

## Technical data Diesel Generator Set

## CAT C13 / DE450E3

	Prime	Standby
Feature Code	C13DE1W	C13DE1W
Performance No.	EM0552	EM1443
Power Rating	kVA 400.0	450.0
Power Rating @ 0.8 Power Factor	KW 320.0	360.0
Voltage	V	400
Frequenz	Hz	50
Power Factor		0.8
Radiator		Yes
Combustion Strategy	Emission EU Stage IIIA	
ISO	3046 / 8528	



Diesel Engine		
Brand	Caterpillar	
Type	C13	
No. of Cylinders	6	
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	130.0
Stroke	mm	157.0
Displacement	L	12.5
Compression Ratio	16.3:1	
Piston speed	m/s	7.85
Mean effective pressure (PME)	bar	23.05
Aspiration	Air-toAir Aftercooled	
Fuel System	Electronic unit injection	
Base Tank Capacity	827	
Jacket Water heaters	V / kW	230 / 3
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

Technical Data	Prime	Standby
<b>Fuel Consumption</b>		
100% load	L/hr	86.8
75% load	L/hr	69.5
50% load	L/hr	50.4
100% load	g/kWh	202.3
75% load	g/kWh	216.0
50% load	g/kWh	234.9
Oil consumption 75% load	L/hr	0.036
Oil consumption 75% load	g/kWh	0.095

<b>Cooling System</b>		
Engine coolant Capacity with Radiator / expansion Tank	L	45.2
Engine coolant Capacity	L	14.2
<b>Inlet Air</b>		
Combustion Air inlet flow rate	m³/min	25.5
<b>Exhaust System</b>		
Exhaust stack gas Temperature 100%	°C	502.0
Exhaust gas flow rate 100%	m³/min	69.7
Exhaust System backpressure max.	kPa	10.0
<b>Heat Rejection</b>		
Heat Rejection to coolant (total)	kW	122.0
Heat Rejection to exhaust (total)	kW	300.0
Heat Rejection to after cooler	kW	72.7
Heat Rejection to Atmosphere from Engine	kW	66.6
Heat Rejection to Atmosphere from Generator	kW	20.4
<b>Lube System</b>		
Sump refill with Filter	L	36.0

Generator		
Brand	Caterpillar	
Type / Frame	A2955L4	
Excitation	Permanent Magnet	
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 ± 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	630.0
Typical Cabeling; TN-C (Prime)	2 x 4 x 120 mm² + 1 x 1 x 120 mm²	
Typical Cabeling; TN-C (Standby)	2 x 4 x 95 mm² + 1 x 1 x 95 mm²	

Exhaust Emission (Nominal Data) @ 75% and 50°C ATAAC		
CO	mg/nm³	403.7
HC	mg/nm³	12.8
NOx	mg/nm³	982.4
HC + Nox	mg/nm³	-
Part Matter	mg/nm³	30.9

Generator		
Motor starting capability @30% Voltage Dip	skVA	1'339.0
Rated Current	A	577.4
Short-Circuit Current	3 x INOM	

Radiator		
Radiator Type	AS13.3CTS	
Design Temperature	°C	50.0
Radiator coolant Capacity	L	25.0
Air Flow @ 120 Pa	m³/min	396.0
Air Flow @ 180 Pa	m³/min	348.0

Package Dimensions (Dry)			
Engine: Length x Width x Height	mm	1'295 x 1'186 x 1'053	
Weight	kg	908	
Generator: Length x Width x Height	mm	1'174 x 710 x 1'055	
Weight	kg	1'026	
Radiator: Length x Width x Height	mm	822 x 1'100 x 1'697	
Dry Weight	kg	150	
Complete: Length x Width x Height	mm	3'800 x 1'119 x 2'156	
Complete: Weight	kg	2'634	
with Enclosure: Length x Width x Height	mm	4'930 x 1'620 x 2'271	
with Enclosure: Weight	kg	4'980	

Sound pressure Level LPA @ 75% Last @ 7m										
dB	Hz									Overall dBA
	63	125	250	500	1000	2000	4000	8000		
Mechanical [Stby]	84.7	84.0	84.0	83.7	84.6	84.7	80.1	77.8	<b>90.0</b>	
Exhaust [Stby]	106.6	102.2	99.8	96.1	96.4	96.6	91.4	81.4	<b>102.0</b>	
Mechanical [Prim]	83.8	83.7	83.9	83.6	84.5	84.3	79.9	76.2	<b>89.8</b>	
Exhaust [Prim]	106.1	101.2	98.1	94.9	95.3	95.2	89.7	79.8	<b>100.8</b>	