

## Model: C165D5

Powered by CUMMINS DCEC

### Output Rating

MODEL		Power rating		Voltage available		
		PRIME(1)	STANDBY(2)			
C165D5	400V/50HZ	120KW	132KW	380/220V	400/230V	415/27V
	PF:0.8	150KVA	165KVA			

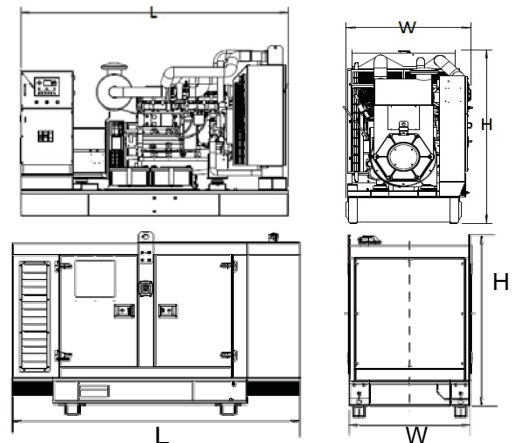
### General Information

Model	C165D5	
Engine	6BTAA5.9G12	
Speed control type	Electronic	
Phase	3	
Control System	Digital	
System voltage	24V	
Frequency	50HZ	
Engine Speed(RPM)	1500	
Fuel Consumption (L/hr)	Standby power(2)	38
	Prime Power(1)	34
	75% prime power	26
	50% prime power	17



### Dimension and Weight

Dimension	Open	Silent
Length (L)	2360mm	3350mm
Width (W)	1000mm	1100mm
Height (H)	1610mm	1790mm
Net Weight	1459KG	1900KG



AGG POWER gensets are compliant with EC mark which include the following directives:

- \* 2006/42/EC Machinery safety.
- \* 2006/95/EC Low voltage
- \* EN 60204-1: 2006+A1:2009, EN ISO 12100:2010, EN ISO 13849-1: 2008, EN 12601: 2010

#### (1) Prime Power (PRP):

According to ISO 8528-1:2005, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operation conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24h of operation shall not exceed 70% of the PRP.

#### (2) Standby Power (ESP):

According to ISO 8528-1:2005, standby power is the maximum power available during a variable electrical power sequence, under the stated operation conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24h of operation shall not exceed 70% of the ESP.



## Engine Specification

Compression Ratio:	<b>17.3:1</b>	Aspiration:	<b>Turbocharged &amp; Charge Air Cooled</b>
Bore:	<b>102 mm</b>	Displacement:	<b>5.9 L</b>
Stroke:	<b>120 mm</b>	No. of Cylinders:	<b>6</b>
Emission Certification:		Fuel System:	<b>BYC P7100/Electronic Governor</b>
Governor Regulation:	<b>≤5%</b>		

### EXHAUST SYSTEM

Maximum Back Pressure.....	-kPa	10
Exhaust Pipe Size Normally Acceptable.....	-mm	75
Maximum Static Supported Weight at the Turbocharger Outlet Flange.....	-N.m	13.5
Exhaust Manifold Insulation Acceptable.....	-Yes/No	No
Turbocharger Insulation Acceptable.....	-Yes/No	No

### CHARGE AIR COOLING SYSTEM

Maximum allowable pressure drop across charge air cooler and OEM CAC piping (IMPD).....	-kPa	13
Maximum Intake Manifold Temperature Differential (Ambient to IMT) (IMTD).....	°C	25
Intake manifold temperature for Fan-ON.....	°C	50
Intake manifold air temperature derate/	°C	58

### AIR INTAKE SYSTEM

Maximum Intake Air Restriction with Heavy Duty Air Cleaner		
— Clean Element.....	-kPa	3.7
— Dirty Element.....	-kPa	6.2
Minimum Dirt Holding Capacity with Heavy Duty Air Cleaner.....	-g/cfm	53
Maximum Temperature Rise from Ambient to the Inlet of the Turbocharger..	°C	17
Recommended intake piping size (inner diameter).....	-mm	76

### LUBRICATION SYSTEM

Normal Operating Oil Pressure Range		
— minimum low idle.....	-kPa	207
— maximum rated speed.....	-kPa	345
Maximum Oil Temperature .....	°C	121
Oil Capacity with OP 9006 Oil Pan:High-Low.....	-litre	14.2-12.3
Minimum Required Lube System Capacity - Sump plus Filters.....	-litre	16.4
Angularity of Standard Oil Pan: (Values stated are for intermittent operation only):		
— Front Down.....	- °	40
— Front Up.....	- °	40
— Side to Side.....	- °	40

