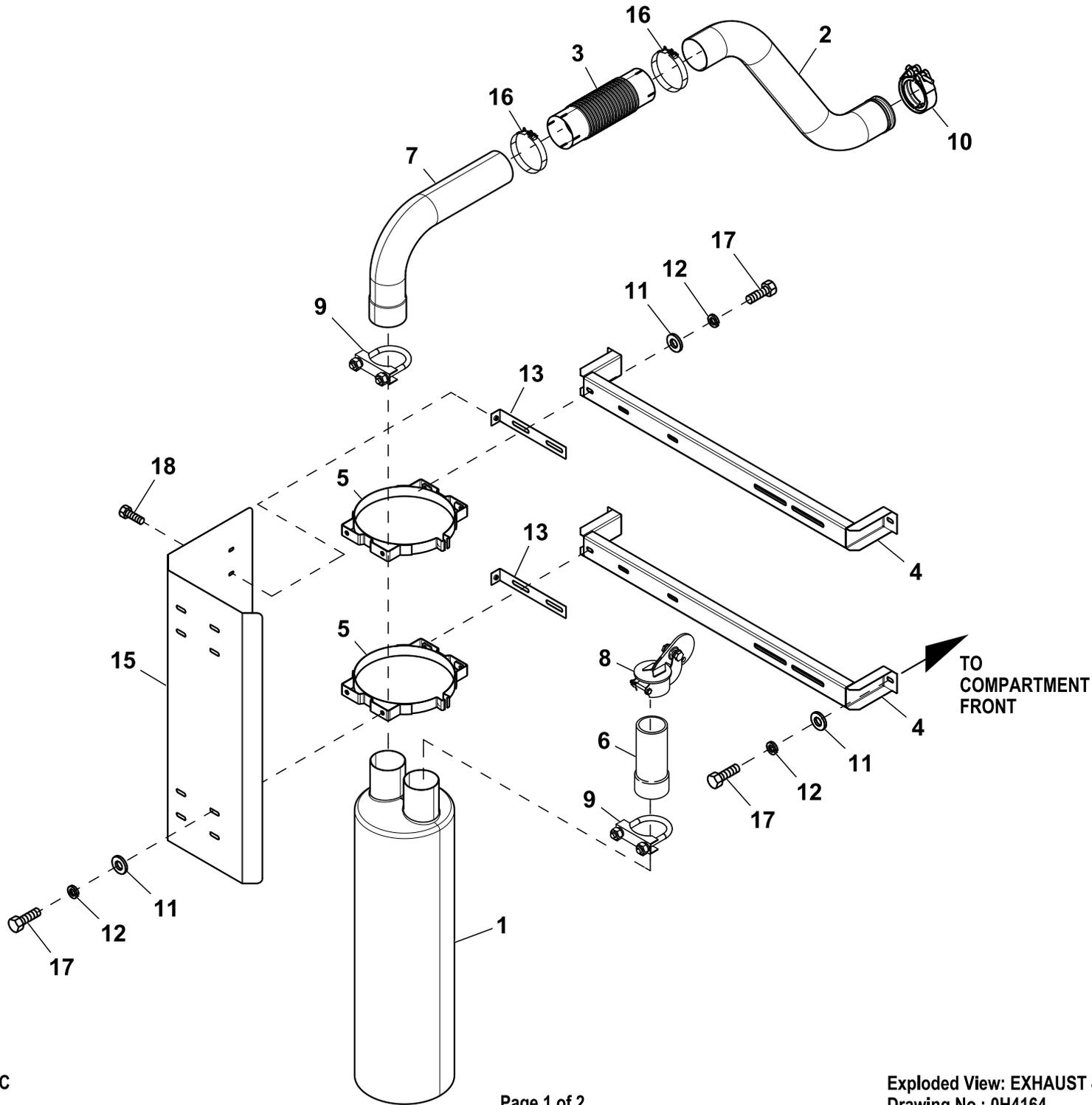
EXHAUST OPTIONS

**MUFFLER
3.0" INLET / OUTLET**

- APPROXIMATE WEIGHT: 23 LBS.
- INSERTION LOSS: 20-25 dBA
- MATERIAL: ALUMINIZED STEEL
- FINISH: HIGH-TEMP BLACK PAINT



GROUP F



EXPLODED VIEW: EV EXH 4.5L G17**DRAWING #: 0H4164****GROUP F**

| ITEM | PART# | QTY. | DESCRIPTION |
|-------------|--------------|-------------|----------------------------------|
| 1 | 0C9652 | 1 | MUFFLER 3" INLET/OUTLET |
| 2 | 0H4162 | 1 | ASSY 4.5L G17 EXHAUST |
| 3 | 0A5215C | 1 | PIPE FLEX 3" |
| 4 | 0C2933 | 2 | BRACKET MUFFLER MTG |
| 5 | 0C4114 | 2 | CLAMP MUFFLER BAND |
| 6 | 0C9640 | 1 | TUBE STRAIGHT 'B' GROUP |
| 7 | 0C9645 | 1 | 3" TUBE 90 DEG ELBOW 'B' GROUP |
| 8 | 059902 | 1 | RAIN CAP 3.00 / 3.19 |
| 9 | 055978 | 2 | BOLT U 3/8-16 X 3.25 |
| (1)10 | 0H6303 | 1(REF) | CLIP |
| 11 | 022145 | 12 | WASHER FLAT 5/16-M8 ZINC |
| 12 | 022129 | 12 | WASHER LOCK M8-5/16 |
| 13 | 0C4170 | 2 | BRACKET EXHAUST SHIELD |
| 14 | 0G3011 | 1 | BLANKET EXHAUST (NOT SHOWN) |
| 15 | 0C3094 | 1 | HEAT SHIELD GEN 2 |
| 16 | 0C3433B | 2 | CLAMP BAND 3.0" |
| 17 | 042907 | 12 | SCREW HHC M8-1.25 X 16 G8.8 |
| 18 | 0C2454 | 2 | SCREW TH-FRM M6-1 X 16 N WA Z/JS |

NOTES (UNLESS OTHERWISE SPECIFIED):

(1) SUPPLIED WITH ENGINE KIT.

Warranty

GENERAC POWER SYSTEMS TWO-YEAR EXTENDED LIMITED WARRANTY FOR STANDBY POWER SYSTEMS

NOTE: ALL UNITS MUST HAVE A START-UP INSPECTION PERFORMED BY AN AUTHORIZED GENERAC DEALER.

For a period of two (2) years or two thousand (2,000) hours of operation from the date of start up, which ever occurs first, Generac Power Systems, Inc. (Generac) will, at its option, repair or replace any part(s) which, upon examination, inspection, and testing by Generac or an Authorized/Certified Generac Dealer, or branch thereof, is found to be defective under normal use and service, in accordance with the warranty schedule set forth below. Repair or replacement pursuant to this limited warranty shall not renew or extend the original warranty period. Any repaired product shall be warranted for the remaining original warranty period only. Any equipment that the purchaser/owner claims to be defective must be examined by the nearest Authorized/Certified Generac Dealer, or branch thereof. This warranty applies only to Generac Generators used in "Standby" applications, as Generac has defined Standby, provided said generator has been initially installed and/or inspected on-site by an Authorized/Certified Generac Dealer, or branch thereof. It is highly recommended that scheduled maintenance, as outlined by the generator owner's manual, be performed by an Authorized/Certified Generac Dealer, or branch thereof. This will verify service has been performed on the unit throughout the warranty period. This warranty is limited to and available only on Liquid-cooled units.

*****This Warranty only applies to units sold for use in the US and Canada*****

WARRANTY SCHEDULE

YEAR ONE AND TWO — Limited comprehensive coverage on mileage, labor, and parts listed.

• ALL COMPONENTS — ENGINE, ALTERNATOR AND TRANSFER SWITCH

GEARBOX EQUIPPED UNITS - LIMITED GEARBOX COVERAGE

YEARS ONE THROUGH FIVE — Parts and labor coverage on gearbox and components.

YEARS SIX THROUGH TEN — Parts only coverage on gearbox and components.

GUIDELINES:

1. Travel allowance is limited to 300 miles maximum, and 7.5 hours maximum (per occurrence), round trip, to the nearest authorized Generac Service Facility.
2. Warranty only applies to permanently wired and mounted units.
3. All warranty repairs, must be performed and/or addressed by an Authorized/Certified Generac Dealer, or branch thereof.
4. A Generac Transfer Switch is highly recommended to be used in conjunction with the generator set. If a Non-Generac Transfer Switch is substituted for use and directly causes damage to the generator set, no warranty coverage shall apply.
5. All warranty expense allowances are subject to the conditions defined in Generac's General Service Policy Manual.
6. Units that have been resold are not covered under the Generac Warranty, as this Warranty is not transferable.
7. Unit enclosure is only covered during the first year of the warranty provision.
8. Damage to any covered components or consequential damages caused by the use of a non-OEM part will not be covered by the warranty.
9. Engine coolant heaters (block-heaters), heater controls and circulating pumps are only covered during the first year of the warranty provision.
10. Generac may chose to Repair, Replace or Refund a piece of equipment.
11. Warranty Labor Rates are based on normal working hours. Additional costs for overtime, holiday or emergency labor costs for repairs outside of normal business hours will be the responsibility of the customer.
12. Warranty Parts shipment costs are reimbursed at ground shipment rates. Costs related to requests for expedited shipping will be the responsibility of the customer.
13. Batteries are warranted by the battery manufacturer.
14. Verification of required maintenance may be required for warranty coverage.

