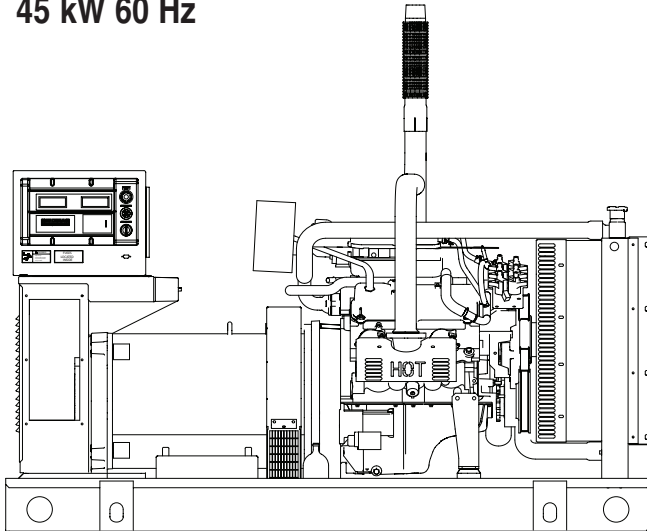


SG045

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
45 kW 60 Hz



GENERAC 4.2L ENGINE

Naturally Aspirated
Gaseous Fueled
Meets EPA Emission Regulations

STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Overspeed automatic shutdown
- Crank timer
- Exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor
- Flex fuel line

FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Quiet test for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- State of the art digital control system with H100 digital control panel
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion Generac designed alternator
- Vibration isolated from mounting base
- Matching Generac transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint

GENERAC®

APPLICATION & ENGINEERING DATA

SG045

GENERATOR SPECIFICATIONS

TYPE	Synchronous
ROTOR INSULATION.....	Class H
STATOR INSULATION.....	Class H
TOTAL HARMONIC DISTORTION.....	<5%
TELEPHONE INTERFERENCE FACTOR (TIF)	<50
ALTERNATOR OUTPUT LEADS 3 PHASE	4 wire
BEARINGS.....	Sealed Ball
COUPLING.....	Flexible Disc
LOAD CAPACITY (STANDBY RATING).....	45 kW
EXCITATION SYSTEM.....	Direct

NOTE: Emergency loading in compliance with NFPA 99, NFPA 110. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.

VOLTAGE REGULATOR

TYPE	Full Digital
SENSING	3 Phase
REGULATION.....	± 1/4%
FEATURES.....	Built into H-100 Control Panel V/F Adjustable Adjustable Voltage and Gain

GENERATOR FEATURES

- Revolving field heavy duty generator
- Directly connected to the engine
- Operating temperature rise 120 °C above a 40 °C ambient
- Insulation is Class H rated at 150 °C rise
- All prototype models have passed three phase short circuit testing

CONTROL PANEL FEATURES

- TWO FOUR LINE LCD DISPLAYS READ:
 - Voltage (all phases)
 - Power factor
 - kVAR
 - Engine speed
 - Run hours
 - Fault history
 - Coolant temperature
 - Low oil pressure shutdown
 - Overvoltage
 - Low coolant level
 - Not in auto position (flashing light)
 - ATS selection
 - Current (all phases)
 - kW
 - Transfer switch status
 - Low fuel pressure
 - Service reminders
 - Oil pressure
 - Time and date
 - High coolant temperature shutdown
 - Overspeed
 - Low coolant level
 - Exercise speed
- INTERNAL FUNCTIONS:
 - I²T function for alternator protection from line to neutral and line to line short circuits
 - Emergency stop
 - Programmable auto crank function
 - 2 wire start for any transfer switch
 - Communicates with the Generac HTS transfer switch
 - Built-in 7 day exerciser
 - Adjustable engine speed at exerciser
 - RS232 port for GenLink[®] control
 - RS485 port remote communication
 - Canbus addressable
 - Governor controller and voltage regulator are built into the master control board
 - Temperature range -40 °C to 70 °C

ENGINE SPECIFICATIONS

MAKE	Generac
MODEL.....	V6
CYLINDERS.....	6
DISPLACEMENT.....	4.2 Liter
BORE (inches)	3.81
STROKE (inches).....	3.74
COMPRESSION RATIO.....	9.3:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS (Int. & Exh.)	Precision ground and hardened
LIFTER TYPE.....	Roller, Hydraulic

GOVERNOR SPECIFICATIONS

TYPE	Electronic
FREQUENCY REGULATION.....	Isochronous
STEADY STATE REGULATION.....	± 0.25%

ENGINE LUBRICATION SYSTEM

OIL PUMP	Gear
OIL FILTER.....	Full flow spin-on cartridge
CRANKCASE CAPACITY.....	6 Quarts

ENGINE COOLING SYSTEM

TYPE	Pressurized Closed
WATER PUMP FLOW	10.8 gal/min
FAN SPEED	1050
FAN DIAMETER.....	22 inches
FAN MODE.....	Puller

FUEL SYSTEM

FUEL TYPE.....	Natural gas, propane vapor
CARBURETOR.....	Down Draft
SECONDARY FUEL REGULATOR.....	Standard
FUEL SHUT OFF SOLENOID	Standard
OPERATING FUEL PRESSURE.....	5" - 14" H ₂ O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	12V 30 Amp
STATIC BATTERY CHARGER	2 Amp
RECOMMENDED BATTERY	Group 26, 525CCA
SYSTEM VOLTAGE.....	12 Volts