### FUEL SYSTEM

Type Injection System.....		BYC P7100
Maximum Restriction at Lift Pump.....	-kPa	13.6
Maximum Restriction at the Supply Side of the injector.....	-kPa	67.7
Total Drain Flow(constant for all loads).....	-litre/hr	30

### COOLING SYSTEM

Coolant Capacity-Engine Only.....	-litre	10
Maximum Coolant Friction Head External to Engine		
— 1800rpm.....	-kPa	35
— 1500rpm.....	-kPa	28
Maximum Static Head of Coolant Above Engine Crank Centerline.....	-m	14
Standard Thermostat (Modulating) Range.....	°C	82-95
Minimum Pressure Cap.....	-kPa	69
Maximum Top Tank Temperature for Standby/Prime Power.....	°C	104/100

### ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty,Positive Engagement).....	-volt	24V
Battery Charging System,Negative Ground.....	-ampere	40
Maximum Allowable Resistance of Cranking Circuit.....	-ohm	0.002
Minimum Recommended Battery Capacity		
— Cold Soal @ 10°F (-12°C) and Above.....	-0°F CCA	400



## ▪ Alternator

Alternator		
Poles	Num	4
Winding Connections (standard)		Star-serie
Frame Mounting		S-1 14"
Insulation	Class	H class
Enclosure (according IEC-34-5)		IP23
Exciter System		self-excited, brushless
Voltage Regulator		A.V.R. (Electronic)
Bearing		Single bearing
Coupling		Flexible disc
Coating type		Standard (Vacuum impregnation)

## ▪ Options

Engine	Alternator	Generator Sets	Fuel System	Canopy
<ul style="list-style-type: none"> <li>●Water Jacket Preheater</li> <li>●Oil Preheater</li> </ul>	<ul style="list-style-type: none"> <li>●Winding Temperature measuring Instrument</li> <li>●Alternator Preheater</li> <li>●PMG</li> <li>●Anti-damp and anti-corrosion treatment</li> <li>●Anti-condensation heater</li> </ul>	<ul style="list-style-type: none"> <li>●Tools with the machine</li> </ul>	<ul style="list-style-type: none"> <li>● Low fuel level alarm</li> <li>●Automatic fuel feeding system</li> <li>●Fuel T-valves</li> </ul>	<ul style="list-style-type: none"> <li>●Rental Type Canopy</li> <li>●Trailer</li> </ul>
Lubricating System	Exhaust System	Cooling System	Control Panel	Voltages
<ul style="list-style-type: none"> <li>●Oil with the machine</li> </ul>	<ul style="list-style-type: none"> <li>●Protection board from hotness</li> </ul>	<ul style="list-style-type: none"> <li>● Front heat protection</li> <li>● Coolant (-30°C)</li> </ul>	<ul style="list-style-type: none"> <li>●Remote control panel</li> <li>● ATS</li> <li>● Remote controller</li> <li>● Synchronizing controller</li> </ul>	<ul style="list-style-type: none"> <li>● 415/240V</li> <li>● 380/220V</li> <li>● 220/127V</li> <li>● 220/127V</li> <li>● 200-115V</li> </ul>



## Control Panel



## Product description

- Single gen-set controller for Stand-by and Prime-power applications
- Direct communication with EFI engines
- Total remote monitoring and control

## Key features

- Easy to install, configure and use
- Wide range of communication capabilities including:
  - connection via RS232, RS485, CAN and on board USB
  - internet access using Ethernet or GPRS
  - support for Modbus and SNMP protocols
- Cloud-based monitoring and control
- Active SMS and emails in different languages
- 2x 5 A binary outputs for cranking and fuel solenoid
- Option for up to 16 additional binary inputs/outputs
- Flexible event based history with up to 350 events
- Load shedding, dummy load capability
- Automatic temperature based cooling/heating
- Comprehensive gen-set protections
- Multipurpose flexible timers
- True RMS measurement

## Available extension modules

Product	Description	Order code
CM-Ethernet	Ethernet interface	CM2ETHERXBX
CM-GPRS	GSM modem / wireless internet	CM2GPRSXXBX
CM-RS232-485	Dual port interface	CM223248XBX
EM-BIO8-EFCP	8 additional binary inputs/outputs	EM2BIO8EXBX

## Functions and protections

Description	ANSI code	Description	ANSI code
Over voltage	59	Load shedding	32P
Under voltage	27	Overload	32
Voltage asymmetry and Phase rotation**	47	Power factor	55
Over frequency	81H	Temperature	49T
Under frequency	81L	Gas (fuel) level	71
Over current*	50 + 51	Earth fault current	50N + 64
Current unbalance	46		

\* Short current only

\*\* Fixed setting

