

Home Standby - 40

Liquid Cooled Gas Engine Generator Sets

Continuous Standby Power Rating
40kW 60 Hz LPV
37kW 60 Hz NG

Model: ASPAS1BBL040

UL 2200 Listed

Power Matched

3.9GN ENGINE

Naturally Aspirated



**2 Year Limited Parts
and Labor Warranty**

**Includes
Bryant 200 Amp
UL Listed Service
Disconnect Transfer
Switch In NEMA 3R
Enclosure**

FEATURES

- INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of BRYANT'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 CARRIER with the confidence that these systems will provide superior performance.
- TEST CRITERIA:**
 - ✓ **PROTOTYPE TESTED**
 - ✓ **SYSTEM TORSIONAL TESTED**
 - ✓ **ELECTRO-MAGNETIC INTERFERENCE**
 - ✓ **NEMA MG1-22 EVALUATION**
 - ✓ **MOTOR STARTING ABILITY**
- SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Bryant 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 Bryant'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 BRYANT SYSTEM.
- BRYANT TRANSFER SWITCHES.** Long life and reliability are synonymous with BRYANT SYSTEMS. One reason for this confidence is that the BRYANT product line includes its own transfer systems and controls for total system compatibility.



GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class F
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION (line to line)	<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, paragraph 5-13.2.6. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.

EXCITATION SYSTEM

DIRECT	DC excitation system ✓
	Low-velocity brushes and slip rings ✓

VOLTAGE REGULATION	Solid-state ✓
	±1% regulation ✓

GENERATOR FEATURES

- Four pole, revolving field generator, directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets temperature rise standards for class "F" insulation as defined by NEMA MG1-22.4 and NEMA MG 1-1.65.
- Stator windings are "trickle" varnished and rotor windings are "roll-dipped" for complete impregnation.
- Unit tested for motor starting ability by measuring instantaneous voltage dip with an oscillograph.
- All models utilize an advanced wire harness design for reliable interconnection within the circuitry.
- Magnetic circuit, including amortisseur windings, tooth and skewed stator design, provides a minimal level of waveform distortion and an electromagnetic interference level which meets accepted requirements for standard AM radio, TV, and marine radio telephone applications.
- Voltage waveform deviation, total harmonic content of the AC waveform, and balanced T.I.F. (Telephone Influence Factor) have been evaluated to acceptable standards in accordance with NEMA MG1-22.
- Alternator is of drip-proof guarded construction.
- Fully life-tested protective systems, including "field circuit and thermal overload protection" and standard main line circuit breakers capable of handling full output capacity.
- System torsional acceptability confirmed during prototype testing.

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271).

ENGINE SPECIFICATIONS

MODEL	3.9GN
CYLINDERS	V-6
DISPLACEMENT	3.9 Liter (238 cu. in.)
BORE	99.3 mm (3.91 in.)
STROKE	84 mm (3.31 in.)
COMPRESSION RATIO	9:1:1
INTAKE AIR	Naturally Aspirated
NUMBER OF MAIN BEARINGS	4
CONNECTING RODS	6-Drop forged steel
CYLINDER HEAD	Cast Iron
PISTONS	6-Notched Head, Aluminum Alloy
CRANKSHAFT	Nodular Steel

VALVE TRAIN

LIFTER TYPE	Hydraulic Roller
INTAKE VALVE MATERIAL	Aluminized Steel Faced
EXHAUST VALVE MATERIAL	Stellite Faced
HARDENED VALVE SEATS	No

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	4.25 Liters (4.5 qts.)

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, closed recovery
WATER PUMP	Pre-lubed, self-sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	10
DIAMETER OF FAN	559 mm (22 in.)

FUEL SYSTEM

FUEL	
<input type="checkbox"/> Natural Gas or L.P. Vapor	Standard
CARBURETOR	Down draft
SECONDARY FUEL REGULATOR	Nat. Gas or L.P. Vapor Systems
AUTOMATIC FUEL LOCKOFF SOLENOID	Standard
OPERATING FUEL PRESSURE VAPOR SYSTEMS ..	Nat. Gas 5 to 14" H ₂ O
	LP Vapor.....11" to 14" H ₂ O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	20 Amps at 12 V
STARTER MOTOR	12 V
RECOMMENDED BATTERY	(1) - 12 V, 90 A.H., 27F
GROUND POLARITY	Negative



