Cat® DG20
GAS GENERATOR SETS
NORTH AMERICA


Image shown may not reflect actual configuration

Engine Model	3.6L NA Inline
No. of Cylinders	4
Bore x Stroke	105.54 mm x 102.87 mm
Displacement	3.6 Liter
Compression Ratio	9.8:1
Aspiration	Naturally Aspirated
Fuel / Ignition System	Electronic Regulator / Spark Ignition
Governor	Electronic

For North America, 60 Hz Market

Model	Emergency Standby		Demand Response		Prime		Emissions Strategy
	Natural Gas ekW	Propane ekW	Natural Gas ekW	Propane ekW	Natural Gas ekW	Propane ekW	
DG20	20	20	20	20	20	20	U.S. EPA Certified for Non-Emergency Application

PACKAGE PERFORMANCE

Performance	Emergency Standby		Demand Response		Prime	
	Natural Gas	Propane	Natural Gas	Propane	Natural Gas	Propane
Frequency, Hz	60					
Genset power rating with fan, ekW (3-Phase / 1-Phase)	20 / 20	20 / 20	20 / 20	20 / 20	20 / 20	20 / 20
Performance number	-	-	-	-	-	-
Fuel System / Fuel Consumption						
Minimum required fuel delivery pressure at rail connector, psi (in. water)	0.28 (8)					
Maximum required fuel delivery pressure at rail connector, psi (in. water)	0.43 (12)					
100% load with fan, kg/hr (CFH)	6.7 (303)	6.7 (125)	6.7 (303)	6.7 (125)	10.8 (489)	11.9 (222)
75% load with fan, kg/hr (CFH)	5.3 (240)	5.3 (99)	5.3 (240)	5.3 (99)	8.8 (398)	9.7 (181)
50% load with fan, kg/hr (CFH)	4.2 (190)	4.2 (78)	4.2 (190)	4.2 (78)	7.3 (330)	7.9 (147)
Cooling System[1]						
Radiator air flow, m^3/min (CFM)	53.7 (1896)					
Radiator air flow restriction (system), kPa (in. water)	0.12					
Engine coolant capacity, L (gal)	2.5 (0.6)					
Radiator coolant capacity, L (gal)	18.3 (4.8)					
Total coolant capacity, L (gal)	20.8 (5.5)					
Inlet Air						
Combustion air inlet flow rate, m^3/min (CFM) (kg/hr)	1.7 (59) (111)	1.7 (59) (111)	1.7 (59) (111)	1.7 (59) (111)	1.8 (64) (117)	1.86 (66) (121)
Maximum allowable intake air restriction, kPa (in. water)	3.5 (14)					
Exhaust System						
Exhaust gas temperature,°C (°F)	688 (1270)	749 (1380)	688 (1270)	749 (1380)	754 (1389)	753 (1387)
Exhaust gas flow rate, m^3/min (CFM) (kg/hr)	5.9 (208) (117)	5.9 (208) (117)	5.9 (208) (117)	5.9 (208) (117)	9.1 (321) (182)	9.1 (321) (134)
Exhaust system back pressure max allowable, kPa (in. water)	7.0 (28)					

PACKAGE PERFORMANCE (contd.)

	Emergency Standby		Demand Response		Prime	
	Natural Gas	Propane	Natural Gas	Propane	Natural Gas	Propane
Heat Rejection						
Heat rejection to jacket water, kW (BTU/min)	38 (2161)	30.6 (1740)	38 (2161)	30.6 (1740)	38 (2161)	39.4 (2240)
Heat rejection to atmosphere from engine, kW (BTU/min)	11.8 (671)	12 (682)	11.8 (671)	12 (682)	11.8 (671)	31 (1763)
Heat rejection to exhaust (total), kW (BTU/min)	22.8 (1296)	25.4 (1444)	22.8 (1296)	25.4 (1444)	22.8 (1296)	47 (2673)

