Avesco AG
Energy Systems
Hasenmattstrasse 2
CH – 4901 Langenthal / BE
www.avesco.ch

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Technical data Diesel Generator Set — CAT C175-16

		Prime	Standby
Feature Code		175DRA2	175DRA2
Performance No.		DM8723	DM8716
Power Rating	kVA	2'725.0	3'000.0
Power Rating @ 0.8 Power Factor	KW	2'180.0	2'400.0
Voltage	V	400	
Frequenz	Hz	50	
Power Factor		0.8	
Radiator		Yes	
Combustion Strategy		Emission Low Emission	
ISO		3046 / 8528	

Diesel Engine		
Brand		Caterpillar
Type		C175-16
No. of Cylinders		16
Cylinders Alignment		V
Cycle		4-Stroke
Cooling Method		Water-cooled
Turbo Configuration		Parallel
Turbo Quantity		4
Fuel		Diesel
Speed	rpm	1'500.0
Bore	mm	175.0
Stroke	mm	220.0
Displacement	L	84.7
Compression Ratio		16.7:1
Piston speed	m/s	11.00
Mean effective pressure (PME)	bar	22.49
Aspiration		Turbo after cooler
Fuel System		Common Rail
Base Tank Capacity		n. a.
Jacket Water heaters	V / kW	230 / 9
Starting Motor	V / kW	24 / 9
Battery Type		153-5720
Battery Quantity		4
Capacity Battery	V / Ah	12 / 210
Capacity Battery total	V / Ah	24 / 420

Generator		
Brand		Caterpillar
Type / Frame		SR5 / 1866
Excitation		Permanent Magnet
Pitch		0.6667
Number of Poles		4
Number of Bearings		2
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)	%	5.0
Voltage Regulator		3 Phase sensing with selectible volts/Hz
Voltage regulation		Less than ± ½% (steady state) Less than ± ½% (with 3% speed change)
Telephone Influence Factor (TIF)		Less than 50
Total Harmonic Distortion (THD)		Less than 5
CBK 3pol manual, fixed mount rear	A	4'000.0
Typical Cabeling; TN-C (Prime)		12 x 4 x 240 mm² + 6 x 1 x 240 mm²
Typical Cabeling; TN-C (Standby)		12 x 4 x 240 mm² + 6 x 1 x 240 mm²

Package Dimensions (Dry)		
Engine: Length x Width x Height	mm	4'116 x 1'778 x 2'233
Weight	kg	11'800
Generator: Length x Width x Height	mm	2'520 x 1'235 x 1'235
Weight	kg	5'592
Radiator: Length x Width x Height	mm	2'516 x 2'756 x 3'308
Dry Weight	kg	3'591
Complete: Length x Width x Height	mm	7'900 x 2'756 x 3'308
Complete: Weight	kg	24'483
with Enclosure: Length x Width x Height	mm	- x - x -
with Enclosure: Weight	kg	-

Illustration

Technical Data		**Prime**	**Standby**
Fuel Consumption			
100% load	L/hr	612.2	667.5
75% load	L/hr	457.4	535.5
50% load	L/hr	311.5	357.2
100% load	g/kWh	215.9	212.4
75% load	g/kWh	215.1	227.2
50% load	g/kWh	219.7	227.3
Oil consumption 75% load	L/hr	0.238	0.264
Oil consumption 75% load	g/kWh	0.092	0.092
Cooling System			
Engine coolant Capacity with Radiator / expansion Tank	L	882.5	
Engine coolant Capacity	L	303.5	
Inlet Air			
Combustion Air inlet flow rate	m³/min	206.1	215.3
Exhaust System			
Exhaust stack gas Temperature 100%	°C	488.8	499.7
Exhaust gas flow rate 100%	m³/min	543.4	578.2
Exhaust System backpressure max.	kPa	6.7	
Heat Rejection			
Heat Rejection to coolant (total)	kW	1'154.0	1'269.0
Heat Rejection to exhaust (total)	kW	2'407.0	2'595.0
Heat Rejection to after cooler	kW	272.0	287.0
Heat Rejection to Atmosphere from Engine	kW	176.0	185.0
Heat Rejection to Atmosphere from Generator	kW	81.4	92.2
Lube System			
Sump refill with Filter	L	530.0	
Exhaust Emission (Nominal Data) @ 75% and 48°C SCAC			
CO	mg/nm³	581.3	260.8
HC	mg/nm³	48.9	64.0
NOx	mg/nm³	1'849.7	1'675.6
HC + Nox	mg/nm³	-	-
Part Matter	mg/nm³	27.1	13.2
Generator			
Motor starting capability @30% Voltage Dip	skVA	6'187.0	
Rated Current	A	3'933.3	4'330.3
Short-Circuit Current		3 x INOM	

Radiator		
Radiator Type		SF64.0CVS
Design Temperature	°C	34.0
Radiator coolant Capacity	L	477.0
Air Flow @ 120 Pa	m³/min	2'416.0
Air Flow @ 180 Pa	m³/min	2'268.0

Sound pressure Level LPA @ 75% Last @ 7m

Hz / dB	63	125	250	500	1000	2000	4000	8000	Overall dBA
Mechanical [Stby]	n.a.	75.5	78.5	85.2	86.7	87.0	82.9	80.4	**97.0**
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.**

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