

VC500-5

DIESEL GENERATOR SET / OPEN + SILENT



OPEN SET



SILENT SET

500

kVA

STANDBY POWER

450

kVA

PRIME POWER

50

Hz

FREQUENCY

400/230

V

VOLTAGE

Cummins QSZ13-G5

3 phase · 0.8 PF · 1500 rpm

CONFIGURATION COMPARISON

Configuration	Dimensions (L × W × H)	Dry weight	Fuel tank
Open set	3200 × 1390 × 2290 mm	3450 kg	750 L
Silent set	4365 × 1650 × 2465 mm	4375 kg	700 L

Performance, engine, alternator and controller data are common to both configurations.

GENERAL CHARACTERISTICS

VC500-5 · 50 Hz · 3 Phase

RATED PERFORMANCE

Standby Power (kVA)	500
Standby Power (kW)	400
Prime Power (kVA)	450
Prime Power (kW)	360
Power Factor (Cos Phi)	0.8
Diesel Engine	QSZ13-G5
Frequency (Hz)	50
Rated Speed (rpm)	1500
Phase	3
Standard Voltage (V)	400/230
Available Voltages (V)	380/220 · 415/240

POWER DEFINITIONS

STANDBY POWER (ESP)

Available for supplying emergency power during a utility interruption. The stated rating follows ISO 8528-1.

PRIME POWER (PRP)

Available for an unlimited number of annual operating hours in variable-load applications, in accordance with ISO 8528-1.

TERMS OF USE

Nominal power is stated at 25 °C inlet-air temperature, 100 kPa barometric pressure (100 m A.S.L.) and 30% relative humidity.

RATED OUTPUT CURRENT BY VOLTAGE

Rated voltage	Standby current (500 kVA)	Prime current (450 kVA)
380/220 V	759.7 A	683.7 A
400/230 V	721.7 A	649.5 A
415/240 V	695.6 A	626.0 A

ENGINE DATA

Cummins QSZ13-G5

GENERAL ENGINE DATA

Engine brand	Cummins
Engine model	QSZ13-G5
Engine type	4-stroke diesel
Governor type	ECU
Injection type	Direct
Aspiration type	Turbocharged and Charge Air Cooled
Cylinders and arrangement	6-L

FUEL CONSUMPTION

100% load ESP	107.1 L/h
100% load PRP	93.2 L/h
75% load PRP	69.9 L/h
50% load PRP	49 L/h

AIR SYSTEM

Intake air flow	492 L/s
Cooling air flow	/

GENERAL ENGINE DATA

Bore × stroke	130 × 163 mm
Displacement	13 L
Cooling system	Water-cooled
Lube oil consumption at full load	0.5%-1% of fuel consumption
Compression ratio	17.1
Air filter	Dry

EXHAUST SYSTEM

Maximum exhaust temperature	524 °C
Exhaust gas flow	1128 L/s
Maximum allowed back pressure	10.1 kPa

STARTING SYSTEM

Starting power	8.5 kW
Recommended battery	120 Ah
Number of batteries	2
Auxiliary voltage	24 VDC

OIL AND COOLING CAPACITIES

Engine oil capacity	75.33 L
Total coolant capacity	23.1(engine only) L

ALTERNATOR DATA

3-phase · Brushless · Electronic AVR

GENERAL ALTERNATOR DATA

Number of phases	3
Power factor (Cos Phi)	0.8
Poles	4
Winding connections (standard)	Star-series
Insulation	H class
Enclosure (according to IEC 34-5)	IP23
Excitation system	Self-excited, brushless
Voltage regulator	AVR (Electronic)
Number of bearings	Single bearing
Coupling system	Flexible disc
Coating type	Standard (vacuum impregnation)

CONTROL MODULE

Deep Sea DSE6120



SINGLE GEN-SET CONTROL

AMF CONTROL

Automatic mains failure controller for one gen-set, with three-phase mains and generator monitoring, flexible I/O and electronic or non-electronic engine versions.

CORE FUNCTIONS

01	Automatic transfer between mains and generator power	05	Event log for 10 events plus engine-hours counter
02	3-phase mains and generator voltage monitoring	06	6 digital inputs and 3 analog sender inputs
03	Generator current monitoring and protection	07	Six outputs; configuration depends on the engine version
04	CAN-engine or magnetic-pick-up/alternator-sensing versions	08	PC/front-panel configuration; optional IP65 front gasket

CONNECTIVITY

DSE6120 · Interfaces, sensing and I/O

USB CAN / MPU 6 INPUTS 6 OUTPUTS

COMMUNICATION AND MONITORING FEATURES

- | | | | |
|----|--|----|---|
| 01 | USB connects to DSE Configuration Suite for controller setup | 05 | Six digital inputs and three analog senders support field signals |
| 02 | Choose CAN-engine or magnetic-pick-up/alternator-sensing version | 06 | Four outputs are configurable on MPU/alternator version; six on CAN |
| 03 | DSE6120 includes dedicated 3-phase mains sensing | 07 | Remote-start input, test mode and configurable timers are included |
| 04 | 3-phase generator voltage and current monitoring is built in | | |

ORDERING OPTIONS

CAN ENGINE VERSION · MPU / ALTERNATOR VERSION

Engine sensing and output configuration depend on the selected controller variant.