THIS WARRANTY SHALL NOT APPLY TO THE FOLLOWING:

Any unit built/manufactured prior to March 1, 2013.

1. Costs of normal maintenance (i.e. tune-ups, associated part(s), adjustments, loose/leaking clamps, installation and start-up).
2. Any failure caused by contaminated fuels, oils, coolants/antifreeze or lack of proper fuels, oils or coolants/antifreeze.
3. Units sold, rated or used for "Prime Power", "Trailer Mounted" or "Rental Unit" applications as Generac has defined Prime Power, Trailer Mounted or Rental Unit. Contact a Generac Distributor for Prime Power, Trailer Mounted or Rental Unit definition and warranty.
4. Failures caused by any external cause or act of God including, without limitation, collision, theft, vandalism, riot or wars, nuclear event, fire, lightning, earthquake, windstorm, hail, volcanic eruption, water or flood, tornado or hurricane.
5. Products that are modified or altered in a manner not authorized by Generac in writing.
6. Failures due, but not limited to, normal wear and tear, accident, misuse, abuse, negligence, or improper installation or sizing.
7. Any incidental, consequential or indirect damages caused by defects in materials or workmanship, or any delay in repair or replacement of the defective part(s).
8. Damage related to rodent and/or insect infestation.
9. Failure due to misapplication, misrepresentation, or bi-fuel conversion.
10. Telephone, facsimile, cellular phone, satellite, Internet, or any other communication expenses.
11. Rental equipment used while warranty repairs are being performed (i.e. rental generators, cranes, etc.).
12. Modes of transportation deemed abnormal (refer to Generac General Service Policy Manual).
13. Steel enclosures that are rusting due to improper installation, location in a harsh or saltwater environment or scratched where integrity of paint applied is compromised.
14. Any and all expenses incurred investigating performance complaints unless defective Generac materials and/or workmanship were the direct cause of the problem.
15. Starting batteries, fuses, light bulbs, engine fluids, and overnight freight cost for replacement part(s).

THIS WARRANTY IS IN PLACE OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, SPECIFICALLY, GENERAC MAKES NO OTHER WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to purchaser/owner.

GENERAC'S ONLY LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF PART(S) AS STATED ABOVE. IN NO EVENT SHALL GENERAC BE LIABLE FOR ANY INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF SUCH DAMAGES ARE A DIRECT RESULT OF GENERAC'S NEGLIGENCE. Any implied warranties which are allowed by law, shall be limited in duration to the terms of the express warranty provided herein. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to purchaser/owner. Purchaser/owner agrees to make no claims against Generac based on negligence. This warranty gives purchaser/owner specific legal rights. Purchaser/owner also may have other rights that vary from state to state.

Generac Power Systems, Inc. • P.O. Box 8 • Waukesha, WI 53187
Ph: (262) 544-4811 • Fax: (262) 544-4851

Garantía

GARANTÍA LIMITADA EXTENDIDA DE DOS AÑOS DE GENERAC POWER SYSTEMS PARA LOS SISTEMAS DE ALIMENTACIÓN DE RESERVA

NOTA: TODAS LAS UNIDADES DEBEN TENER UNA INSPECCIÓN PREVIA A LA PUESTA EN MARCHA EFECTUADA POR UN CONCESIONARIO AUTORIZADO DE GENERAC.

Durante un período de dos (2) años o dos mil (2000) horas de funcionamiento desde la puesta en marcha, lo que ocurra primero, Generac Power Systems, Inc. (Generac) reparará o sustituirá, a su opción, toda pieza que, tras el examen, inspección y prueba por parte de Generac, un concesionario autorizado o certificado de Generac o una sucursal de este, se determine que es defectuosa bajo condiciones de uso y mantenimiento normales, de acuerdo con el programa de garantía estipulado a continuación. La reparación o sustitución conforme a esta garantía limitada no renovará ni prolongará el período de garantía original. Todo producto reparado será garantizado solo por el período de garantía original restante. Todo equipo que el comprador o propietario reclame como defectuoso debe ser examinado por el concesionario autorizado o certificado de Generac más cercano o una sucursal de este. Esta garantía se aplica solamente a los generadores Generac usados en aplicaciones "de reserva", tal como Generac ha definido "de reserva", siempre que tal generador haya sido instalado y/o inspeccionado inicialmente en el sitio por un concesionario autorizado o certificado de Generac o una sucursal de este. Se recomienda encarecidamente que el mantenimiento programado recomendado, como se indica en el manual del propietario del generador, sea efectuado por un concesionario autorizado o certificado de Generac o una sucursal de este. Esto verificará que el mantenimiento se ha efectuado en la unidad durante todo el período de garantía. Esta garantía está limitada a las unidades refrigeradas por líquido y solo está disponible para ellas.

*****Esta garantía sólo es válida para unidades vendidas para su uso en EE.UU. y Canadá.*****

PROGRAMA DE GARANTÍA

AÑOS UNO Y DOS - Cobertura completa limitada sobre el millaje, mano de obra y piezas que se indican.

• TODOS LOS COMPONENTES - MOTOR, ALTERNADOR E INTERRUPTOR DE TRANSFERENCIA

UNIDADES QUE TIENEN CAJA DE ENGRANAJES - COBERTURA LIMITADA DE LA CAJA DE ENGRANAJES

AÑOS UNO A CINCO - Cobertura sobre piezas y mano de obra para la caja de engranajes y los componentes.

AÑOS SEIS A DIEZ - Solo cobertura sobre piezas para la caja de engranajes y los componentes.

DIRECTRICES:

1. La asignación para viajes está limitada a 300 millas como máximo y 7,5 horas como máximo (por caso), viaje de ida y vuelta, a la instalación de servicio de Generac autorizada más cercana.
2. La garantía corresponde solamente a las unidades conectadas y montadas en forma permanente.
3. Todas las reparaciones por garantía deben ser efectuadas y/o dirigidas por un concesionario autorizado o certificado de Generac o una sucursal de este.
4. Se recomienda encarecidamente usar un interruptor de transferencia de Generac en conjunto con el equipo generador. Si se sustituye por un interruptor de transferencia que no sea de Generac y este causa daños directamente al equipo generador, no se aplicará ninguna cobertura de garantía.
5. Todas las asignaciones para gastos por garantía están sujetas a las condiciones definidas en el Manual de política de mantenimiento general de Generac.
6. Las unidades que hayan sido revendidas no están cubiertas por la garantía de Generac dado que esta garantía no es transferible.
7. El gabinete de la unidad está cubierto solo durante el primer año de prestación de la garantía.
8. Los daños a cualquier componente o los daños emergentes causados por el uso de una pieza que no sea OEM no estarán cubiertos por la garantía.
9. Los calentadores de la refrigeración del motor (calentadores del bloque), los controles del calentador y las bombas de circulación solo están cubiertas durante el primer año de prestación de la garantía.
10. Generac puede elegir reparar, sustituir o reembolsar una pieza del equipo.
11. Las tarifas de mano de obra de la garantía se basan en horas de trabajo normales. Los costes adicionales por horas extra y feriados y los costes de mano de obra de emergencia por reparaciones fuera del horario de trabajo normal serán responsabilidad del cliente.
12. Los costes de envío de piezas por garantía se reembolsarán con las tarifas de envío terrestre. Los costes relativos a solicitudes de envío urgente serán responsabilidad del cliente.
13. Las baterías están garantizadas por el fabricante de las baterías.
14. Puede requerirse la verificación del mantenimiento requerido para la cobertura de la garantía.

