STANDBY POWER RATING
80 kW, 100 kVA, 60 Hz

PRIME POWER RATING*
72 kW, 90 kVA, 60 Hz

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

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.

*Built in the USA using domestic and foreign parts

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

**Certain options or customization may not hold certification valid.

Image used for illustration purposes only
SD080 | 4.5L | 80 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency

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
- Factory Filled Oil
- Critical Exhaust Silencer (enclosed only)
- Stainless Steel flexible exhaust connection
- Silencer housed in discharge hood (enclosed only)
- Vented rotor
- 2/3 pitch
- Skewed stator
- Auxiliary voltage regulator power winding
- Amortisseur winding
- Brushless Excitation
- Full load capacity alternator
- Protective thermal switch

ALTERNATOR SYSTEM
- UL2200 GENprotect™
- 12 leads (3-phase, non 600 V)
- Class H insulation material
- 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)

CONTAINER SYSTEM
- Internal Genset Vibration Isolation
- Separation of circuits - high/low voltage
- Separation of circuits - multiple breakers
- Silencer Heat Shield
- Amortisseur winding
- 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
- 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
- Amortisseur winding
- 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
- Full load capacity alternator
- Protective thermal switch

ENCELUSURE (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
- 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)
- Customizeable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance algorithm
- Sealed Boards
- Password parameter adjustment protection

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)
**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.
## ENGINE SPECIFICATIONS

### General
- **Make**: Iveco/FPT
- **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/Aftercooled
- **Cylinder Head Type**: 2 Valve
- **Piston Type**: Aluminium
- **Crankshaft Type**: Forged Steel
- **Governor**: Electronic Isochronous
- **Frequency Regulation (Steady State)**: +/- 0.25%

### Cooling System
- **Water Pump Type**: 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 Injection**: 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
- **Battery Voltage**: 12 VDC
- **Ground Polarity**: Negative

## ALTERNATOR SPECIFICATIONS

### Standard Model
- **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
- **Bearing**: 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%
**OPERATING DATA**

### POWER RATINGS

<table>
<thead>
<tr>
<th>Alternator Type</th>
<th>Voltage</th>
<th>kW</th>
<th>Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Phase 120/240 VAC @1.0pf</td>
<td>480 VAC</td>
<td>80</td>
<td>333</td>
</tr>
<tr>
<td>Three-Phase 120/208 VAC @0.8pf</td>
<td>480 VAC</td>
<td>80</td>
<td>278</td>
</tr>
<tr>
<td>Three-Phase 120/240 VAC @0.8pf</td>
<td>480 VAC</td>
<td>80</td>
<td>241</td>
</tr>
<tr>
<td>Three-Phase 277/480 VAC @0.8pf</td>
<td>480 VAC</td>
<td>80</td>
<td>120</td>
</tr>
<tr>
<td>Three-Phase 346/600 VAC @0.8pf</td>
<td>480 VAC</td>
<td>80</td>
<td>96</td>
</tr>
</tbody>
</table>

### STARTING CAPABILITIES (sKVA)

<table>
<thead>
<tr>
<th>Alternator</th>
<th>kW</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
<th>10%</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>80</td>
<td>59</td>
<td>88</td>
<td>117</td>
<td>147</td>
<td>176</td>
<td>205</td>
<td>44</td>
<td>66</td>
<td>88</td>
<td>110</td>
<td>132</td>
<td>154</td>
</tr>
<tr>
<td>Upsize 1</td>
<td>100</td>
<td>79</td>
<td>118</td>
<td>157</td>
<td>197</td>
<td>236</td>
<td>275</td>
<td>59</td>
<td>89</td>
<td>118</td>
<td>148</td>
<td>177</td>
<td>206</td>
</tr>
<tr>
<td>Upsize 2</td>
<td>130</td>
<td>116</td>
<td>174</td>
<td>232</td>
<td>290</td>
<td>348</td>
<td>406</td>
<td>87</td>
<td>131</td>
<td>174</td>
<td>218</td>
<td>261</td>
<td>305</td>
</tr>
</tbody>
</table>

### FUEL CONSUMPTION RATES*

<table>
<thead>
<tr>
<th>Fuel Pump Lift - ft (m)</th>
<th>Diesel - gal/hr (l/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 (1)</td>
<td>Percent Load Standby</td>
</tr>
<tr>
<td>25%</td>
<td>2.1 (7.9)</td>
</tr>
<tr>
<td>50%</td>
<td>3.7 (14.0)</td>
</tr>
<tr>
<td>75%</td>
<td>5.2 (19.7)</td>
</tr>
<tr>
<td>100%</td>
<td>6.3 (23.8)</td>
</tr>
</tbody>
</table>