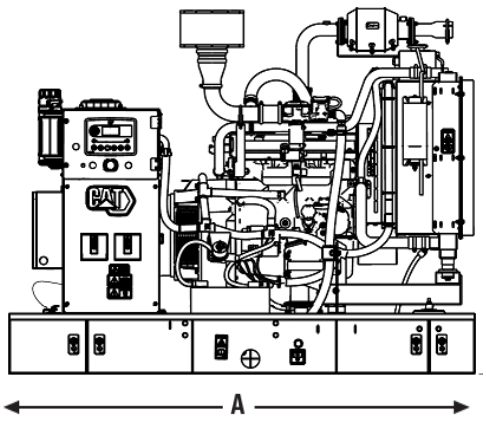
Lube System	
Oil dry fill capacity, L (gal)	8.3 (2.2)
Maximum oil temperature, °C (°F)	121 (250)
Maximum oil capacity, L (gal)	7.6 (2.0)
Minimum oil capacity, L (gal)	5.7 (1.5)
Emissions Meets (EPA Stationary Non-Emergency Limits)	
NOx + HC, g/kW-hr	0.8
CO, g/kW-hr	20.6

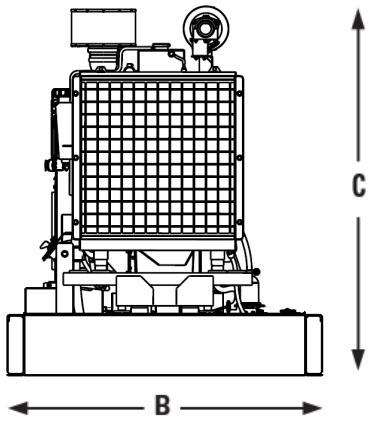
ALTERNATOR DATA

DG20						
Alternator	60 Hz 1-Phase	60 Hz 3-Phase				
Voltages	240/120	480/277	240/120	240/139	208/120	600/346
Temperature rise[2], °C	105	105	105	105	105	105
Motor starting capability @ 30% Voltage Dip, skVA	-	-	-	-	-	-
Frame size	M1736L4	M1713L4	M1713L4	M1713L4	M1713L4	M1713L4
Excitation	SE	SE	SE	SE	SE	SE
Rated Current, Amps - Natural Gas / Propane						
Emergency Standby	83 / 83	30 / 30	60 / 60	60 / 60	69.5 / 69.5	24 / 24
Demand Response	83 / 83	30 / 30	60 / 60	60 / 60	69.5 / 69.5	24 / 24
Prime	83 / 83	30 / 30	60 / 60	60 / 60	69.5 / 69.5	24 / 24

Motor starting capability is based on the assumption of 0.6 pf.
Temperature rise is based on the rating type and the respective site conditions.

WEIGHTS & DIMENSIONS





Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Dry Weight Kg (lb)
1950 (77)	1300 (51)	1530 (60)	648 (1429)

Note: General configuration not to be used for installation. See general dimension drawings for detail.

APPLICABLE CODES AND STANDARDS:

CSA C22.2 No 100-04, UL142, UL489, UL869, cUL/UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO 3046, ISO 8528, NEMA MG 1-33.

EMERGENCY STANDBY POWER (ESP): Typical usage of 50 hours per year with a maximum of 200 hours per year with varying loads. Average variable load factor is 70% of the ESP rating. No overload is available. Not for maintained utility paralleling applications.

DEMAND RESPONSE POWER: Output available with varying load when participating in a demand response or economic dispatch program. Average power output is 70% of the standby rated ekW. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

PRIME POWER: Output available with varying load for an unlimited time. Average power output is 70% of the prime rated ekW. Typical peak demand is 100% of prime rated ekW.

Ratings are based on SAE J1349 standard conditions.
These ratings also apply at ISO 3046 standard conditions.

1 CFH = 1000 BTU/HR
Fuel Rates are based on LHV of 35.83 MJ/Nm^3 for Natural Gas and 92.1 MJ/Nm^3 for Propane Vapor @77°F (25°C) and 328 ft (100 m) above sea level and a relative humidity of 30%.Temperatures and elevations greater than this standard must be accounted for as follows:

A derate of 1.5% for every 5°C above 20°C air inlet temperature.
Derate varies between 4% to 9% for every 500m. Refer derate chart for more details.

DEFINITIONS AND CONDITIONS

[1] For ambient and altitude capabilities, consult your Cat dealer.
Air flow restriction (system) is added to the existing restriction from the factory.

[2] Generator temperature rise is based on 40°C (104°F) ambient per NEMA MG1-32.

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