ESTA GARANTÍA NO SE APLICA A LO SIGUIENTE:

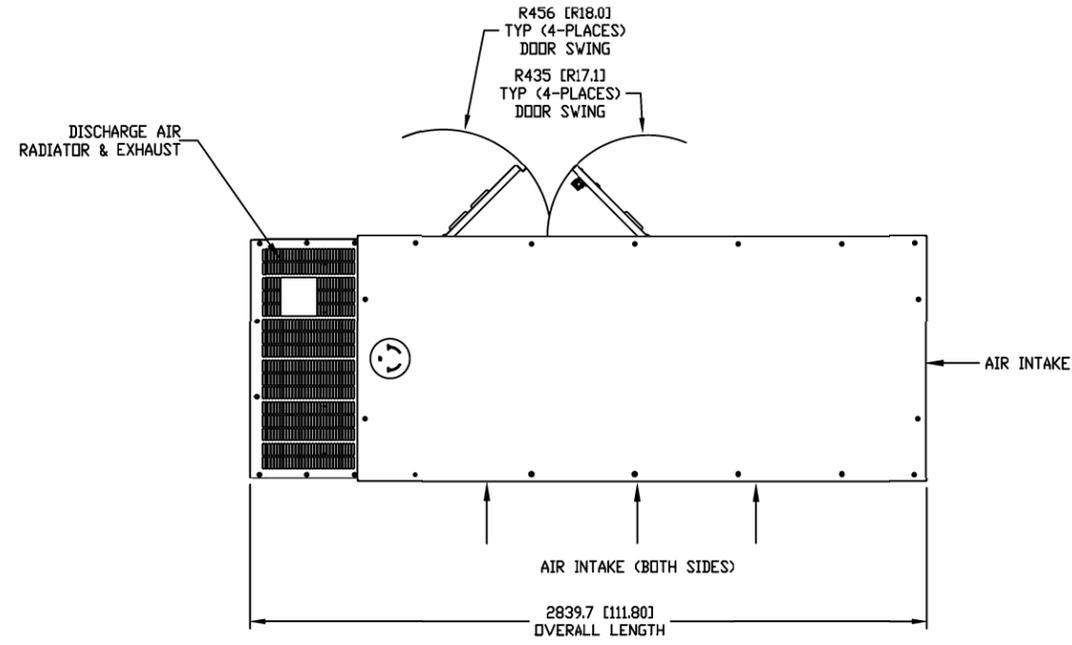
Toda unidad fabricada/construida antes del 1 de marzo de 2013.

1. Los costes del mantenimiento normal (es decir: afinaciones, pieza(s) relacionada(s), ajustes, abrazaderas sueltas o con fugas, instalación y puesta en marcha).
2. Todo fallo causado por combustibles, aceites, refrigerantes y anticongelantes contaminados o la falta de combustibles, aceites o refrigerantes y anticongelantes apropiados.
3. Las unidades vendidas, calificadas para o usadas en aplicaciones de "Alimentación eléctrica principal", "Montada en remolque" o "Unidad en alquiler" tal como Generac ha definido como Alimentación principal, Montada en remolque o Unidad en alquiler. Comuníquese con un distribuidor de Generac para conocer las definiciones y la garantía correspondientes a Alimentación eléctrica principal, Montada en remolque o Unidad en alquiler.
4. Los fallos causados por una causa externa o fuerza mayor, tal como colisión, robo, vandalismo, disturbios o guerras, holocausto nuclear, incendio, rayos, terremoto, tormenta de viento, granizo, erupción volcánica, agua o inundación, tornado o huracán.
5. Los productos que sean modificados o alterados en forma no autorizada por Generac por escrito.
6. Fallos debidos, pero no limitados a: desgaste y daños normales, accidente, uso indebido, abuso, negligencia o instalación incorrecta.
7. Todos los daños accesorios, emergentes o indirectos causados por defectos en los materiales o mano de obra o toda demora en la reparación o sustitución de la(s) pieza(s) defectuosa(s).
8. Daños relacionados con plagas de roedores y/o insectos.
9. Fallos debidos a aplicaciones incorrectas, distorsiones o conversión a dos combustibles.
10. Gastos de teléfono, facsímil, teléfono celular, satélite, Internet o cualquier otro gasto de comunicaciones.
11. Equipos arrendados usados mientras se efectúan reparaciones de garantía (es decir, arriendo de generadores, grúas, etc.).
12. Modos de transporte considerados anormales (consulte el Manual de política de mantenimiento general de Generac).
13. Gabinetes de acero que se están corroyendo debido a instalación incorrecta, ubicación en un entorno agresivo o salino o rayado donde esté comprometida la integridad de la pintura aplicada.
14. Todos los gastos incurridos investigando reclamos por rendimiento salvo que la mano de obra y/o los materiales defectuosos de Generac sean la causa directa del problema.
15. Baterías de arranque, fusibles, bombillas, fluidos del motor y costes de flete nocturno de pieza(s) de repuesto.

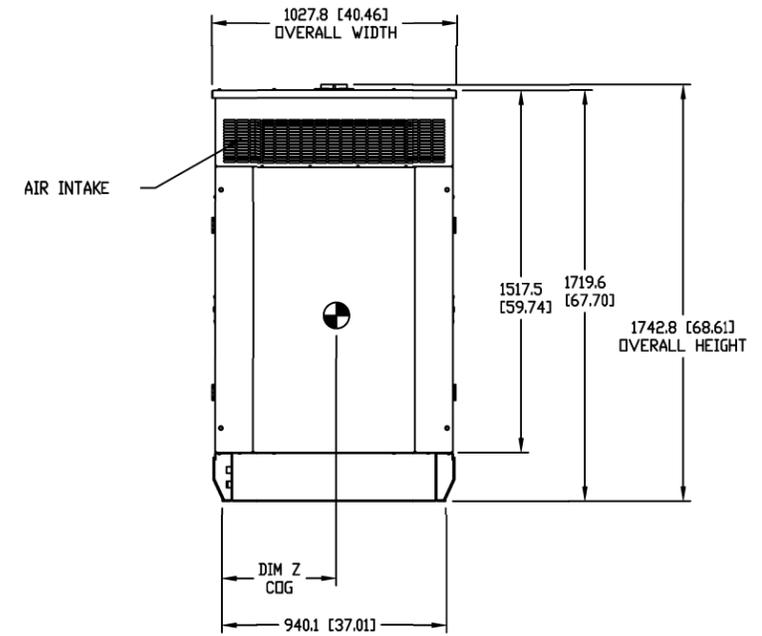
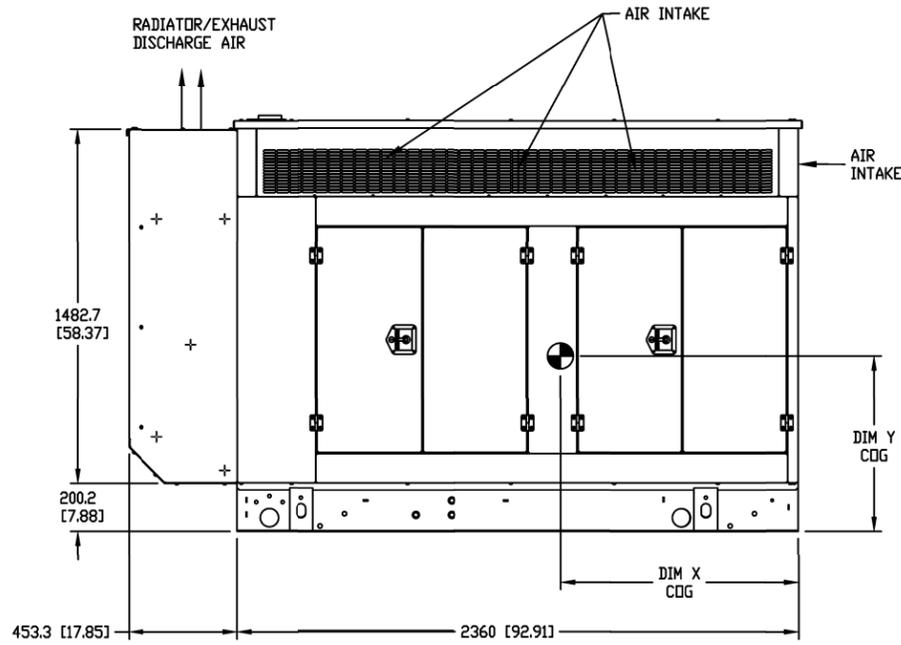
ESTA GARANTÍA SUSTITUYE CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLÍCITA. ESPECÍFICAMENTE, GENERAC NO OTORGA NINGUNA GARANTÍA DE COMERCIALIZACIÓN O APTITUD PARA UN PROPÓSITO EN PARTICULAR. Algunos estados no permiten limitaciones de la duración de una garantía implícita: por lo tanto, la limitación precedente puede no aplicarse al comprador o propietario.

LA ÚNICA RESPONSABILIDAD DE GENERAC SERÁ REPARAR O SUSTITUIR LA(S) PIEZA(S) COMO SE ESTIPULA PRECEDENTEMENTE. GENERAC NO SERÁ RESPONSABLE EN NINGÚN CASO POR NINGÚN DAÑO ACCESORIO O EMERGENTE, AUN CUANDO TAL DAÑO SEA RESULTADO DIRECTO DE LA NEGLIGENCIA DE GENERAC. La duración de todas las garantías implícitas permitidas por la ley, estará limitada a las condiciones de la garantía expresa estipulada en la presente. Algunos estados no permiten la exclusión o limitación de daños accesorios o emergentes, de manera que las limitaciones precedentes pueden no aplicarse al comprador o propietario. El comprador o propietario acuerda no efectuar reclamos contra Generac basados en negligencia. Esta garantía otorga al comprador o propietario derechos legales específicos. El comprador o propietario también puede tener otros derechos que varían en diferentes estados.