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

### COOLING

<table>
<thead>
<tr>
<th>Coolant Flow per Minute</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>gal/min (l/min)</td>
<td>32.7 (123.8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coolant System Capacity</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>gal (L)</td>
<td>4.5 (17.44)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heat Rejection to Coolant</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTU/hr</td>
<td>232,270</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inlet Air</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>cfm (m³/hr)</td>
<td>6360 (180)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. Operating Radiator Air Temp</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>°F (°C)</td>
<td>122 (50)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. Ambient Temperature (before derate)</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>°F (°C)</td>
<td>104 (40)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum Radiator Backpressure</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>in H₂O</td>
<td>0.5</td>
</tr>
</tbody>
</table>

### COMBUSTION AIR REQUIREMENTS

<table>
<thead>
<tr>
<th>Flow at Rated Power</th>
<th>cfm (m³/min)</th>
<th>306 (8.67)</th>
</tr>
</thead>
</table>

### ENGINE

<table>
<thead>
<tr>
<th>Rated Engine Speed</th>
<th>rpm</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1800</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horsepower at Rated kW**</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>hp</td>
<td>131</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Piston Speed</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft/min (m/min)</td>
<td>1559 (475)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMEP</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>psi</td>
<td>210</td>
</tr>
</tbody>
</table>

### EXHAUST

<table>
<thead>
<tr>
<th>Exhaust Flow (Rated Output)</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>cfm (m³/min)</td>
<td>782 (22.14)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. Backpressure (Post Silencer)</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>inHg (Kpa)</td>
<td>1.5 (5.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exhaust Temp (Rated Output)</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>°F (°C)</td>
<td>887 (475)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exhaust Outlet Size (Open Set)</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm (in)</td>
<td>76.2 (3.0)</td>
</tr>
</tbody>
</table>

** 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.
### OPEN SET

<table>
<thead>
<tr>
<th>RUN TIME HOURS</th>
<th>USABLE CAPACITY GAL (L)</th>
<th>L x W x H in (mm)</th>
<th>WT lbs (kg) - Tank &amp; Open Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO TANK</td>
<td>-</td>
<td>93 (2362.2) x 40 (1016) x 49 (1244.6)</td>
<td>2425 (1100)</td>
</tr>
<tr>
<td>13</td>
<td>79 (299)</td>
<td>93 (2362.2) x 40 (1016) x 62 (1574.8)</td>
<td>2947 (1201)</td>
</tr>
<tr>
<td>30</td>
<td>189 (715.4)</td>
<td>93 (2362.2) x 40 (1016) x 74 (1879.6)</td>
<td>3183 (1444)</td>
</tr>
<tr>
<td>48</td>
<td>300 (1135.6)</td>
<td>93 (2362.2) x 40 (1016) x 86 (2184.4)</td>
<td>3407 (1545)</td>
</tr>
<tr>
<td>56</td>
<td>350 (1325)</td>
<td>110 (2794) x 40 (1016) x 86 (2184.4)</td>
<td>NA</td>
</tr>
<tr>
<td>81</td>
<td>510 (1930.5)</td>
<td>117 (2971.8) x 47 (1193.8) x 86 (2184.4)</td>
<td>3790 (1719)</td>
</tr>
<tr>
<td>93</td>
<td>589 (2229.6)</td>
<td>128 (3251.2) x 49 (1244.6) x 86 (2184.4)</td>
<td>4269 (1936)</td>
</tr>
</tbody>
</table>

