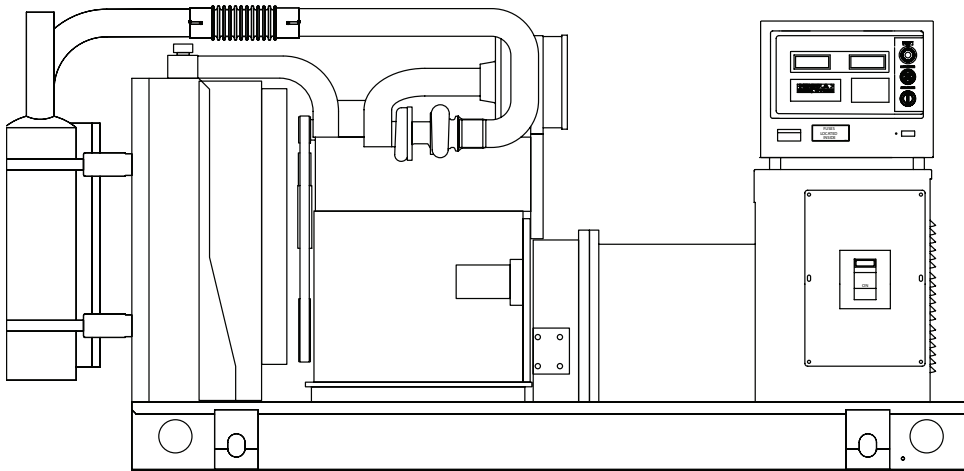


SD010

Liquid Cooled Diesel Engine Generator Sets

Standby Power Rating
10KW 60 Hz / 10KVA 50 Hz

Prime Power Rating
8KW 60 Hz / 8KVA 50Hz



Power Matched
GENERAC 2.4DT ENGINE
Turbocharged
Interim Tier IV Compliant

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **TEST CRITERIA:**
 - ✓ PROTOTYPE TESTED
 - ✓ SYSTEM TORSIONAL TESTED
 - ✓ ELECTRO-MAGNETIC INTERFERENCE
 - ✓ NEMA MG1 EVALUATION
 - ✓ MOTOR STARTING ABILITY
 - ✓ SHORT CIRCUIT TESTING
 - ✓ UL 2200 COMPLIANCE AVAILABLE
- **SOLID-STATE, FREQUENCY COMPENSATED DIGITAL VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized
- FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component. You are never on your own when you own a GENERAC POWER SYSTEM.
- **ECONOMICAL DIESEL POWER.** Low cost operation due to modern diesel engine technology. Better fuel utilization plus lower cost per gallon provide real savings.
- **LONGER ENGINE LIFE.** GENERAC heavy-duty diesels provide long and reliable operating life.
- **GENERAC TRANSFER SWITCHES, SWITCHGEAR AND ACCESSORIES.** Long life and reliability is synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems, accessories, switchgear and controls for total system compatibility.

GENERAC®

APPLICATION & ENGINEERING DATA

SD010

GENERATOR SPECIFICATIONS

TYPE	390 mm, Four-pole, revolving field
ROTOR INSULATION.....	Class H
STATOR INSULATION.....	Class H
TOTAL HARMONIC DISTORTION	<3%
TELEPHONE INTERFERENCE FACTOR (TIF).....	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	1
COUPLING.....	Direct, Flexible Disc
LOAD CAPACITY (STANDBY)	100%
LOAD CAPACITY (PRIME).....	110%

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
- Quiet drive coupling
- 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
 - Exercise speed
 - Not in auto position (flashing light)
 - Current (all phases)
 - kW
 - Transfer switch status
 - Low fuel pressure
 - Service reminders
 - Oil pressure
 - Time and date
 - High coolant temp shutdown
 - Overspeed
 - Low coolant level
 - ATS selection
- 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	DEERE
MODEL.....	See Exhaust Emission Sheet
ENGINE FAMILY.....	First digit is Cert. Yr. (i.e. 7, 8, 9) _JDXL02.4074
CYLINDERS	4 in-line
DISPLACEMENT	2.4 Liter (149 cu. in.)
BORE	86 mm (3.39 in.)
STROKE.....	105 mm (4.13 in.)
COMPRESSION RATIO	18:1
INTAKE AIR	Turbocharged
NUMBER OF MAIN BEARINGS	5
CONNECTING RODS	4-Drop forged steel
CYLINDER HEAD	Cast iron w/ overhead valve
PISTONS.....	4-Aluminum alloy
CRANKSHAFT	Forged Steel