Generac Power Systems, Inc. • P.O. Box 8 • Waukesha, WI 53187, EE. UU.
Tel.: (262) 544-4811 • Fax: (262) 544-4851



FOR ALL STUB-UP, WEIGHT, AND COG DETAILS, SEE CORRESPONDING OPEN SET DRAWING PER UNIT CONFIGURATION.



DIMENSIONS ARE IN MILLIMETERS [INCHES]

DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

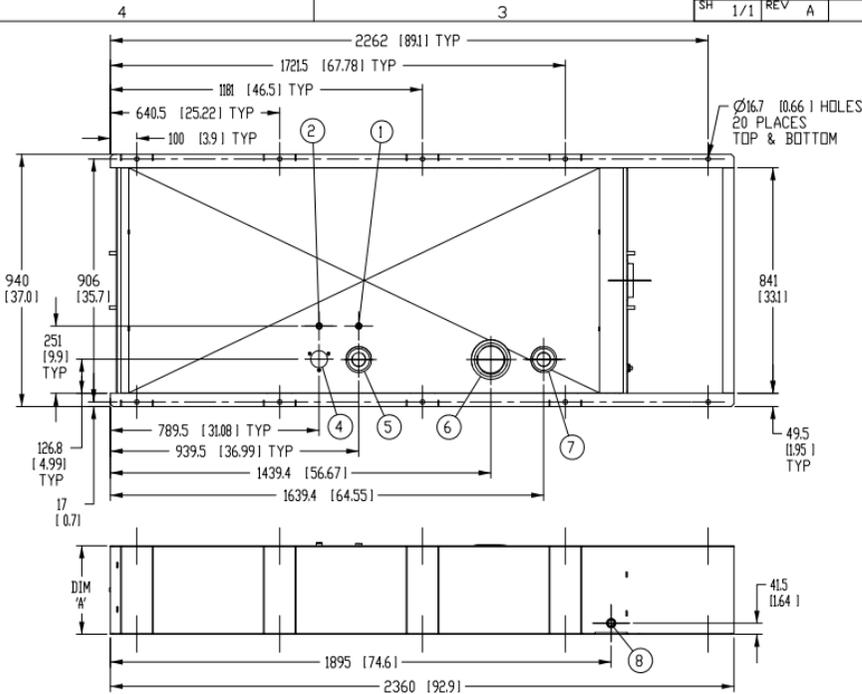
INSTALLATION DRAWING

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS. © GENERAC POWER SYSTEMS 2012

ELECTRONICALLY APPROVED
INSIDE WINDCHILL



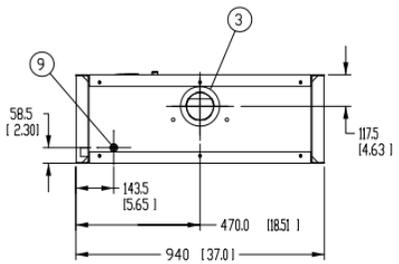
| | | | | |
|--|---------|---------|--------------|--|
| TITLE | | | | |
| L2A ENCLOSURE D4.5L, 60HZ: SD080, PD072 SD060, PD054 | | | | |
| ISSUE DATE: | | 6/2/14 | | |
| SIZE | CAGE NO | DWG NO | REV | |
| B | N/A | 0J4189C | D | |
| SCALE | 0.035 | WT-KG | SHEET 1 of 1 | |



| I/N | TANK FITTING | FUNCTION |
|-----|--------------------|------------------------|
| 1 | 3/8" NPT COUPLING | FUEL SUPPLY |
| 2 | 3/8" NPT COUPLING | FUEL RETURN |
| 3 | 4" NPT WELD FLANGE | EMERGENCY VENT |
| 4 | | FUEL VENT |
| 5 | 2" NPT WELD FLANGE | FUEL FILL |
| 6 | 4" NPT WELD FLANGE | EMERGENCY VENT (INNER) |
| 7 | 2" NPT WELD FLANGE | VENT |
| 8 | 3/4" NPT COUPLING | DRAIN |
| 9 | Ø22 MM HOLE | LEAK DETECTOR |

CAPACITY SHOWN: LITER [GALLONS]
 WEIGHT SHOWN: KILOGRAMS [POUNDS]
 LENGTH SHOWN: MM [INCH]

UL #142 LISTED



| TANK P/N | 0J18430ST03 | 0J18440ST03 | 0J18450ST03 |
|----------------------|-------------|-------------|-------------|
| DIM 'A' | 330 [13] | 635 [25] | 940 [37] |
| TOTAL TANK CAPACITY | 318 [84] | 734 [194] | 1154 [305] |
| USABLE TANK CAPACITY | 299 [79] | 716 [189] | 1134 [300] |
| DRY WEIGHT (EST) | 237 [522] | 344 [758] | 445 [982] |

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DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

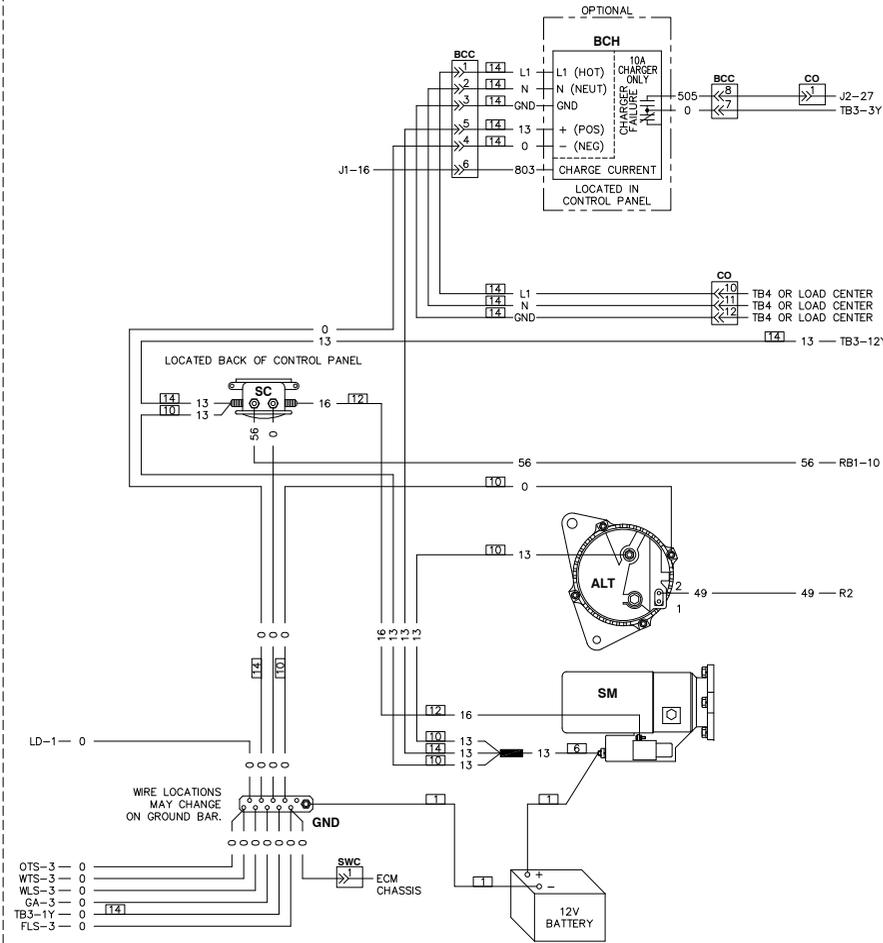


| | | | |
|------------------------------------|----------------|--------------------------|-------------------------|
| TITLE INSTALL B-GROUP BASETANKS | | | |
| MATERIAL SEE ABOVE | | GENERAC SPECIFICATION | PAINT SURFACE FINISH |
| ISSUE DATE: 02/04/11 | | | |
| SIZE B | CAGE NO N/A | DWG NO 0J4211 | REV A |
| SCALE 0.075 | WT-KG 0.00 | SHEET 1 OF 1 | |