### STANDARD ENCLOSURE

<table>
<thead>
<tr>
<th>RUN TIME HOURS</th>
<th>USABLE CAPACITY GAL (L)</th>
<th>L x W x H in (mm)</th>
<th>WT lbs (kg) - Enclosure Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO TANK</td>
<td>-</td>
<td>112 (2844.8) x 41 (1041.4) x 56 (1422.4)</td>
<td>425 (193)</td>
</tr>
<tr>
<td>13</td>
<td>79 (299)</td>
<td>112 (2844.8) x 41 (1041.4) x 69 (1752.6)</td>
<td>285 (129)</td>
</tr>
<tr>
<td>30</td>
<td>189 (715.4)</td>
<td>112 (2844.8) x 41 (1041.4) x 81 (2057.4)</td>
<td>347 (157)</td>
</tr>
<tr>
<td>48</td>
<td>300 (1135.6)</td>
<td>112 (2844.8) x 41 (1041.4) x 93 (2382.2)</td>
<td>462 (210)</td>
</tr>
<tr>
<td>56</td>
<td>350 (1325)</td>
<td>112 (2844.8) x 41 (1041.4) x 93 (2382.2)</td>
<td>545 (246)</td>
</tr>
<tr>
<td>81</td>
<td>510 (1930.5)</td>
<td>117 (2971.8) x 47 (1193.8) x 93 (2382.2)</td>
<td>625 (284)</td>
</tr>
<tr>
<td>93</td>
<td>589 (2229.6)</td>
<td>128 (3251.2) x 49 (1244.6) x 93 (2382.2)</td>
<td>706 (321)</td>
</tr>
</tbody>
</table>

### LEVEL 1 ACOUSTIC ENCLOSURE

<table>
<thead>
<tr>
<th>RUN TIME HOURS</th>
<th>USABLE CAPACITY GAL (L)</th>
<th>L x W x H in (mm)</th>
<th>WT lbs (kg) - Enclosure Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO TANK</td>
<td>-</td>
<td>130 (3302) x 41 (1041.4) x 56 (1422.4)</td>
<td>450 (204)</td>
</tr>
<tr>
<td>13</td>
<td>79 (299)</td>
<td>130 (3302) x 41 (1041.4) x 69 (1752.6)</td>
<td>395 (180)</td>
</tr>
<tr>
<td>30</td>
<td>189 (715.4)</td>
<td>130 (3302) x 41 (1041.4) x 81 (2057.4)</td>
<td>462 (210)</td>
</tr>
<tr>
<td>48</td>
<td>300 (1135.6)</td>
<td>130 (3302) x 41 (1041.4) x 93 (2382.2)</td>
<td>545 (246)</td>
</tr>
<tr>
<td>56</td>
<td>350 (1325)</td>
<td>130 (3302) x 41 (1041.4) x 93 (2382.2)</td>
<td>625 (284)</td>
</tr>
<tr>
<td>81</td>
<td>510 (1930.5)</td>
<td>130 (3302) x 47 (1193.8) x 93 (2382.2)</td>
<td>706 (321)</td>
</tr>
<tr>
<td>93</td>
<td>589 (2229.6)</td>
<td>130 (3302) x 49 (1244.6) x 93 (2382.2)</td>
<td>787 (357)</td>
</tr>
</tbody>
</table>

### LEVEL 2 ACOUSTIC ENCLOSURE

<table>
<thead>
<tr>
<th>RUN TIME HOURS</th>
<th>USABLE CAPACITY GAL (L)</th>
<th>L x W x H in (mm)</th>
<th>WT lbs (kg) - Enclosure Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO TANK</td>
<td>-</td>
<td>112 (2844.8) x 41 (1041.4) x 69 (1752.6)</td>
<td>625 (284)</td>
</tr>
<tr>
<td>13</td>
<td>79 (299)</td>
<td>112 (2844.8) x 41 (1041.4) x 82 (2082.8)</td>
<td>570 (255)</td>
</tr>
<tr>
<td>30</td>
<td>189 (715.4)</td>
<td>112 (2844.8) x 41 (1041.4) x 94 (2387.6)</td>
<td>657 (298)</td>
</tr>
<tr>
<td>48</td>
<td>300 (1135.6)</td>
<td>112 (2844.8) x 41 (1041.4) x 106 (2692.4)</td>
<td>744 (336)</td>
</tr>
<tr>
<td>56</td>
<td>350 (1325)</td>
<td>112 (2844.8) x 41 (1041.4) x 106 (2692.4)</td>
<td>831 (375)</td>
</tr>
<tr>
<td>81</td>
<td>510 (1930.5)</td>
<td>117 (2971.8) x 47 (1193.8) x 106 (2692.4)</td>
<td>918 (414)</td>
</tr>
<tr>
<td>93</td>
<td>589 (2229.6)</td>
<td>128 (3251.2) x 49 (1244.6) x 106 (2692.4)</td>
<td>1005 (463)</td>
</tr>
</tbody>
</table>

*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.*