OPERATING DATA

		STANDBY	
		Home Standby-40	
GENERATOR OUTPUT VOLTAGE/KW - 60Hz 120/240V, 1-phase, 1.0 pf		NG / LP	Rated Amp
			37 / 40
MOTOR STARTING Maximum at 35% instantaneous voltage dip Main Line Circuit Breaker		55 KVA NG / 60 KVA LP 200 Amp	
FUEL Fuel consumption – 60 Hz – 100% Load ft. ³ / hr. (gal. / hr.) m ³ / hr.		NG	LP
		570 NA	216 5.9
		16.1	6.1
COOLING Coolant capacity System lit. (US gal.) Coolant flow/min. 60 Hz lit. (US gal.) Heat rejection to coolant 60 Hz BTU/hr. Radiator air flow 60 Hz m ³ /min. (cfm) Maximum operating air temp. onto radiator °F Maximum operating ambient temp. °F		161,500	166,700
		21.2 (5.6) 80.6 (21.3) 272 (9600) 140 120	
COMBUSTION AIR REQUIREMENTS Flow at rated power 60 Hz m ³ /min. (cfm)		NG	LP
		3.3 (115)	3.5 (123)
EXHAUST Exhaust flow at rated output 60 Hz m ³ /min. (cfm) Max. recommended back pressure Kpa (Hg) Exhaust temp. at rated output °C (°F)		NG	LP
		11.5 (405) 718 (1325)	12.3 (435) 5.0 (1.5) 732 (1350)
ENGINE Rated at RPM 60 Hz HP at rated kW 60 Hz Piston speed 60 Hz m/min. (ft./min.) BMEP (PSI) 60 Hz		NG	LP
		60.1 111.1	1800 331 (993) 119.4
POWER ADJUSTMENT FOR AMBIENT CONDITIONS Temperature -1.65% for every 12°C above - °C -1.65% for every 10°F above - °F Altitude -3.0% for every 305 m above - m -3.0% for every 1000 ft. above - ft.			25 77 183 600

TRANSFER SWITCH SPECIFICATIONS		
No. of Poles		2
Current Rating (amps)		200
Voltage Rating (VAC)		250
Service Disconnect Breaker		200 Amp HACR Type
Utility Voltage Monitor (fixed)		
Pick-up		80%
Drop out		60%
Return to Utility		1 minute
Exercise cycle 15 minutes weekly		Standard
Enclosure - NEMA 3R (Outdoor rated)		Standard
UL Listed		Standard
Dimensions (H" x W" x D")		23.5 x 13.05 x 7.4
Weight (lbs.)		35

STANDARD ENGINE & SAFETY FEATURES

Home Standby - 40



- 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
- Fuel Lockoff Solenoid
- Isochronous Governor
- Secondary Fuel Regulator (N.G. and L.P.)
- 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
- Stainless Steel Flexible Exhaust Connection
- Main Line Circuit Breaker
- Critical Exhaust Silencer
- Battery Trickle Charger
- Weather Protective Enclosure (Locking Type)
- 200 Amp Service Disconnect Transfer Switch

Home Standby Control Features:

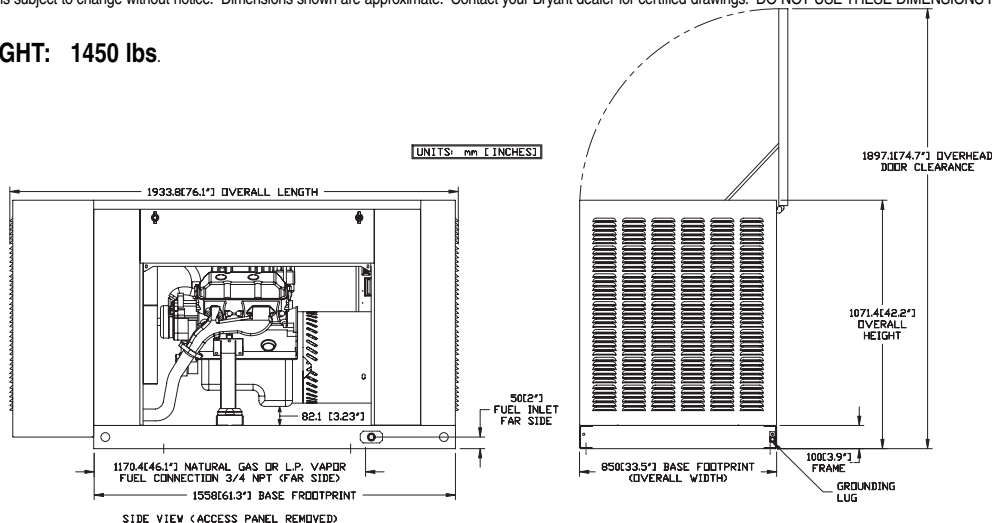
Home Standby Control Console
 Manual/Auto/Off switch
 Six light LED indicator for generator status and fault status
 Fuses (panel overload)
 Set exercise time switch

Home Standby Microprocessor Controls
 Automatic voltage regulation
 Utility voltage sensing
 Utility interrupt delay (10-second setpoint)
 Engine warm-up (10-second setpoint)
 Engine cool-down (1-minute setpoint)
 Seven-day exercise cycle

Distributed by:

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

UNIT WEIGHT: 1450 lbs.



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