INSTALLATION DRAWING

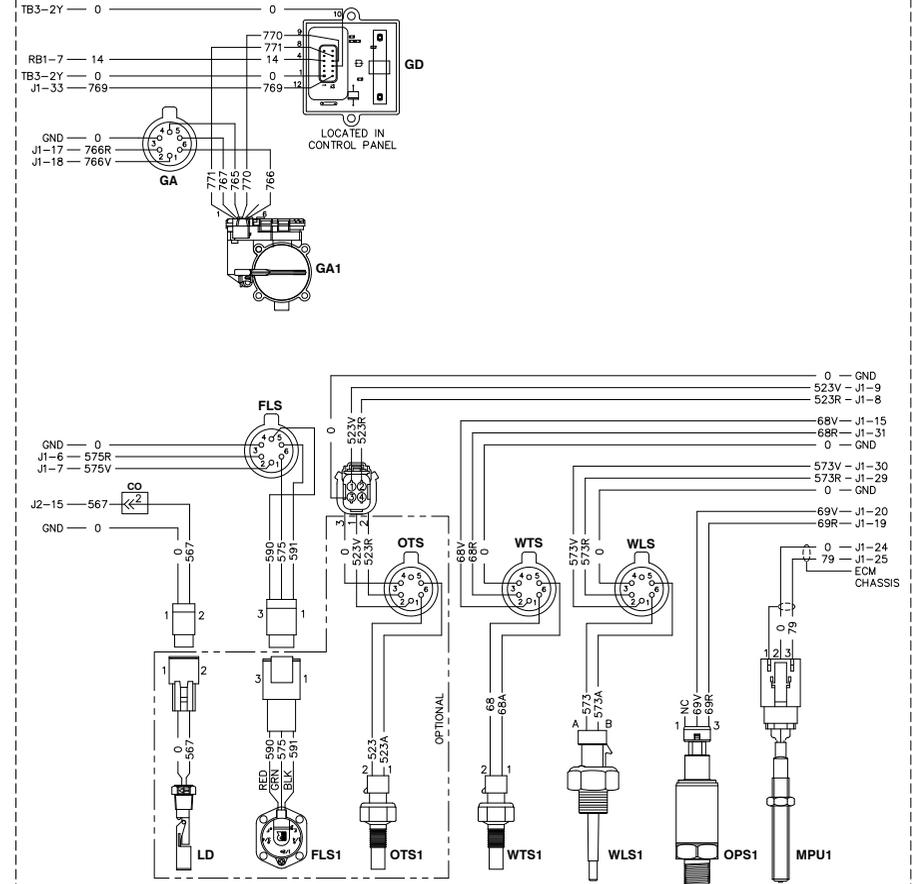
GROUP G

COMPONENTS LOCATED ON ENGINE

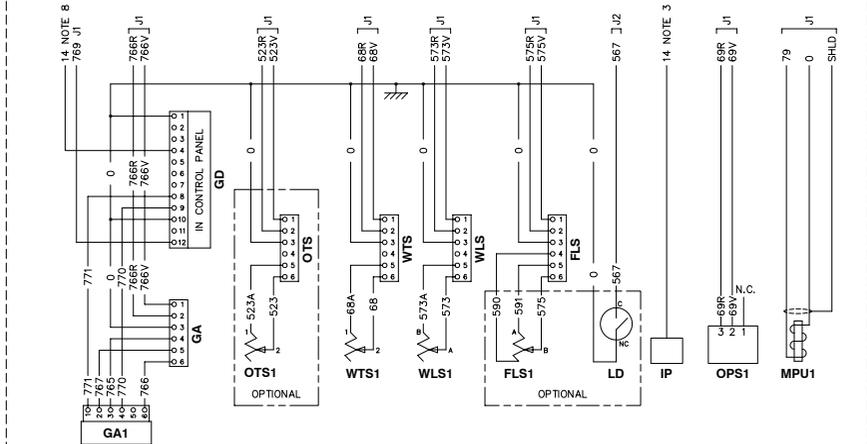
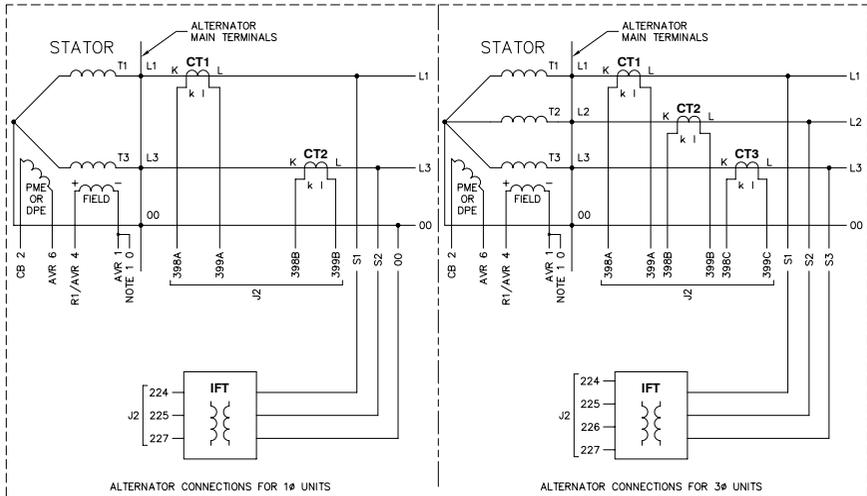


