PROTECT POWER SYSTEMS

PCL500

Industrial Range | Powered by Cummins

General Characteristics

Item	Data
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 Definition**

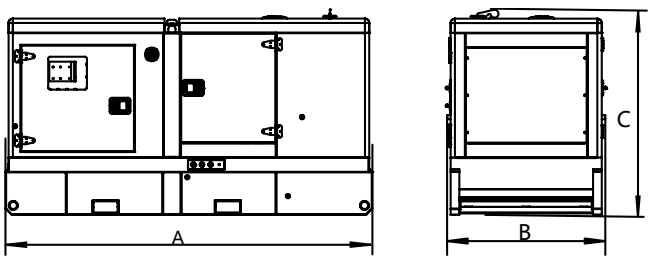
Standby Power(ESP): The standby power rating is applicable for supply emergency power in variable load applications in accordance with ISO8528-1, overload is not allowed.

Prime Power(PRP): The prime power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO8528-1.

- **Terms of use**

According to the standard, the nominal power assigned by the genset is given for 25 ℃ air inlet temperature, of a barometric pressure of 100 kPA (100m A.S.L) and 30%.

Dimensions & Weights & Fuel Tank



Note: General configuration not to be used for installation. See general dimension drawings for detail.

Model	Constructure	Dim"A"mm	Dim"B"mm	Dim"C"mm	Dry Weight kg	Fuel Tank Capacity L
PCL500-O	Open set	2980	1360	2290	/	600
PCL500-C	Silent set	4365	1650	2465	/	750

■ Engine Data

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
Number of cylinders and arrangement	6-L
Bore and stroke (mm*mm)	130X163
Displacement (L)	13
Cooling system	Water-cooled
Lube oil consumption with full load	0.5%-1% of fuel consumption
Compression Ratio	17.1
Air Filter	Dry
Fuel Consumption	
Fuel Consumption @100% load ESP (L/H)	107.1
Fuel Consumption @100% load PRP (L/H)	93.2
Fuel Consumption @75% load PRP (L/H)	69.9
Fuel Consumption @50% load PRP (L/H)	19
Air System	
Intake air flow (L/s)	492
Cooling air flow (L/s)	/
Exhaust System	
Maximum exhaust temperature (°C)	524
Exhaust gas flow (L/s)	1128
Maximum allowed back pressure (kPa)	10.1
Starting System	
Starting power(kW)	8.5
Recommended battery (Ah)	120
Number of Batteries	2
Auxiliary voltage (Vdc)	24
Oil System	
Engine oil capacity (L)	75.33
Cooling System	
Total coolant capacity (L)	23.1(engine only)

Alternator Data

Alternator Data	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Insulation	H class
Enclosure(according IEC-34-5)	IP23
Excitation system	Self-excited, brushless
Voltage regulator	AVR (Electronic)
No. of bearings	Single bearing
Coupling system	Flexible disc
Coating type	Standard (Vacuum impregnation)

Control Module

Digital Instrumentation
- Generating set voltage.
- Mains voltage.
- Generating set frequency.
- Generating set current.
- Battery voltage.
- Power (kVA-kW-kVAr)
- Power factor Cos φ.
- Hours-counter
- Engine speed r.p.m
- Fuel level (%)

Commands and other
- Four operation modes: OFF - Manual starting - Automatic starting - Automatic test
- Pushbutton for forcing Mains contactor or Genset contactor.
- Push-buttons: start/stop, fault reset, up/down/page/enter selection.
- Remote starting availability.
- DC system disconnection switch.
- Acoustic alarm.
- Automatic battery charger.

Protections with alarm
- Engine protections: low fuel level, low oil pressure, high engine temperature.
- Genset protections: under/over voltage, overload, under/over frequency, starting failure, under/over battery voltage

Other Protections
- Emergency stop button.
- Panel protected through door with lockable handle

Protections with shutdown
- Engine protections: low fuel level, low oil pressure, high engine temperature,
- Genset protection: under/over voltage, overload, under/over battery voltage, battery charger failure.
- Circuit breaker protection: III poles.
- Earth Fault included in the control unit.