

## Technical data Diesel Generator Set

## CAT 3516B-2250

Output Ratings with Radiator	DIN/ISO 3046	
Combustion Strategy	Low Emission, 60 °C ACT	
Generating set Model	<b>Prime</b>	<b>Standby</b>
400V, 50Hz, power factor 0.8	2'000 kVA	2'250 kVA
	1'600 kW	1'800 kW
Feature Code	516DE90	
Performance No.	DM8358	DM8355

Diesel Engine	
Brand	Caterpillar
Type	3516B TA
No. of Cylinders / Alignment	16 / V
Cycle	4-Stroke
Cooling Method	Water-cooled
Fuel	Diesel
Speed	1'500 rpm
Bore	170.00 mm
Stroke	190.00 mm
Displacement	69.00 L
Compression Ratio	14.0:1
Aspiration	Turbo after cooler
Fuel System	Electronic unit injection
Base Tank Capacity	n. a.
Jacket Water heaters	220 V / 9 kW
Starting Motor	24 V / 7 kW
Battery Type	153-5700
Quantity	4
Capacity per Battery / total	145 Ah - 12 V / 290 Ah - 24 V

Generator	
Brand	Caterpillar
Type / Frame	1647
Excitation	Permanent Magnet or AREP
Pitch	0.6667
Number of Poles	4
Number of Bearings	Single Bearing
Number of Leads	6
Insulation	Class H
IP Rating	IP23
Nominal Speed	1'500 rpm
Over Speed capability	150 %
Wave form Deviation (Line to Line)	2 %
Voltage Regulator	3 Phase sensing with selectable volts/Hz
Voltage regulation	Less than $\pm 1/2\%$ (steady state) Less than $\pm 1\%$ (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	4'000 A / 50 kA
Typical Cabeling; TN-C (Prime)	8 x 4 x 240 mm <sup>2</sup> + 4 x 1 x 240 mm <sup>2</sup>
Typical Cabeling; TN-C (Standby)	8 x 4 x 240 mm <sup>2</sup> + 4 x 1 x 240 mm <sup>2</sup>

Package Dimensions			
Engine:	Length x Width x Height	3'292 x 1'930 x 1'511 mm	
	Weight	7'935 kg	
Generator:	Length x Width x Height	2'061 x 1'380 x 1'759 mm	
	Weight	3'945 kg	
Radiator:	Length x Width x Height	1'900 x 2'588 x 3'051 mm	
	Dry Weight	884 kg	
Complete:	Length x Width x Height	6'264 x 2'588 x 3'051 mm	
	Weight	13'264 kg	



Illustration

Technical Data	Prime	Standby
<b>Fuel Consumption</b>		
100% load with Fan	412.2 L/hr	469.8 L/hr
75% load with Fan	311.4 L/hr	348.5 L/hr
50% load with Fan	218.0 L/hr	240.8 L/hr
Oil consumption 75% load	0.247 L/hr	0.277 L/hr
<b>Cooling System</b>		
Engine coolant Capacity with Radiator / expansion Tank	382.0 L	
Engine coolant Capacity	233.0 L	
<b>Inlet Air</b>		
Combustion Air inlet flow rate	122.9 m <sup>3</sup> /min	135.2 m <sup>3</sup> /min
<b>Exhaust System</b>		
Exhaust stack gas Temperature	517.0 °C	538.5 °C
Exhaust gas flow rate	339.4 m <sup>3</sup> /min	383.9 m <sup>3</sup> /min
Exhaust System backpressure max.	6.7 kPa	
<b>Heat Rejection</b>		
Heat Rejection to coolant (total)	674 kW	742 kW
Heat Rejection to exhaust (total)	1'580 kW	1'819 kW
Heat Rejection to after cooler	262 kW	341 kW
Heat Rejection to Atmosphere from Engine	158 kW	166 kW
Heat Rejection to Atmosphere from Generator	68.4 kW	80.9 kW
<b>Lube System</b>		
Sump refill with Filter	401.3 L	
<b>Exhaust Emission (Nominal Data); Potential Site Variation possible</b>		
NOx mg/nm <sup>3</sup>	2'000	2'000
CO mg/nm <sup>3</sup>	125	145
HC mg/nm <sup>3</sup>	75	60
Part Matter mg/nm <sup>3</sup>	18	17
<b>Generator</b>		
Motor starting capability @30%	5'865 skVA	
Voltage Dip		
Rated Current	2'886.4 A	3'247.6 A
Short-Circuit Current	3 x I <sub>NOM</sub>	

Radiator	
Radiator Type	44.0 CTD
Design Temperature	38 °C
Radiator coolant Capacity	149.0 L
Air Flow @ 120 Pa	1'543 m <sup>3</sup> /min
Air Flow @ 180 Pa	1'459 m <sup>3</sup> /min

Sound pressure Level LPA @ 75% Last @ 7m										
dB	Hz	63	125	250	500	1000	2000	4000	8000	Overall dBA
		Mechanical [Stby]	101	110	101	92	88	87	85	
Exhaust [Stby]	96	107	101	92	92	93	93	89	100	
Mechanical [Prim]	101	110	101	92	88	87	85	89	98	
Exhaust [Prim]	96	106	100	91	91	92	93	88	99	