GROUP G

COMPONENTS LOCATED ON ENGINE

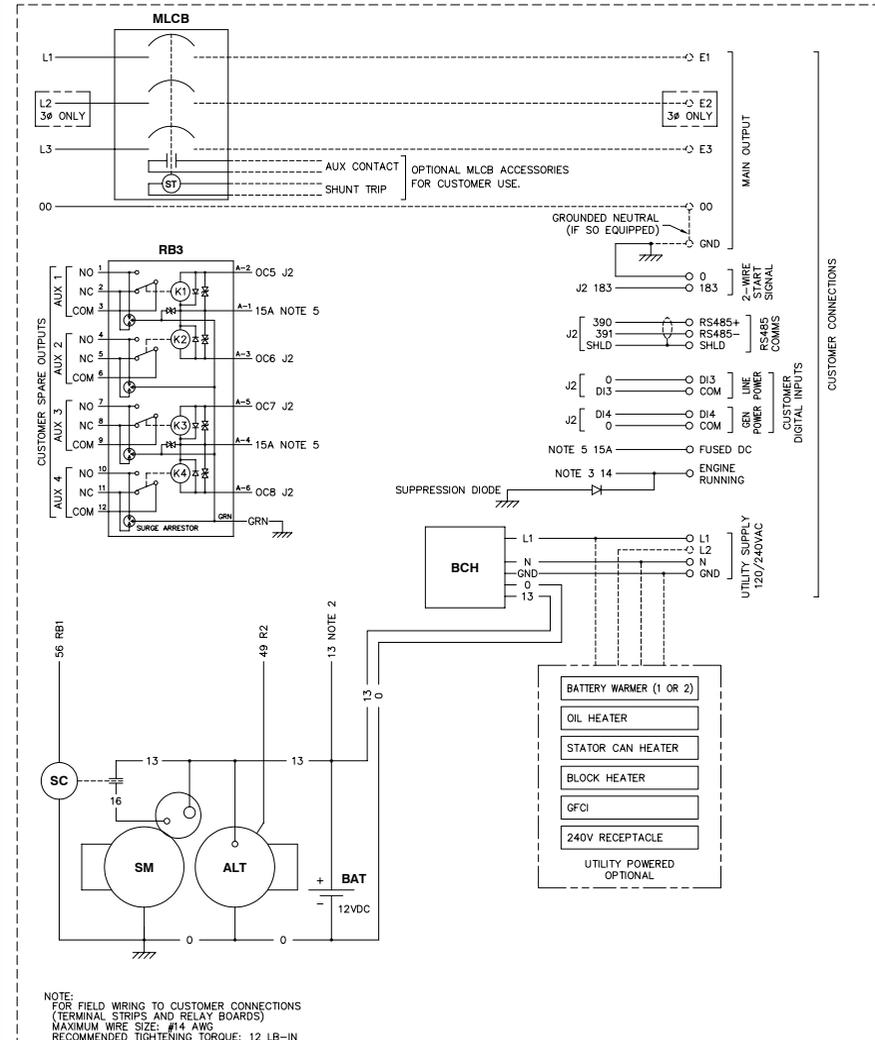


GROUP G



SCHEMATIC - DIAGRAM
D4.5L/D6.7L G17 I2V
DRAWING #: 0H9863

GROUP G



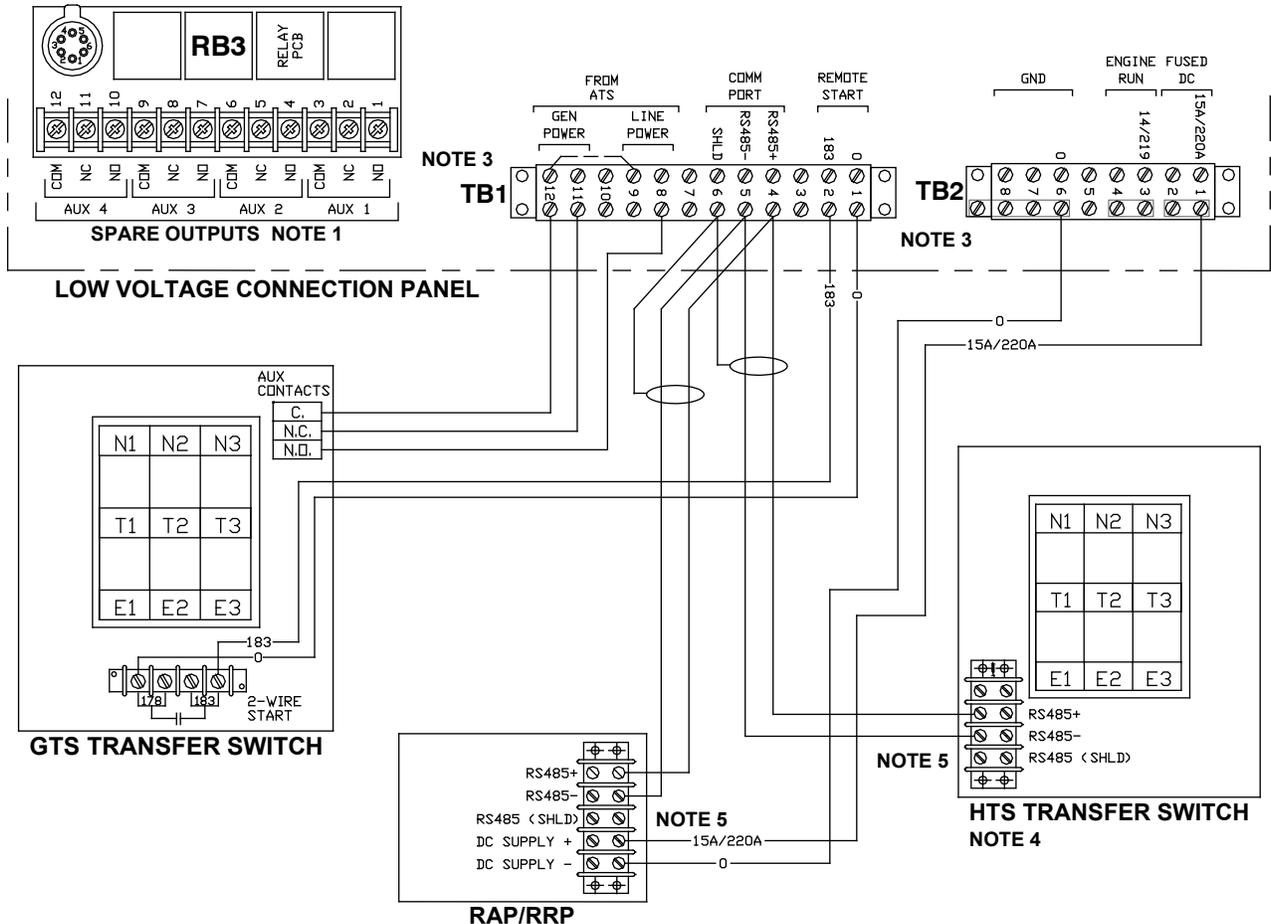
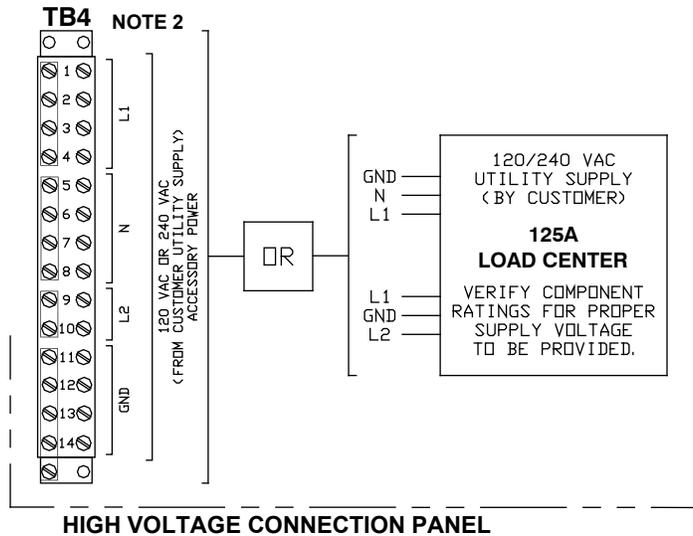
SCHEMATIC - DIAGRAM
D4.5L/D6.7L G17 I2V
DRAWING #: 0H9863

SYSTEM INTERCONNECTION

CONTROL INTERCONNECTIONS H-PANEL

NOTES:

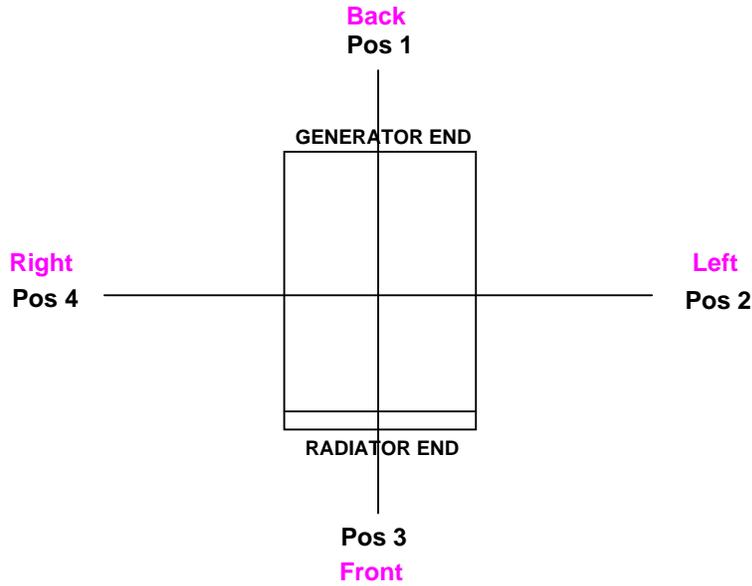
- 1) SPARE OUTPUTS ARE STANDARD ON INDUSTRIAL PRODUCT ONLY. GENLINK™ REQUIRED FOR PROGRAMMING.
- 2) TB4 MAX WIRE SIZE: #10 AWG, RECOMMENDED TIGHTENING TORQUE: 14 LB-IN
- 3) TB1, TB2 & RB3 MAX WIRE SIZE: #14 AWG RECOMMENDED TIGHTENING TORQUE: 12 LB-IN
- 4) REFER TO H-PANEL MANUAL FOR INSTRUCTIONS ON ENABLING HTS TRANSFER SWITCH. REFER TO HTS TRANSFER SWITCH MANUAL FOR DIP SWITCH SETTINGS FOR MULTIPLE HTS APPLICATIONS.
- 5) CONNECT THE RS485 OVERALL SHIELD AT GENSET CONNECTION TERMINAL ONLY.



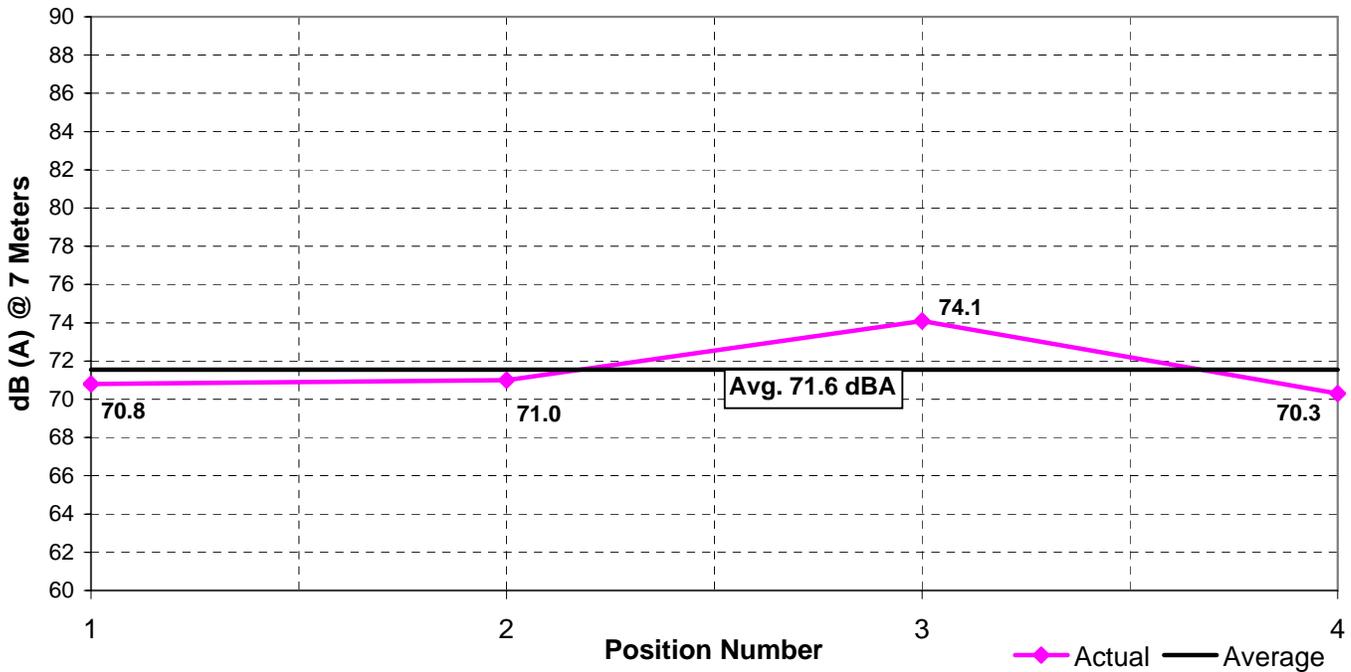
Sound Test Results

Genset: SD060 4.5L Iveco

Enclosure: Sound Attenuated, Level 2



Measured Sound Levels - 60 Hz



Notes:

1. All positions 23 ft (7M) from side faces of generator set.
2. Generator operating at full load.
3. Test conducted on a 100 foot diameter asphalt surface.
4. Non-enclosed sets do not include exhaust sound during testing.