OPERATING DATA

		SG045		
KW RATING		45 (LPG)		
ENGINE SIZE		4.2 Liter		
GENERATOR OUTPUT VOLTAGE/KW - 60Hz		KW	AMP	CB Size
120/240V, 1-phase, 1.0 pf (nat. gas)		45 (42)	188 (175)	225 (200)
120/240V, 3-phase, 0.8 pf (nat. gas)		45 (43)	135 (129)	150
120/208V, 3-phase, 0.8 pf (nat. gas)		45 (43)	156 (149)	175
277/480V, 3-phase, 0.8 pf (nat. gas)		45 (43)	68 (65)	80
346/600V, 3-phase, 0.8 pf (nat.gas)		45 (43)	54 (52)	60
GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%				
Single phase or 208 3-phase		90		
480V, 600V 3-phase		120		
ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)		Natural Gas	Propane	
		(ft ³ /hr.)	(gal/hr.)	cu ft/hr
Exercise cycle		85	0.9	33.7
25% of rated load		175	1.9	69.6
50% of rated load		333	3.7	133
75% of rated load		480	5.3	192
100% of rated load*		668	7.3	267
ENGINE COOLING				
Air flow (inlet air including alternator and combustion air)	ft ³ /min.	2,460		
System coolant capacity	US gal.	3.0		
Heat rejection to coolant	BTU/hr.	160,500		
Max. operating air temp. on radiator	°C (°F)	60 (150)		
Max. ambient temperature	°C (°F)	50 (140)		
COMBUSTION AIR REQUIREMENTS				
Flow at rated power 60 Hz	cfm	125		
EXHAUST				
Exhaust flow at rated output 60 Hz	cfm	395		
Exhaust temp. at muffler outlet	°F	1100		
Maximum recommended back pressure	kPa ("Hg)	10 (2.9")		
ENGINE PARAMETERS				
Rated synchronous RPM	60 Hz	1800		
HP at rated KW**	60 Hz	71		
POWER ADJUSTMENT FOR AMBIENT CONDITIONS				
Temperature Deration				
3% for every 10 °C above - °C		25		
1.65% for every 10 °F above - °F		77		
Altitude Deration				
1% for every 100 m above - m		183		
3% for every 1000 ft. above - ft.		600		

* Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

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

RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

STANDARD ENGINE & SAFETY FEATURES

SG045

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Radiator Duct Adapter
- Fuel Lockoff Solenoid
- Secondary Fuel Regulator (N.G. and L.P.)
- Battery Charge Alternator
- Battery Cables
- Battery Box
- Vibration Isolation of Unit to Mounting Base
- 12 Volt, Solenoid-Activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Isochronous Governor
- Engine Block Heater
- Gas Detector
- H100 Control Panel
- 8-Function Relay Board

■ FUEL ACCESSORIES

- Flexible Fuel Lines
- L.P. Liquid Withdrawal
- Automatic Gaseous Dual Fuel

■ ELECTRICAL ACCESSORIES

- Battery, 12 Volt, 90 A.H., 26F
- 10A Dual Rate Battery Charger

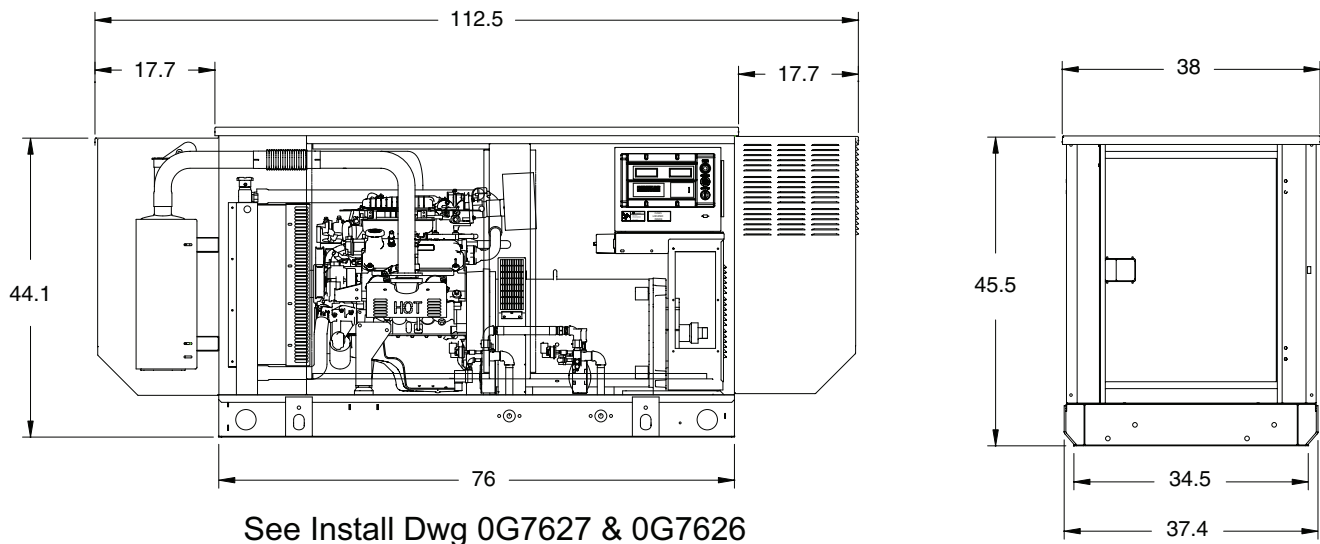
■ ALTERNATOR ACCESSORIES

- Alternator Upsizing to 60 kW
- Main Line Circuit Breaker

■ ENCLOSURES

- Aluminum Enclosure
- Enclosed Muffler

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.



GENERAC

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