

Standby & Prime: 50Hz & 60 Hz, 230/400V, 277/480V; 3-Ph



Engine Model	Cat® C7.1 In-line 6, 4-cycle diesel
Bore x Stroke	105 mm x 135 mm (4.1 in x 5.3 in)
Displacement	7.0 L (427.8 in³)
Compression Ratio	18.2:1
Aspiration	Turbocharged Water cooled
Governor	Mechanical
Emission Strategy	Non-Certified Emissions

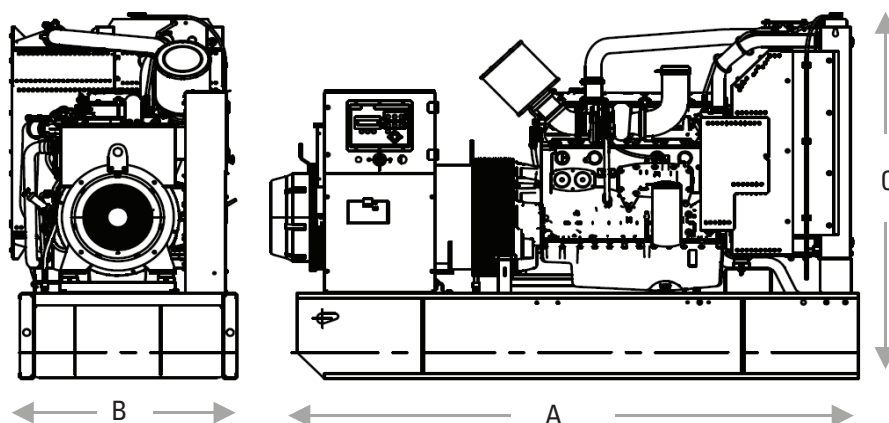
Model	Voltage/Frequency	Standby	Prime
DE150E0	400/230 V, 50 Hz	150 kVA, 120 ekW	135 kVA, 108 ekW
	480/277 V, 60 Hz	165 kVA, 132 ekW	150 kVA, 120 ekW

PACKAGE PERFORMANCE

Technical Data	50 Hz		60 Hz	
	Standby	Prime	Standby	Prime
Engine Speed: RPM	1500		1800	
Gross Engine Power: kW (hp)	136.9 (184.0)	123.7 (166.0)	155.4 (208.0)	140.5 (188.0)
BMEP: kPa (psi)	1562.0 (226.5)	1411.0 (204.6)	1477.0 (214.2)	1336.0 (193.7)
Regenerative Power: kW	6.2		7.0	
Fuel System¹ : L/hr (US gal/hr)				
110% Load	-NA-	-NA-	33.4 (8.8)	36.7 (9.7)
100% Load	33.4 (8.8)	36.7 (9.7)	29.9 (7.9)	33.1 (8.7)
75% Load	24.9 (6.6)	27.5 (7.3)	22.6 (6.0)	25.5 (6.7)
50% Load	17.6 (4.6)	20.7 (5.5)	16.2 (4.3)	19.7 (5.2)
Fuel Filter Type	Replaceable Element			
Recommended Fuel	Class A2 Diesel or BSEN590			
Air System				
Combustion Air Flow: m³/min (cfm)	8.1 (286)	11.5 (405)	7.6 (270)	11.0 (387)
Air Filter Type	Paper Element			
Max. Combustion Air intake restriction: kPa (in H2O)	5.0 (20.1)		5.0 (20.1)	
Radiator Cooling Air flow: m³/min (cfm)	228.6 (8073)		234.0 (8264)	
External Restriction to Cooling Air Flow: Pa (in H2O)	125 (0.5)		125 (0.5)	
Cooling System²				
Heat Rejected to Water & Lube Oil: kW (Btu/min)	82.0 (4663)	74.9 (4259)	92.0 (5232)	84.2 (4788)
Heat Radiated from Engine & Alternator: kW (Btu/min)	25.9 (1473)	21.6 (1228)	27.0 (1535)	24.1 (1371)
Cooling System Capacity: l (US gal)	21.0 (5.5)		21.0 (5.5)	
Radiator Fan Load: kW (hp)	5.0 (6.7)		7.0 (9.4)	
Water Pump Type	Centrifugal			