EXHAUST EMISSIONS DATA

**STATEMENT OF EXHAUST EMISSIONS
2014 FPT DIESEL FUELED GENERATOR**

The measured emissions values provided here are proprietary to Generac and its authorized dealers. This information may only be disseminated upon request, to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc. The data provided shall not be meant to include information made public by Generac.

| | | | |
|-----------------------------|---------------------|-----------------------------|--|
| Generator Model: | SD060 | EPA Certificate Number: | FFPXL04.5DTD-001 |
| kW _e Rating: | 60 | CARB Certificate Number: | Not Applicable |
| Engine Family: | FFPXL04.5DTD | Emission Standard Category: | Tier 3 |
| Engine Model: | F4GE9455A*J | Certification Type: | Stationary Emergency CI (40 CFR Part 60 Subpart IIII) |
| Rated Engine Power (BHP)*: | 93 | | |
| Fuel Consumption (gal/hr)*: | 5.05 | | |
| Aspiration: | Turbocharged | | |
| Rated RPM: | 1800 | | |

*Engine Power and Fuel Consumption are declared by the Engine Manufacturer of Record and the U.S. EPA.

| Emissions based on engine power of specific Engine Model. | | | |
|---|-------------------|-------------|--------------|
| (These values are actual composite weighted exhaust emissions results over the EPA 5-mode test cycle.) | | | |
| CO | NOx + NMHC | PM | |
| 1.3 | 4.3 | 0.34 | Grams/kW-hr |
| 1.0 | 3.2 | 0.25 | Grams/bhp-hr |

- The stated values are actual exhaust emission test measurements obtained from an engine representative of the type described above.
- Values based on 5-mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA protocol, which is typically accepted by SCAQMD and other regional authorities.
- No emissions values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems, Inc. reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and local agencies must be consulted by the permit application/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems cannot be construed as a guarantee of installability of the generating set.

Certification of Quality

Generac Power Systems certifies that the products we manufacture have been built and tested in accordance with strict internal and external standards for quality. Our quality management system has been registered with the internationally recognized ISO 9001:2008 standard and our products comply with external standards that include, but are not limited to CSA, NEMA, EGSA, ISO and UL.

The Generac Quality Management System (GQMS) ensures the highest standards of quality at every level of production, from raw materials to the finished product. This includes receiving inspection, in-process checks, product and process audits, testing, final inspections and shipping standards.

Tests of our products are performed in accordance with our internal procedures and controlled through the GQMS to ensure accuracy and effectiveness. The testing process and product designs comply with external standards which may include, but are not limited to: ISO 8528-5, ISO 3046, NFPA 99, NFPA 110, BS 5514, SAE J1349 and DIN 6271.

Generac Power Systems has over one million square feet of manufacturing space and over 2000 employees dedicated to designing and manufacturing power generation equipment in our multiple State of Wisconsin, USA factories. All of our installed and mobile generators are built with pride by our skilled American workforce to ensure our customers receive the quality that they expect from Generac.

We are committed to producing quality products for both our internal and external customers. We will continuously improve our processes and diligently measure all aspects of our business.

Daniel Waschow

Vice President of Quality
Generac Power Systems, Inc.
Waukesha, Wisconsin USA



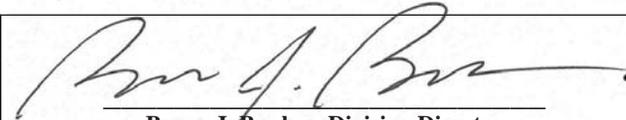
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2014 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT OF 1990

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: FPT Industrial S.p.A.
(U.S. Manufacturer or Importer)
Certificate Number: EFPXL04.5DTD-001

Effective Date:
05/20/2013

Expiration Date:
12/31/2014


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
05/20/2013
Revision Date:
N/A

Model Year: 2014
Manufacturer Type: Original Engine Manufacturer
Engine Family: EFPXL04.5DTD

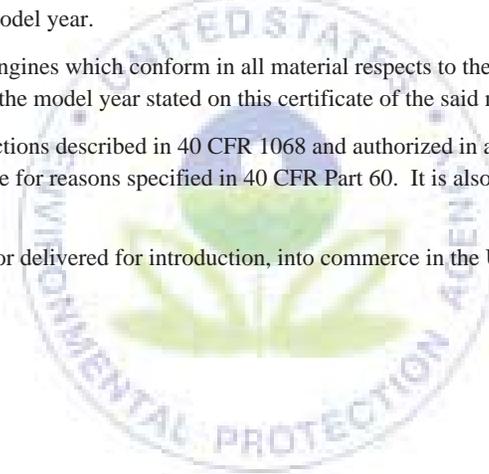
Mobile/Stationary Indicator: Stationary
Emissions Power Category: 56<=kW<75
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: No Non-After Treatment Devices Installed

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.





CERTIFICATE



This is to certify that

Generac Power Systems, Inc.

S45 W29290 Hwy. 59
Waukesha, WI 53189
United States of America

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope:

Design, Manufacturing and Distribution of Generators and Power Products.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2008

| | |
|--------------------------------|---------------|
| Certificate registration no. | 10012920 QM08 |
| Date of original certification | 2013-12-09 |
| Date of certification | 2013-12-09 |
| Valid until | 2016-12-08 |



UL DQS Inc.

Ganesh Rao
Managing Director



**Annex to Certificate
Registration No. 10012920 QM08**

Generac Power Systems, Inc.

S45 W29290 Hwy. 59
Waukesha, WI 53189
United States of America



Location

10012922
Generac Power Systems, Inc.
211 Murphy Dr.
Eagle, WI 53119
United States of America

10012923
Generac Power Systems, Inc.
757 N. Newcomb St.
Whitewater, WI 53190
United States of America

10012924
Generac Power Systems, Inc.
900 N. Parkway
Jefferson, WI 53549
United States of America

This annex (edition: 2013-12-09) is only valid in connection with the above-mentioned certificate.

ASCO[®] SERIES 300SE Power Transfer Switch

The ASCO Service Entrance Power Transfer Switch combines automatic power switching with the necessary disconnecting, grounding, and bonding required for use as service entrance equipment. The power transfer switch meets all National Electrical Code requirements for service entrance use. Transfer switches generally are installed at facilities that have a single utility feed and a single emergency power source.

ASCO SERIES 300SE products use two types of construction.

Products 400 amperes or less, utilize a single enclosure including a service (utility source) disconnect circuit breaker, as well as the power transfer switch, grounding and bonding provisions.

Products 600 amperes and above, utilize a multi-section switchboard construction including a service equipment section containing the service (utility source) disconnect circuit breaker, grounding, and bonding provisions. A second section contains the power transfer switch.

Product Features:

- Suitable for use as service entrance equipment. Listed to UL 891 (standard for switchboards) for 600 - 3000 amps, sizes and UL 1008 (standard for panel-boards) for 70 - 400 amps.
- Automatic Transfer Switch is listed to UL 1008 for total system loads
- Sizes available from 70 - 3000 amps, 600 VAC, 50 or 60 Hz, single or three phase
- Silver plated copper ground and neutral bus solderless screw type terminals
- Ground fault trip protection provided on sizes 1000 amps and above
- Available with solid or switched neutral

600 - 3000 Amp Construction

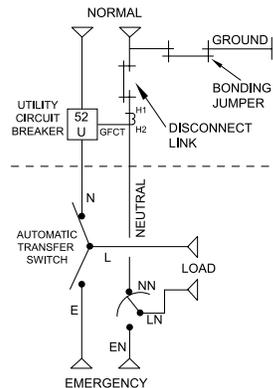


Fig. 16: ASCO SERIES 300 SE Rated 800 amperes Type 1 enclosure with Service Entrance Equipment

70 - 400 Amp Construction

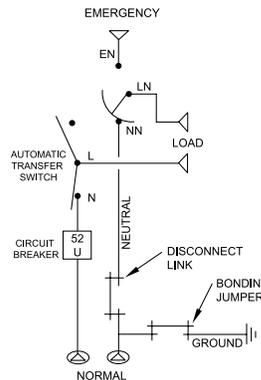


Fig. 17: ASCO SERIES 300 SE rated 200 amperes in Type 1 enclosure with single source breakers

