

## Technical data Diesel Generator Set

## CAT C4.4 / DE110E3

	Prime	Standby
Feature Code	-	C04DF12
Performance No.	-	P4522B
Power Rating	kVA 100.0	110.0
Power Rating @ 0.8 Power Factor	KW 80.0	88.0
Voltage	V	400
Frequenz	Hz	50
Power Factor		0.8
Radiator		Yes
Combustion Strategy	Emission EU Stage IIIA	
ISO	3046 / 8528	



Illustration

Diesel Engine		
Brand	Caterpillar	
Type	C4.4	
No. of Cylinders	4	
Cylinders Alignment	L	
Cycle	4-Stroke	
Cooling Method	Water-cooled	
Turbo Configuration	Single	
Turbo Quantity	1	
Fuel	Diesel	
Speed	rpm	1'500.0
Bore	mm	105.0
Stroke	mm	127.0
Displacement	L	4.4
Compression Ratio	16.7:1	
Piston speed	m/s	6.35
Mean effective pressure (PME)	bar	17.43
Aspiration	Air-toAir Aftercooled	
Fuel System	Electronic unit injection	
Base Tank Capacity	301	
Jacket Water heaters	V / kW	230 / 1.5
Starting Motor	V / kW	12 / 7
Battery Type	115-2421	
Battery Quantity	1	
Capacity Battery	V / Ah	12 / 90
Capacity Battery total	V / Ah	12 / 90

Generator		
Brand	Caterpillar	
Type / Frame	R2253L4	
Excitation	Self Excited	
Pitch	0.6667	
Number of Poles	4	
Number of Bearings	1	
Number of Leads	12	
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 ± 1% (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	160.0
Typical Cabeling; TN-C (Prime)	x x mm <sup>2</sup> + x x mm <sup>2</sup>	
Typical Cabeling; TN-C (Standby)	x x mm <sup>2</sup> + x x mm <sup>2</sup>	

Package Dimensions (Dry)			
Engine: Length x Width x Height	mm	1'358 x 746 x 1'087	
Weight	kg	439	
Generator: Length x Width x Height	mm	684 x 532 x 640	
Weight	kg	320	
Radiator: Length x Width x Height	mm	394 x 711 x 850	
Dry Weight	kg	238	
Complete: Length x Width x Height	mm	2'089 x 1'120 x 1'526	
Complete: Weight	kg	1'138	
with Enclosure: Length x Width x Height	mm	2'770 x 1'120 x 1'690	
with Enclosure: Weight	kg	1'892	

Technical Data	Prime	Standby
<b>Fuel Consumption</b>		
100% load	L/hr	23.8
75% load	L/hr	18.9
50% load	L/hr	12.9
100% load	g/kWh	208.4
75% load	g/kWh	220.7
50% load	g/kWh	226.0
Oil consumption 75% load	L/hr	0.010
Oil consumption 75% load	g/kWh	0.101

<b>Cooling System</b>		
Engine coolant Capacity with Radiator / expansion Tank	L	17.0
Engine coolant Capacity	L	
<b>Inlet Air</b>		
Combustion Air inlet flow rate	m <sup>3</sup> /min	6.4
<b>Exhaust System</b>		
Exhaust stack gas Temperature 100%	°C	517.6
Exhaust gas flow rate 100%	m <sup>3</sup> /min	16.4
Exhaust System backpressure max.	kPa	15.0
<b>Heat Rejection</b>		
Heat Rejection to coolant (total)	kW	57.4
Heat Rejection to exhaust (total)	kW	70.0
Heat Rejection to after cooler	kW	9.0
Heat Rejection to Atmosphere from Engine	kW	23.8
Heat Rejection to Atmosphere from Generator	kW	7.0
<b>Lube System</b>		
Sump refill with Filter	L	8.0

Exhaust Emission (Nominal Data) @ 75% and 55°C ATAAC		
CO	mg/nm <sup>3</sup>	-
HC	mg/nm <sup>3</sup>	-
NOx	mg/nm <sup>3</sup>	-
HC + Nox	mg/nm <sup>3</sup>	-
Part Matter	mg/nm <sup>3</sup>	-

Generator		
Motor starting capability @30% Voltage Dip	skVA	266.0
Rated Current	A	144.3
Short-Circuit Current		3 x INOM

Radiator	
Radiator Type	
Design Temperature	°C
Radiator coolant Capacity	L
Air Flow @ 120 Pa	m <sup>3</sup> /min
Air Flow @ 180 Pa	m <sup>3</sup> /min

Sound pressure Level LPA @ 75% Last @ 7m									
dB	Hz								Overall dBA
	63	125	250	500	1000	2000	4000	8000	
Mechanical [Stby]	74.3	77.4	79.7	78.2	75.8	73.6	72.1	70.1	81.6
Exhaust [Stby]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mechanical [Prim]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Exhaust [Prim]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.