VALVE TRAIN

LIFTER TYPE	Solid
INTAKE VALVE MATERIAL.....	High Temp
EXHAUST VALVE MATERIAL	High Temp

ENGINE GOVERNOR

<input type="checkbox"/> ELECTRONIC	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	0.5%
STEADY STATE REGULATION.....	±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Gear
OIL FILTER.....	Full flow, cartridge
CRANKCASE CAPACITY.....	7.5 qts.

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, closed recovery
WATER PUMP.....	Pre-lubed, self-sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES.....	6
DIAMETER OF FAN	457.2 mm (18.0 in.)
COOLANT HEATER	120V, 1000 W

FUEL SYSTEM

FUEL	#2D Fuel (Min Cetane #40) (Fuel should conform to ASTM Spec.)
FUEL FILTER	10 Micron
FUEL INJECTION PUMP	Bosch (VE)
FUEL PUMP.....	Engine Driven Gear Type
INJECTORS	Pintel Type, 2100 PSI
ENGINE TYPE.....	Pre-combustion, swirl chamber
FUEL LINE (Supply)	6.35 mm (0.25 in.)
FUEL RETURN LINE	3.17 mm (0.125 in.)

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	42 Amps at 12 V
STARTER MOTOR	12 V 290A @ 0 °C
RECOMMENDED BATTERY.....	(1) - 12 V, 90 A.H., 27F
GROUND POLARITY	Negative

SD010

OPERATING DATA

	STANDBY				PRIME					
	SD010				SD010					
GENERATOR OUTPUT VOLTAGE/KW-60Hz	Rated kW		Rated AMP		Rated kW		Rated AMP			
120/240V, 1-phase, 1.0 pf	10		41.7		8		33			
120/208V, 3-phase, 0.8 pf	10		34.7		8		28			
120/240V, 3-phase, 0.8 pf	10		30.1		8		24			
277/480V, 3-phase, 0.8 pf	10		15.0		8		12			
600V, 3-phase, 0.8 pf	10		12.0		8		9.6			
	NOTE: Consult your Generac dealer for additional voltages.									
GENERATOR OUTPUT VOLTAGE/KVA-50Hz	Rated kVA		Rated AMP		Rated kVA		Rated AMP			
110/220V, 1-phase, 1.0 pf	8		36		6.6		30			
115/200V, 3-phase, 0.8 pf	10		28.9		8		23			
100/200V, 3-phase, 0.8 pf	10		28.9		8		23			
231/400V, 3-phase, 0.8 pf	10		14.4		8		12			
	NOTE: Consult your Generac dealer for additional voltages.									
MOTOR STARTING KVA	200/240V		400/480V		200/240V		400/480V			
Maximum at 35% instantaneous voltage dip	17 / 20		20 / 24		17 / 20		17 / 20			
Stand—50/60 Hz										
FUEL		Load	25%	50%	75%	100%	25%	50%	75%	100%
Fuel consumption—60 Hz		gal./hr.	0.26	0.5	0.74	0.96	0.21	0.41	0.6	0.79
		liters/hr.	0.97	1.91	2.80	3.65	0.8	1.56	2.29	2.99
Fuel consumption—50 Hz		gal./hr.	0.21	0.4	0.59	0.77	0.17	0.33	0.48	0.63
		liters/hr.	0.78	1.53	2.24	2.92	0.64	1.25	1.83	2.39
Fuel pump lift		meters (in.)	0.9 (36)				0.9 (36)			
COOLING										
Coolant capacity	System - lit. (US gal.)		11.2 (3.0)				11.2 (3.0)			
	Engine - lit. (US gal.)		2.6 (0.7)				2.6 (0.7)			
Radiator - lit. (US gal.)			8.6 (2.3)				8.6 (2.3)			
Coolant flow/min.	60 Hz - lit. (US gal.)		90.8 (24)				90.8 (24)			
	50 Hz - lit. (US gal.)		75.7 (20)				75.7 (20)			
Heat rejection to coolant	BTU/hr.		46,000				36,000			
Inlet air	60 Hz - m ³ /min. (cfm)		130 (4,600)				130 (4,600)			
	50 Hz - m ³ /min. (cfm)		109 (3,800)				109 (3,800)			
Max. operating air temp onto radiator			60 (140)				60 (140)			
*see note	°C (°F)									
Max. operating ambient temp			50 (122)				50 (122)			
*see note	°C (°F)									
COMBUSTION AIR REQUIREMENTS										
Flow at rated power	60 Hz - m ³ /min. (cfm)		1.3 (46)				1.1 (39)			
	50 Hz - m ³ /min. (cfm)		1.0 (34)				0.8 (29)			
EXHAUST										
Exhaust flow at rated output	60 Hz m ³ /min. (cfm)		3.1 (108)				2.4 (86)			
	50 Hz - m ³ /min. (cfm)		2.3 (81)				1.8 (65)			
Max recommended back pressure	Kpa ("Hg)		5.0 (1.5)				5.0 (1.5)			
Exhaust temp at rated output	°C (°F)		432 (810)				421 (790)			
Exhaust outlet size	in. N.P.T. (female)		2.5"				2.5"			
ENGINE										
Rated RPM	60 Hz / 50 Hz		1800 / 1500				1800 / 1500			
HP at rated KW	60 Hz / 50 Hz		20.1 / 15.2				17.1 / 12.8			
Piston speed	60 Hz - m/min. (ft./min.)		377.6 (1239)				377.6 (1239)			
	50 Hz - m/min. (ft./min.)		314.7 (1033)				314.7 (1033)			
BMEP	60 Hz / 50 Hz - psi		60 / 55				51 / 46			
POWER ADJUSTMENTS FOR AMBIENT CONDITIONS										
Temperature										
	5% for every 10°C above - °C		25				25			
	2.77% for every 10°F above - °F		77				77			
Altitude										
	0.8% for every 100 m above - m		183				183			
	-2.7% for every 1000 ft. above - ft.		600				600			