ASCO[®] SERIES 300SE Transfer Switch Ordering Information

To order an ASCO SERIES 300SE Power Transfer Switch, complete the following catalog number:

| 3AUS + B + 3 + 400 + N + 1 + X + C + 11CD + 240V/60 | | | | | | | | | | | |
|---|------------------------------------|--------------------------------|--|----------------|----------------|------------|--|-----------|---|---------------------------------------|---|
| Product | Neutral Code | Phase Poles | Amperes Continuous Rating | Voltage Code | | Controller | Options | Enclosure | | Optional Accessories | Specific Volt & Freq |
| | | | | A ³ | B ³ | | | Blank | Open Type | | |
| 3AUS | B ¹ Switched Neutral | 2 poles, 1Ø 3 poles, 3Ø | 70, 100, 150, 200 ⁶ , 225 ⁶ , 250, 400, 600, 800, 1000, 1200, 1600, 2000 2500, 3000 | A ³ | 115 | 1 | Insert "X" If optional accessories are required | C | Type 1 (Standard) | 11BG Programmable Engine Exerciser | This information is necessary to allow correct control settings prior to shipment |
| | | | | C | 208 | | | F | Type 3R | 14AA/14BA Auxiliary Contacts (2 sets) | |
| | | | | D | 220 | | | G | Type 4 ² | 44G Strip Heater w/Thermostat | |
| | | | | E | 230 | | | H | Type 4X | 72A Serial Module | |
| | | | | F | 240 | | | L | Type 12 ² | 72E Connectivity Module | |
| | | | | H | 380 | | | M | Type 3R Secure | 73A Surge Suppressor | |
| | | | | J | 400 | | | N | Type 4 Secure | | |
| | | | | K | 415 | | | P | Type 4X ⁶ Secure Double Door SS | | |
| | | | | L | 440 | | | R | Type 3RX ^{7,8} Secure Double Door SS | | |
| | | | | M | 460 | | | | | | |

- Notes:**
1. Specify neutral code "C" for 250 and 400 amperes only.
 2. Available 70-1000 ampacity. Use Type 3R for 1200-3000 amp applications.
 3. 115-120 volt available 150-400 amps only.
 4. A solid neutral is standard on 3AUS.
 5. For switch sizes 70 - 225 amperes only.
 6. 200, 225 amp rated switch suitable for use with copper cable only.
 7. Type 316 Stainless Steel is standard. It provides an improved reduction in corrosion of salt and some chemicals. It is the preferred choice for marine environments.
 8. Available only on switches rated 1200, 2000, 2600, and 3000 Amps.

ASCO® SERIES 300SE Transfer Switch Dimensions and Shipping Weights

UL Type 1 Enclosure⁴

| Switch Rating Amps | Phase Poles | Neutral Code | Dimensions, In. (mm) | | | Approx. Shipping Weight Lb. (kg) |
|---------------------------------------|-------------|--------------|----------------------|-------------|-------------|----------------------------------|
| | | | Width | Height | Depth | |
| 70, 100, 150, 200, 225 | 2 | STD | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 400 (185) |
| | 2 | B | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 408 (188) |
| | 3 | STD | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 408 (188) |
| | 3 | B | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 416 (192) |
| 250, 400 | 2 | STD | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 400 (185) |
| | 2 | C | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 408 (188) |
| | 3 | STD | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 408 (188) |
| | 3 | C | 36.5 (927) | 48.5 (1232) | 13.25 (337) | 416 (192) |
| 600 ¹ , 800 ¹ | 2 | STD | 38 (965) | 91 (2311) | 28 (711) | 800 (370) |
| | 2 | B | 38 (965) | 91 (2311) | 28 (711) | 820 (378) |
| | 3 | STD | 38 (965) | 91 (2311) | 28 (711) | 820 (378) |
| | 3 | B | 38 (965) | 91 (2311) | 28 (711) | 846 (390) |
| 1000 ¹ , 1200 ¹ | 2 | STD | 38 (965) | 91 (2311) | 48 (1218) | 1085 (501) |
| | 2 | B | 38 (965) | 91 (2311) | 48 (1218) | 1105 (510) |
| | 3 | STD | 38 (965) | 91 (2311) | 48 (1218) | 1105 (510) |
| | 3 | B | 38 (965) | 91 (2311) | 48 (1218) | 1134 (523) |
| 1600 ¹ , 2000 ¹ | 3 | STD | 38 (965) | 91 (2311) | 48 (1218) | 2590 (1198) |
| | 3 | B | 38 (965) | 91 (2311) | 48 (1218) | 2640 (1218) |
| 2500 ¹ , 3000 ¹ | 3 | STD | 38 (965) | 91 (2311) | 72 (1829) | 4590 (2118) |
| | 3 | B | 38 (965) | 91 (2311) | 72 (1829) | 4655 (2148) |

UL Type 3R Enclosure⁴

| Switch Rating Amps | Phase Poles | Neutral Code | Dimensions, In. (mm) | | | Approx. Shipping Weight Lb. (kg) |
|--|-------------|--------------|----------------------|------------|----------|----------------------------------|
| | | | Width | Height | Depth | |
| 70, 100, 150, 200, 225 must specify | 2 | STD | 36(914) | 48(1219) | 16 (406) | 180 (83) |
| | 2 | B | 36(914) | 48(1219) | 16 (406) | 188 (87) |
| | 3 | STD | 36(914) | 48(1219) | 16 (406) | 188 (87) |
| | 3 | B | 36(914) | 48(1219) | 16 (406) | 196 (90) |
| 250, 400 | 2 | STD | 36(914) | 48(1219) | 16 (406) | 440 (203) |
| | 2 | C | 36(914) | 48(1219) | 16 (406) | 448 (207) |
| | 3 | STD | 36(914) | 48(1219) | 16 (406) | 448 (207) |
| | 3 | C | 36(914) | 48(1219) | 16 (406) | 485 (225) |
| 600 ¹ , 800 ¹ | 2 | STD | 41(1041) | 95.5(2426) | 34(864) | 990 (458) |
| | 2 | B | 41(1041) | 95.5(2426) | 34(864) | 1010 (467) |
| | 3 | STD | 41(1041) | 95.5(2426) | 34(864) | 1010 (467) |
| | 3 | B | 41(1041) | 95.5(2426) | 34(864) | 1036 (479) |
| 1000 ¹ , 1200 ¹ | 2 | STD | 41(1041) | 95.5(2426) | 62(1575) | 1305 (604) |
| | 2 | B | 41(1041) | 95.5(2426) | 62(1575) | 1325 (613) |
| | 3 | STD | 41(1041) | 95.5(2426) | 62(1575) | 1325 (613) |
| | 3 | B | 41(1041) | 95.5(2426) | 62(1575) | 1354 (626) |
| 1600 ¹ , 2000 ¹ | 3 | STD | 41(1041) | 95.5(2426) | 62(1575) | 2890 (1337) |
| | 3 | B | 41(1041) | 95.5(2426) | 62(1575) | 2940 (1360) |
| 2500 ¹ , 3000 ¹ | 3 | STD | 41(1041) | 96(2438) | 85(2159) | 5350 (2474) |
| | 3 | B | 41(1041) | 96(2438) | 85(2159) | 5415 (2504) |

- Notes:**
- Unit is designed for top and bottom cable entry for all services and load.
 - Enclosures for 600 – 3000 amps are freestanding.
 - When temperatures below 32° F can be experienced, special precautions should be taken, such as the inclusion of strip heaters, to prevent condensation and freezing of this condensation. This is

- particularly important when environmental enclosures (Type 3R, 4 & 12) are ordered for installation outdoors. See Optional Accessories page for space heater options (acc. 44G).
4. Dimensional data is approximate and subject to change. Certified dimensions available upon request.

Extended Warranties for SERIES 300SE Transfer Switches

| Catalog No. | Description |
|-------------|--|
| 2EXW300SE | Two-Year Extended Warranty (Parts & Labor) |
| 3EXW300SE | Three-Year Extended Warranty (Parts & Labor) |
| 4EXW300SE | Four-Year Extended Warranty (Parts & Labor) |
| 5EXW300SE | Five-Year Extended Warranty (Parts & Labor) |

SERIES 300SE AIC Rating

| Switch Rating | AIC Rating | Voltage |
|-----------------------------|------------|---------|
| 70, 100, 150, 200, 225 | 25,000 | 480 |
| 250, 400 | 35,000 | 480 |
| 600 | 50,000 | 480 |
| 800, 1000, 1200, 1600, 2000 | 65,000 | 480 |
| 2500, 3000 | 100,000 | 480 |

SERIES 300SE External Power Connections Sizes UL-Listed Solderless Screw-Type Terminals

| Switch Rating | Ranges of AL-CU Wire Sizes (Unless Specified Copper Only) |
|---|---|
| 70, 100, 150, 200 [*] , 225 [*] | One #14 to 4/0 AWG |
| 250, 400 | Two 1/0 AWG to 250 MCM or One #4 AWG to 600 MCM |
| 600 | Two 1/0 AWG to 600 MCM |
| 800, 1000, 1200 | Four 1/0 to 600 MCM |
| 1600, 2000 | Six 1/0 to 600 MCM |
| 2500 | Twelve 3/0 to 600 MCM |
| 3000 | Twelve 3/0 to 600 MCM |

- Note:** All SERIES 300SE switches are furnished with a solid neutral plate (unless switched neutral configuration is specified) and terminal lugs.
^{*} 200 and 225 amp rated switch for use with copper cable only.