Cat® DG20
Gas Generator Sets

Image shown might 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 – G2 Class* capable

Model	Emergency Standby		Demand Response#		Prime		Emission 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

#Demand Response is offered only for North America region.

PACKAGE PERFORMANCE

Performance	Emergency Standby		Demand Response#		Prime	
	Natural Gas	Propane	Natural Gas	Propane	Natural Gas	Propane
Frequency	60 Hz					
Genset power rating with fan, ekW (3-Phase / 1-Phase)	20 / 20	20 / 20	20 / 20	20 / 20	20 / 20	20 / 20
Performance number	EM7752/ EM7754	EM7748/ EM7750	EM7768/ EM7770	EM7764/ M7766	EM7760/ EM7762	EM7756/ EM7758
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)	9.6 (433)	10.1 (188)
75% load with fan, kg/hr (CFH)	5.3 (240)	5.3 (99)	5.3 (240)	5.3 (99)	8.0 (360)	8.6 (160)
50% load with fan, kg/hr (CFH)	4.2 (190)	4.2 (78)	4.2 (190)	4.2 (78)	6.8 (307)	7.3 (134)
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)	1.6 (57) (104)	1.6 (57) (105)
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)	743 (1369)	741 (1366)
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)	8.1 (286) (114)	8.1 (286) (116)
Exhaust system back pressure max allowable, kPa (in. water)	10.0 (40.0)	10.0 (40.0)				
Heat Rejection						
Heat rejection to jacket water, kW (BTU/min)	30 (1706)	36 (2047)	30 (1706)	36 (2047)	32 (1819)	31.5 (1791)
Heat rejection to atmosphere from engine, kW (BTU/min)	38.5 (2189)	71 (4037)	38.5 (2189)	71 (4037)	75 (4265)	81 (4606)
Heat rejection to exhaust (total), kW (BTU/min)	23 (1308)	50 (2843)	23 (1308)	50 (2843)	24 (1365)	23 (1308)
Lube System						
Oil dry fill capacity, L (gal)	8.3 (2.2)					
Maximum oil temperature, °C (°F)	101 (214)					
Maximum oil capacity, L (gal)	7.6 (2.0)					
Minimum oil capacity, L (gal)	5.7 (1.5)					

PACKAGE PERFORMANCE

Emissions Meets (EPA Stationary Non-Emergency Limits)	Emergency Standby		Demand Response#		Prime	
	Natural Gas	Propane	Natural Gas	Propane	Natural Gas	Propane
NOx + HC, g/kW-hr	0.8					
CO, g/kW-hr	20.6					

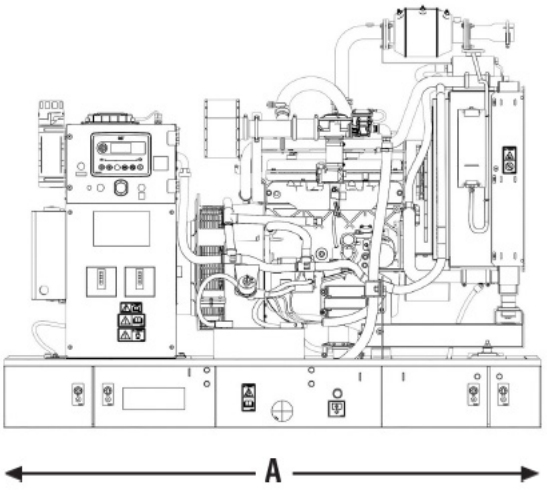
ALTERNATOR DATA

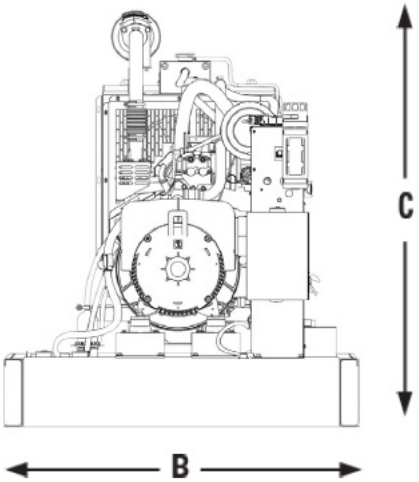
DG20								
Alternator	60 Hz 1-Phase	60 Hz 3-Phase						
Voltages*	240/120	480/277	380/220	240/120	240/139	220/127	208/120	600/346
Temperature rise[2], °C	105	105	105	105	105	105	105	105
Motor starting capability @ 30% Voltage Dip, skVA	46	52	35	41	41	45	41	59
Frame size	M1736L4	M1713L4	M1713L4	M1713L4	M1713L4	M1713L4	M1713L4	M1713L4
Excitation	SE	SE	SE	SE	SE	SE	SE	AREP
Rated Current, Amps – Natural Gas / Propane								
Emergency Standby	83 / 83	30 / 30	38 / 38	60 / 60	60 / 60	66 / 66	69 / 69	24 / 24
Demand Response	83 / 83	30 / 30	38 / 38	60 / 60	60 / 60	66 / 66	69 / 69	24 / 24
Prime	83 / 83	30 / 30	38 / 38	60 / 60	60 / 60	66 / 66	69 / 69	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.
*Note: 220 V and 380 V are additional offerings for the Latin America region. Demand Response is not offered for this region.

DG20 Gas Generator Sets
Electric Power

WEIGHTS & DIMENSIONS





Length "A" mm (in)	Width "B" mm (in)	Height "C" mm (in)	Dry Weight kg (lb)
1950 (77)	1300 (51)	1530 (60)	664 (1463)

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, UL 489, UL 869, ULC 2200, IBC, IEC60034-1, ISO 3046, ISO 8528, NEMA MG 1-22, NEMA MG 1-33 and facilitates the compliance to NFPA 37, NFPA 70, NFPA 99, NFPA 110.

Codes may not be available for all model configurations. Site level review needed for NFPA70. Please consult your Cat dealer for availability.

CEMERGENCY 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 of 6% 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.

*Governing Class capability as per ISO-8528-5. Consult your local Cat dealer for configuration and site specific transient performance classification.