Exhaust System		50 Hz				60 Hz			
	Standby	Prime		Standby	Prime				
Exhaust Gas Flow: m³/min (cfm)	22.7 (800)	20.8 (733)		29.1 (1026)	27.2 (959)				
Exhaust Gas Temperature: °C (°F)	576 (1069)	576 (1069)		526 (979)	526 (979)				
Silencer Type	Industrial								
Silencer Model & Quantity	EXSY1 (1)								
Pressure Drop Across Silencer System: kPa (in Hg)	0.45 (0.133)			0.72 (0.213)					
Silencer Noise Reduction Level: dB	10			10					
Max. Allowable Back Pressure: kPa (in. Hg)	6.0 (1.8)			6.0 (1.8)					
Generator Performance Data³		50 Hz				60 Hz			
Voltage	415/240V	400/230V 230/115V 200/115V	380/220V 220/110V	220/127V	480/277V 240/139V	380/220V 220/110V	240/120V 208/120V	440/254V 220/127V	
Motor Starting Capability* kVA	281	260	233	307	306	195	231	262	
Short Circuit Capacity** %	300	300	300	300	300	300	300	300	
Reactances: Per Unit									
Xd	2.508	2.700	2.881	2.231	2.750	2.683	3.328	3.273	
X'd	0.183	0.197	0.210	0.163	0.201	0.272	0.243	0.239	
X''d	0.090	0.097	0.103	0.080	0.099	0.134	0.120	0.118	
Generator Technical Data									
Physical Data			Operating Data						
Frame Model	R2273L4		Overspeed: RPM			2250			
No. of Bearings	1		Voltage Regulation: (steady state)			+/- 0.5%			
Wires	12		Wave Form NEMA = TIF:			50			
IP Rating & Insulation Class	IP23 & H		Wave Form IEC = THF:			2.0%			
Winding Pitch-Code	2/3 - M0		Total Harmonic Content LL/LN:			2.0%			
Excitation	SHUNT		Radio Interference:			Suppression is in line with European Standard EN61000-6			
AVR Model	Mark V		Radiant Heat: kW (Btu/min)			50 Hz: 10.6 (603) 60 Hz: 12.1 (688)			
Capacities									
50 Hz					60 Hz				
Voltage	Prime		Standby		Voltage	Prime		Standby	
	kVA	kW	kVA	kW		kVA	kW	kVA	kW
415/240V	135.0	108.0	150.0	120.0	480/277V	150.0	120.0	165.0	132.0
400/230V	135.0	108.0	150.0	120.0	220/127V	150.0	120.0	165.0	132.0
380/220V	130.0	104.0	142.0	113.6	380/220V	140.0	112.0	153.0	122.4
230/115V	135.0	108.0	150.0	120.0	240/120V	150.0	120.0	165.0	132.0
220/127V	135.0	108.0	148.0	118.4	220/110V	140.0	112.0	153.0	122.4
220/110V	130.0	104.0	142.0	113.6	208/120V	150.0	120.0	165.0	132.0
200/115V	135.0	108.0	150.0	120.0	240/139V	150.0	120.0	165.0	132.0

Weight: kg (lb)			Dimensions: mm (in)		
Net (+ lube oil)	Wet (+ lube oil & coolant)	Fuel, lube oil & coolant	Length, A	Width, B	Height, C
1569 (3459)	1590 (3505)	1886 (4157)	2500 (98.4)	1120 (44.1)	1430 (56.3)



Notes:

¹ Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2.

² Cooling system designed to operate in ambient conditions up to 50°C (122°F). Contact your local Cat dealer for power ratings at specific site conditions.

³ Reactances shown are applicable to prime ratings. *Based on 30% voltage dip at 0 power factor and shunt excitation system. **With optional Auxiliary winding.

DEFINITIONS:

STANDBY: Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

PRIME: Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated kW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year

Standard Reference Conditions: Note: Standard reference conditions 25°C (77°F) air inlet temp, 100m (328ft) A.S.L. 30% relative humidity. Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.

Quality Standards: The equipment meets the following standards: IEC60034-1, IEC60034-22, ISO3046, ISO8528, NEMA MG 1-32, NEMA MG 1-33, 2004/108/EC, 2006/42/EC, 2006/95/EC.

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