

Technical data Diesel Generator Set

CAT C18 / DE850E0

	Prime	Standby
Feature Code	C18DEHE	C18DEHE
Performance No.	EM3831	EM3830
Power Rating	kVA 770.0	850.0
Power Rating @ 0.8 Power Factor	KW 616.0	680.0
Voltage	V	400
Frequenz	Hz	50
Power Factor		0.8
Radiator		Yes
Combustion Strategy	Emission Low BSFC	
ISO	3046 / 8528	



Diesel Engine		
Brand	Caterpillar	
Type	C18	
No. of Cylinders	6	
Cylinders Alignment	L	
Cycle	4-Stroke	
Cooling Method	Water-cooled	
Turbo Configuration	Parallel	
Turbo Quantity	2	
Fuel	Diesel	
Speed	rpm	1'500.0
Bore	mm	145.0
Stroke	mm	183.0
Displacement	L	18.1
Compression Ratio	14.5:1	
Piston speed	m/s	9.15
Mean effective pressure (PME)	bar	29.89
Aspiration	Air-toAir Aftercooled	
Fuel System	Electronic unit injection	
Base Tank Capacity	1442	
Jacket Water heaters	V / kW	230 / 9
Starting Motor	V / kW	24 / 7
Battery Type	115-2421	
Battery Quantity	2	
Capacity Battery	V / Ah	12 / 90
Capacity Battery total	V / Ah	24 / 90

Generator		
Brand	Caterpillar	
Type / Frame	LC7234L	
Excitation	Permanent Magnet or AREP	
Pitch	0.6667	
Number of Poles	4	
Number of Bearings	1	
Number of Leads	6	
Insulation	Class H	
IP Rating	IP23	
Nominal Speed	rpm	1'500.0
Over Speed capability	%	150.0
Wave form Deviation (Line to Line)	%	2.0
Voltage Regulator	3 Phase sensing with selectable volts/Hz	
Voltage regulation	Less than ± ½% (steady state) Less than ± ½% (no load to full load)	
Telephone Influence Factor (TIF)	Less than 50	
Total Harmonic Distortion (THD)	Less than 5	
CBK 3pol manual, fixed mount rear	A	1'000.0
Typical Cabeling; TN-C (Prime)	2 x 4 x 240 mm ² + 1 x 1 x 240 mm ²	
Typical Cabeling; TN-C (Standby)	2 x 4 x 240 mm ² + 1 x 1 x 240 mm ²	

Package Dimensions (Dry)			
Engine: Length x Width x Height	mm	1'691 x 936 x 1'277	
Weight	kg	1'725	
Generator: Length x Width x Height	mm	1'406 x 824 x 1'086	
Weight	kg	1'685	
Radiator: Length x Width x Height	mm	1'671 x 753 x 2'147	
Dry Weight	kg	480	
Complete: Length x Width x Height	mm	4'130 x 1'671 x 2'561	
Complete: Weight	kg	4'580	
with Enclosure: Length x Width x Height	mm	5'572 x 2'170 x 2'453	
with Enclosure: Weight	kg	6'932	

Technical Data	Prime	Standby
Fuel Consumption		
100% load	L/hr	161.6
75% load	L/hr	117.6
50% load	L/hr	81.3
100% load	g/kWh	200.3
75% load	g/kWh	194.3
50% load	g/kWh	201.5
Oil consumption 75% load	L/hr	0.068
Oil consumption 75% load	g/kWh	0.092

Cooling System		
Engine coolant Capacity with Radiator / expansion Tank	L	110.0
Engine coolant Capacity	L	20.8
Inlet Air		
Combustion Air inlet flow rate	m ³ /min	58.2
Exhaust System		
Exhaust stack gas Temperature 100%	°C	404.0
Exhaust gas flow rate 100%	m ³ /min	134.7
Exhaust System backpressure max.	kPa	8.5
Heat Rejection		
Heat Rejection to coolant (total)	kW	197.0
Heat Rejection to exhaust (total)	kW	629.0
Heat Rejection to after cooler	kW	229.0
Heat Rejection to Atmosphere from Engine	kW	102.0
Heat Rejection to Atmosphere from Generator	kW	31.7
Lube System		
Sump refill with Filter	L	76.0

Exhaust Emission (Nominal Data) @ 75% and 49°C ATAAC		
CO	mg/nm ³	139.8
HC	mg/nm ³	13.3
NOx	mg/nm ³	3'378.4
HC + Nox	mg/nm ³	-
Part Matter	mg/nm ³	9.7

Generator		
Motor starting capability @30% Voltage Dip	skVA	2'117.0
Rated Current	A	1'111.4
Short-Circuit Current		3 x INOM

Radiator		
Radiator Type	A29.0CVS	
Design Temperature	°C	55.0
Radiator coolant Capacity	L	70.0
Air Flow @ 120 Pa	m ³ /min	853.0
Air Flow @ 180 Pa	m ³ /min	817.0

Sound pressure Level LPA @ 75% Last @ 7m										
dB	Hz									Overall dBA
	63	125	250	500	1000	2000	4000	8000		
Mechanical [Stby]	87.3	88.3	90.9	88.5	87.8	86.7	85.4	86.9		94.1
Exhaust [Stby]	107.2	104.3	102.4	97.5	92.4	94.4	90.4	78.0		101.1
Mechanical [Prim]	86.8	88.3	91	88.5	87.8	86.6	85.3	86.7		94
Exhaust [Prim]	107.7	104.3	101.7	96.9	91.4	93.3	89.3	75.9		100.3