* Note: Values given are maximum temperatures to which power adjustments can be applied. Consult your Generac Power Systems representative if operating conditions exceed these maximums. Altitude and temperature derations are emissions certification contingent by engine manufacturer. Actual power deration may be less than published values.

- 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
- Coolant Heater
- Secondary Fuel Filter
- Fuel Lockoff Solenoid
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Vibration Isolation of Unit to Mounting Base
- 12 Volt, Solenoid-activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Radiator Duct Adaptor
- Isochronous Governor

OPTIONS

- **OPTIONAL COOLING SYSTEM ACCESSORIES**
 - 208/240V Coolant Heater
- **OPTIONAL FUEL ACCESSORIES**
 - Flexible Fuel Lines
 - UL Listed Fuel Tanks
 - Base Tank Low Fuel Alarm
 - Primary Fuel Filters
- **OPTIONAL EXHAUST ACCESSORIES**
 - Critical Exhaust Silencer
- **OPTIONAL ELECTRICAL ACCESSORIES**
 - 2A Battery Charger
 - 10A Dual Rate Battery Charger
 - Battery, 12 Volt, 135 A.H.
- **OPTIONAL ALTERNATOR ACCESSORIES**
 - Alternator Upsizing
 - Alternator Strip Heater
 - Alternator Tropicalization
 - Voltage Changeover Switch
 - Main Line Circuit Breaker
- **CONTROL CONSOLE OPTIONS**
 - Digital Controller H100 (Bulletin 0172110SBY)
- **ADDITIONAL OPTIONAL EQUIPMENT**
 - Automatic Transfer Switch (HTS or GTS)
 - 20 Light Remote Annunciator
 - Remote Relay Panels
 - Unit Vibration Isolators
 - Oil Make-Up System
 - Oil Heater
 - 5 Year Warranties
 - Export Boxing
 - GenLink® Communications Software
- **OPTIONAL ENCLOSURE**
 - Weather Protective
 - Sound Attenuated
 - Aluminum and Stainless Steel
 - Enclosed Muffler

Distributed by:

