Cat® DG150

Gas Generator Sets
North America

Image shown may not reflect actual configuration.

Engine Model	9.1L V8 TCAC
No. of Cylinders	8
Bore x Stroke	109.5 mm x 120.7 mm
Displacement	9.1 Liter
Compression Ratio	9.5:1
Aspiration	Turbocharged & Aftercooled
Fuel System	Electronic Regulator / Spark Ignition
Governor	G1 Class* capable – 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	
DG150	150	132.6	150	132.6	121.6	121.6	U.S. EPA Certified for Emergency and Non-Emergency

PACKAGE PERFORMANCE

Performance	Emergency Standby (3-Phase)		Demand Response (3-Phase)		Prime (3-Phase)	
	Natural Gas	Propane	Natural Gas	Propane	Natural Gas	Propane
Frequency, Hz	60	60	60	60	60	60
Genset power rating with fan, ekW / kVA	150	132.6	150	132.6	121.6	121.6
Performance number	EM6953	EM6954	EM6955	EM6956	EM6957	EM6958
Fuel System / Fuel Consumption						
Minimum Running pressure to Electronic Pressure Regulator (EPR), psi (in. water)	0.25 (7)	0.25 (7)	0.25 (7)	0.25 (7)	0.25 (7)	0.25 (7)
Maximum Running pressure to Electronic Pressure Regulator (EPR), psi (in. water)	0.40 (11)	0.40 (11)	0.40 (11)	0.40 (11)	0.40 (11)	0.40 (11)
100% load with fan, kg/hr (ft^3/hr)	39.1 (1769)	32.9 (622)	39.1 (1769)	32.9 (622)	30.3 (1369.5)	30.2 (571.3)
75% load with fan, kg/hr (ft^3/hr)	31.32 (1337)	25.3 (477.8)	31.32 (1337)	25.3 (477.8)	24 (1084.2)	24 (454.2)
50% load with fan, kg/hr (ft^3/hr)	20.7 (887)	18.2 (345)	20.7 (887)	18.2 (345)	17.7 (799)	17.8 (336.6)
Cooling System[1]						
Radiator air flow, m^3/min (cfm)	463 (16350)	463 (16350)	463 (16350)	463 (16350)	463 (16350)	463 (16350)
Radiator air flow restriction (system), kPa (in. water)	0.12	0.12	0.12	0.12	0.12	0.12
Engine coolant capacity, L (gal)	18.9 (5)	18.9 (5)	18.9 (5)	18.9 (5)	18.9 (5)	18.9 (5)
Radiator coolant capacity, L (gal)	11.4 (3)	11.4 (3)	11.4 (3)	11.4 (3)	11.4 (3)	11.4 (3)
Total coolant capacity, L (gal)	30.3 (8)	30.3 (8)	30.3 (8)	30.3 (8)	30.3 (8)	30.3 (8)
Inlet Air						
Combustion air inlet flow rate, m^3/min (cfm) (kg/hr)	9.7 (341) (643)	7.8 (273.5) (515.6)	9.7 (341) (643)	7.8 (273.5) (515.6)	7.3 (257.7) (486)	7.0 (246) (463.7)
Maximum allowable intake air restriction, kPa (in. water)	3.48 (13.98)	3.48 (13.98)	3.48 (13.98)	3.48 (13.98)	3.48 (13.98)	3.48 (13.98)
Exhaust System						
Exhaust gas temperature after turbo,°C (°F)	706 (1302)	696 (1284)	706 (1302)	696 (1284)	659 (1218)	682 (1259)
Exhaust gas flow rate, kg/hr	35.5 (1253) (682)	27.2 (960) (548.5)	35.5 (1253) (682)	27.2 (960) (548.5)	25.5 (900.5) (516)	24.8 (875.8) (494)
Exhaust system back pressure max allowable after turbo, kPa (in. water)	20 (80.4)	20 (80.4)	20 (80.4)	20 (80.4)	20 (80.4)	20 (80.4)

PACKAGE PERFORMANCE (contd.)

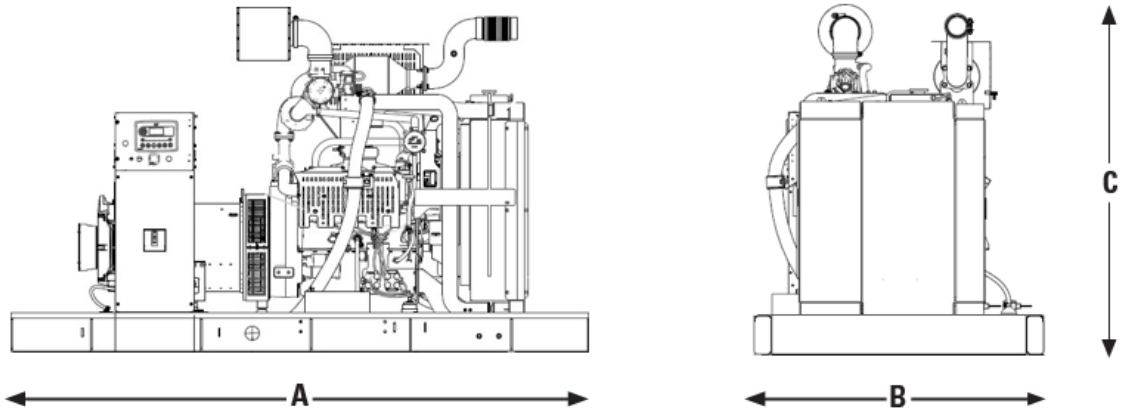
	Emergency Standby (3-Phase)		Demand Response (3-Phase)		Prime (3-Phase)	
	Natural Gas	Propane	Natural Gas	Propane	Natural Gas	Propane
Heat Rejection						
Heat rejection to jacket water, Btu/min	86.1 (4896)	66.3 (3770)	86.1 (4896)	66.3 (3770)	64 (3639)	61.7 (3508)
Heat rejection to aftercooler, Btu/min	24.3 (1382)	13 (739)	24.3 (1382)	13 (739)	11.6 (659)	10.5 (597)
Heat rejection to oilcooler, Btu/min	20.8 (1183)	21.1 (1200)	20.8 (1183)	21.1 (1200)	16.4 (932)	19.7 (1120)
Heat rejection to atmosphere from engine, Btu/min	56.6 (3219)	60.4 (3435)	56.6 (3219)	60.4 (3435)	68.3 (3884)	58.5 (3326)
Heat rejection to exhaust (Total) Btu/min	144.7 (8229)	112 (6369)	144.7 (8229)	112 (6369)	101.8 (5789)	98.8 (5618)
Lube System						
Sump refill with filter, L (gal)	12.1 (3.2)	12.1 (3.2)	12.1 (3.2)	12.1 (3.2)	12.1 (3.2)	12.1 (3.2)
Maximum oil temperature, °C (°F)	107 (225)	107 (225)	107 (225)	107 (225)	107 (225)	107 (225)
Maximum oil capacity, L (gal)	11.4 (3)	11.4 (3)	11.4 (3)	11.4 (3)	11.4 (3)	11.4 (3)
Minimum oil capacity, L (gal)	7.6 (2)	7.6 (2)	7.6 (2)	7.6 (2)	7.6 (2)	7.6 (2)
Emissions (Nominal)[2]						
NOx + HC, g/kW-hr	0.35 (0.26)	1.15 (0.86)	0.36 (0.26)	1.15 (0.86)	0.30 (0.22)	1.17 (0.87)
CO, g/kW-hr	1.28 (0.95)	1.72 (1.28)	1.28 (0.95)	1.72 (1.28)	0.87 (0.65)	1.73 (1.29)

ALTERNATOR DATA

DG150					
Alternator	60 Hz 3-Phase				
Voltages	480/277	240/120	240/139	208/120	600/346
Temperature rise, °C	105	105	105	105	105
Motor starting capability @ 30% Voltage Dip, skVA	513	403	513	403	461
Frame Size	M2294L4	M2294L4	M2294L4	M2294L4	M2294L4
Excitation	PMG	PMG	PMG	PMG	PMG
Rated Current, Amps – Natural Gas / Propane					
Standby	225 / 200	451 /399	451 / 399	520 / 460	180 / 160
Demand Response	225 / 200	451 / 399	451 / 399	520 / 460	180 / 160
Prime	183 / 183	366 / 366	366 / 366	366 / 366	146 / 146

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)
2892 (114)	1396 (55)	1734 (68.3)	1657 (3653)

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 heat values of 1015 BTU/SCF for Natural Gas and 2500 BTU/SFC for Propane Vapor @77°F (25°C) and 328 ft (100m) above sea level.

Genset Ratings are based on ambient temperature and elevation of 2152 ft (656m) above sea level. For higher temperatures and elevations the follow the derate specification. Contact your Cat representative for 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 a 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.

LET'S DO THE WORK.™

Cat® DG150

Gas Generator Sets
Latin America

Image shown may not reflect actual configuration.

Engine Model	9.1L V8 TCAC
No. of Cylinders	8
Bore x Stroke	109.5 mm x 120.7 mm
Displacement	9.1 Liter
Compression Ratio	9.5:1
Aspiration	Turbocharged & Aftercooled
Fuel System	Electronic Regulator / Spark Ignition
Governor	G1 Class* capable – Electronic

For Latin America, 60 Hz Market

Model	Emergency Standby		Prime		Emissions Strategy
	Natural Gas ekW	Propane ekW	Natural Gas ekW	Propane ekW	
DG150	150	132.6	121.6	121.6	U.S. EPA Certified for Emergency and Non-Emergency

PACKAGE PERFORMANCE

Performance	Emergency Standby (3-Phase)		Prime (3-Phase)	
	Natural Gas	Propane	Natural Gas	Propane
Frequency, Hz	60	60	60	60
Genset power rating with fan, ekW / kVA	150	132.6	121.6	121.6
Performance number	EM6953	EM6954	EM6957	EM6958
Fuel System / Fuel Consumption				
Minimum Running pressure to Electronic Pressure Regulator (EPR), psi (in. water)	0.25 (7)	0.25 (7)	0.25 (7)	0.25 (7)
Maximum Running pressure to Electronic Pressure Regulator (EPR), psi (in. water)	0.40 (11)	0.40 (11)	0.40 (11)	0.40 (11)
100% load with fan, kg/hr (ft^3/hr)	39.1 (1769)	32.9 (622)	30.3 (1369.5)	30.2 (571.3)
75% load with fan, kg/hr (ft^3/hr)	31.32 (1337)	25.3 (477.8)	24 (1084.2)	24 (454.2)
50% load with fan, kg/hr (ft^3/hr)	20.7 (887)	18.2 (345)	17.7 (799)	17.8 (336.6)
Cooling System[1]				
Radiator air flow, m^3/min (cfm)	463 (16350)	463 (16350)	463 (16350)	463 (16350)
Radiator air flow restriction (system), kPa (in. water)	0.12	0.12	0.12	0.12
Engine coolant capacity, L (gal)	18.9 (5)	18.9 (5)	18.9 (5)	18.9 (5)
Radiator coolant capacity, L (gal)	11.4 (3)	11.4 (3)	11.4 (3)	11.4 (3)
Total coolant capacity, L (gal)	30.3 (8)	30.3 (8)	30.3 (8)	30.3 (8)
Inlet Air				
Combustion air inlet flow rate, m^3/min (cfm) (kg/hr)	9.7 (341) (643)	7.8 (273.5) (515.6)	7.3 (257.7) (486)	7.0 (246) (463.7)
Maximum allowable intake air restriction, kPa (in. water)	3.48 (13.98)	3.48 (13.98)	3.48 (13.98)	3.48 (13.98)
Exhaust System				
Exhaust gas temperature after turbo,°C (°F)	706 (1302)	696 (1284)	659 (1218)	682 (1259)
Exhaust gas flow rate, kg/hr	35.5 (1253) (682)	27.2 (960) (548.5)	25.5 (900.5) (516)	24.8 (875.8) (494)
Exhaust system back pressure max allowable after turbo, kPa (in. water)	20 (80.4)	20 (80.4)	20 (80.4)	20 (80.4)

PACKAGE PERFORMANCE (contd.)

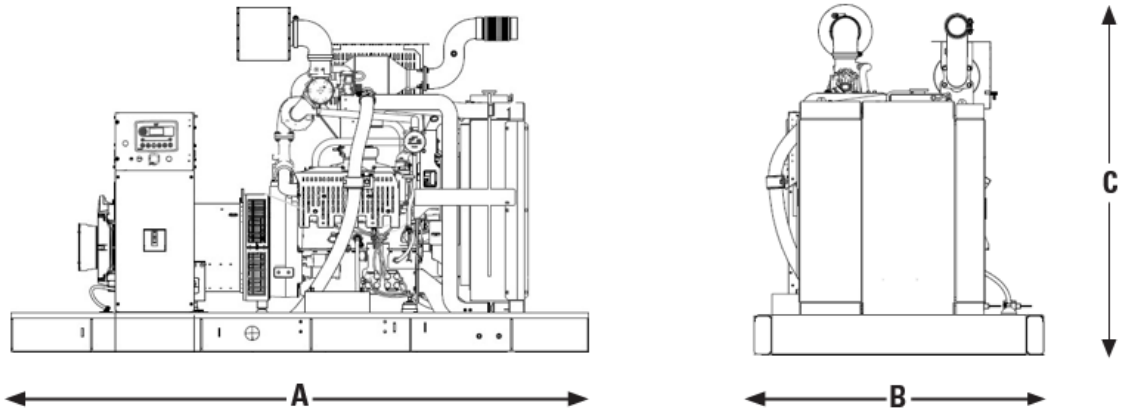
	Emergency Standby (3-Phase)		Prime (3-Phase)	
Performance	**Natural Gas**	**Propane**	**Natural Gas**	**Propane**
Heat rejection to jacket water, Btu/min	86.1 (4896)	66.3 (3770)	64 (3639)	61.7 (3508)
Heat rejection to aftercooler, Btu/min	24.3 (1382)	13 (739)	11.6 (659)	10.5 (597)
Heat rejection to oilcooler, Btu/min	20.8 (1183)	21.1 (1200)	16.4 (932)	19.7 (1120)
Heat rejection to atmosphere from engine, Btu/min	56.6 (3219)	60.4 (3435)	68.3 (3884)	58.5 (3326)
Heat rejection to exhaust (Total) Btu/min	144.7 (8229)	112 (6369)	101.8 (5789)	98.8 (5618)
Lube System				
Sump refill with filter, L (gal)	12.1 (3.2)	12.1 (3.2)	12.1 (3.2)	12.1 (3.2)
Maximum oil temperature, °C (°F)	107 (225)	107 (225)	107 (225)	107 (225)
Maximum oil capacity, L (gal)	11.4 (3)	11.4 (3)	11.4 (3)	11.4 (3)
Minimum oil capacity, L (gal)	7.6 (2)	7.6 (2)	7.6 (2)	7.6 (2)
Emissions (Nominal)[2]				
NOx + HC, g/kW-hr	0.35 (0.26)	1.15 (0.86)	0.30 (0.22)	1.17 (0.87)
CO, g/kW-hr	1.28 (0.95)	1.72 (1.28)	0.87 (0.65)	1.73 (1.29)

ALTERNATOR DATA

DG150							
Alternator	60 Hz 3-Phase						
Voltages	480/277	380/220	220/127	240/120	240/139	208/120	600/346
Temperature rise, °C	105	105	105	105	105	105	105
Motor starting capability @ 30% Voltage Dip, skVA	513	345	444	403	513	403	461
Frame Size	M2294L4	M2294L4	M2294L4	M2294L4	M2294L4	M2294L4	M2294L4
Excitation	PMG	PMG	PMG	PMG	PMG	PMG	PMG
Rated Current, Amps – Natural Gas / Propane							
Emergency Standby	225 / 200	285 / 249	492/ 435	451 /399	451 / 399	520 / 460	180 / 160
Prime	183 / 183	231/ 231	399 / 399	366 / 366	366 / 366	366 / 366	146 / 146

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)
2892 (114)	1396 (55)	1734 (68.3)	1657 (3653)

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 heat values of 1015 BTU/SCF for Natural Gas and 2500 BTU/SFC for Propane Vapor @77°F (25°C) and 328 ft (100m) above sea level.

Genset Ratings are based on ambient temperature and elevation of 2152 ft (656m) above sea level. For higher temperatures and elevations the follow the derate specification. Contact your Cat representative for 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 a 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.

LET'S DO THE WORK.™