

Standby & Prime: 50Hz, 400/230V; 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 in ³)
Compression Ratio	16.8:1
Aspiration	Turbocharged Water cooled
Governor	Mechanical
Emission Strategy	EU stage IIIA emissions compliant

Model	Voltage/Frequency	Standby	Prime
DE200E3	400/230 V, 50 Hz	200 kVA, 160 ekW	180 kVA, 144 ekW

PACKAGE PERFORMANCE

Technical Data	50 Hz	
	Standby	Prime
Engine Speed: RPM	1500	
Gross Engine Power: kW (hp)	188.7 (253.0)	171.5 (230.0)
BMEP: kPa (psi)	2153.0 (312.2)	1956.0 (283.7)
Regenerative Power: kW	14.5	
Fuel System¹ : L/hr (US gal/hr)		
110% Load	-	45.2 (11.9)
100% Load	45.2 (11.9)	41.3 (10.9)
75% Load	35.5 (9.4)	32.6 (8.6)
50% Load	25.7 (6.8)	23.7 (6.3)
Fuel Filter Type	Replaceable Element	
Recommended Fuel	Class A2 Diesel or BSEN590	
Air System		
Combustion Air Flow: m ³ /min (cfm)	13.2 (466)	12.8 (452)
Air Filter Type	Replaceable Element	
Max. Combustion Air intake restriction: kPa (in H ₂ O)	8.0 (32.1)	
Radiator Cooling Air flow: m ³ /min (cfm)	328.0 (11583)	
External Restriction to Cooling Air Flow: Pa (in H ₂ O)	125 (0.5)	
Cooling System²		
Heat Rejected to Water & Lube Oil: kW (Btu/min)	80.8 (4595)	72.7 (4134)
Heat Radiated from Engine & Alternator: kW (Btu/min)	42.0 (2388)	38.7 (2201)
Cooling System Capacity: l (US gal)	27.0 (7.1)	
Radiator Fan Load: kW (hp)	6.3 (8.5)	
Water Pump Type	Centrifugal	

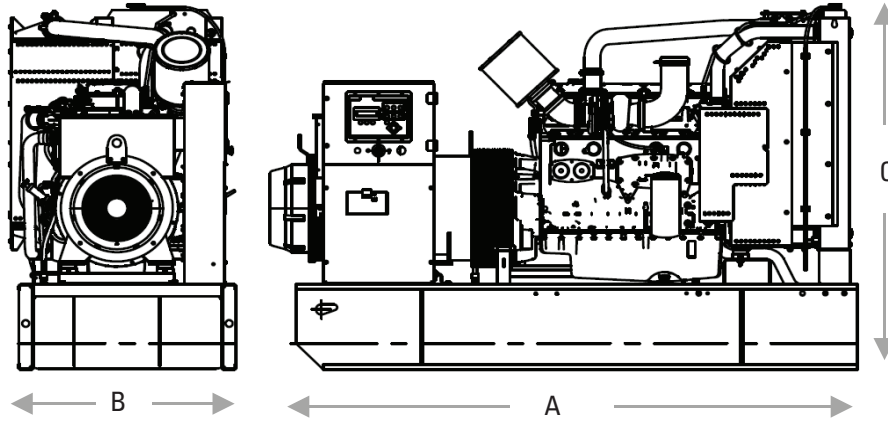
Exhaust System		50 Hz	
	Standby	Prime	
Exhaust Gas Flow: m ³ /min (cfm)	31.7 (1119)	30.2 (1067)	
Exhaust Gas Temperature: °C (°F)	530 (986)	530 (986)	
Silencer Type	Industrial		
Silencer Model & Quantity	EXSY1 (1)		
Pressure Drop Across Silencer System: kPa (in Hg)	0.24 (0.071)		
Silencer Noise Reduction Level: dB	10		
Max. Allowable Back Pressure: kPa (in. Hg)	15.0 (4.4)		

Generator Performance Data ³			
Voltage	415/240V	400/230V	380/220V
Motor Starting Capability* kVA	238	221	199
Short Circuit Capacity** %	300	300	300
Reactances: Per Unit			
Xd	3.037	3.269	3.622
X'd	0.259	0.279	0.309
X''d	0.104	0.112	0.124

Generator Technical Data			
Physical Data		Operating Data	
Frame Model	R2453L4	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: 12.2 (694)

Capacities		50 Hz			
Voltage	Prime		Standby		
	kVA	kW	kVA	kW	
415/240V	180.0	144.0	200.0	160.0	
400/230V	180.0	144.0	200.0	160.0	
380/220V	180.0	144.0	200.0	160.0	

Weight: kg (lb)			Dimensions: mm (in)		
Net (+ lube oil)	Wet (+ lube oil & coolant)	Fuel, lube oil & coolant	Length, A	Width, B	Height, C
1597 (3521)	1624 (3580)	1978 (4361)	2510 (98.8)	1010 (39.8)	1640 (64.6)



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:

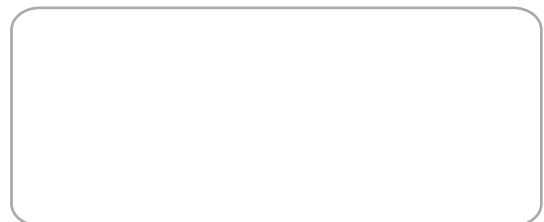
STANDBY: Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

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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