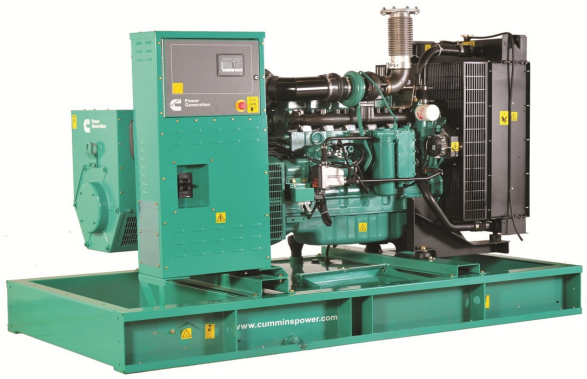
Diesel Generating Sets



C185D6

Our energy working for you.™

Cummins Power Generation

Standard Genset Features

Cummins water cooled Diesel engine.
Oil and fuel filter fitted, water separator.
Lube-oil drain valve fitted.
Electric starter and Charge alternator 12 VDC.
Mechanical governor
Normal duty air filter.
Single bearing alternator.
Set mounted starting battery.
Engine, Alternator, Chassis and Control Command House color: Munsell Jade Green.
Radiator and Guarding in color: Black.
Packing under shrunk plastic film.
Operation and Maintenance manual.
Standard set of labels.
Fuel tank in skid - day tank.

PMG (Permanent Magnet Generating)
Offers enhanced motor starting, good performance with non-linear loads and faultclearing short circuit capability.

Standard Warranty
Warranty 2 years (Standby) or 1 year (Prime)

Generator Set Performance

Voltage Regulation
Maintains voltage output within ±1,0%
in the following conditions:
1. At any power factor between 0.8 and 1.0
2. At any load level from no load to full load.
3. At speed droop variations up to 4,5%.

Frequency Regulation
Isochronous under any load from no load to 100% full load when electronic governor is fitted.

Random Frequency Variation
Will not exceed ±0,25% of rated frequency value for constant loads, no load to full load.

Compliance Standards

To BS4999/5000 pt 99,
VDE 0530, UTE5100,
NEMA MG1-22, CEMA,
IEC 34, CSA A22.2,
AS1359, BSS 5514,
ISO 3046 and ISO 8528

Alternator Specification

Type
Brushless single bearing, revolving field, four pole, protection from water (dripping).
Class H Insulation, IP23 Protection
Vacuum impregnation.
IC 01 cooling system.
Fully interconnected damper winding.
AC exciter and rotating rectifier unit.
Epoxy coated stator winding.
Rotor and exciter impregnated with polyester resin appropiate to the tropical climate, resistant to oil and acids.
Rotor balanced dinamicaly BS 5625 2,5 degrees.
Permanent lubricant ball bearing
Rotor wound in layers and with mechanics coins.

Exciter
Triple dipped in varnish resistent to oil and acid and coated with anti-tracking varnish.

Winding
Low reactance 2/3 pitch windings; low waveform distortion with non-linear loads, fault clearing short-circuit capability.
Engine/alternator direct coupling for perfect alignment.

Generator Set Options

Exhaust Options
Exhaust silencer - Industrial 9 dB(A).
Exhaust silencer - Residential 29 dB(A)

Warranty
Warranty 5 years extended - (Standby)
Warranty 2 years extended or 6000 hours - (Prime)

Options
Coolant heater
Battery Charger
Automatic Transfer Switches - GTEC
Silencer Enclosures
External Tank
Heavy Duty Air Filter
Eletronic governor

Voltage Connections - 60 Hz
480/277 V 440/254 V 416/240 V
380/220 V 240/139 V 220/127 V
208/120 V

Fuel Consumption (L/H)

Ratings	Standby				Prime			
	231 kVA		**185** kW		**213** kVA		**170** kW	
Load	Full	3/4	1/2	1/4	Full	3/4	1/2	1/4
Consumption (L/hr)	53	48	35	24	48	35	24	14

Observation:
The engine above was tested according to the ISO-3046 respecting the following conditions:
Barometric Pressure = 100 kPa (29.83 in Hg)
Altitude above sea level = 110 m (316 ft)
Ambient temperature = 25º c (77º F)
Relative humidity = 30%

Technical Data

Model	C185D6	Alternator voltage regulation	± 1,0%
Standby Rating	231 kVA / 185 kW	Alternator insulation class	H
Prime Rating	213 kVA / 170 kW	IP Protection	IP 23
Engine Make	Cummins	Fuel consumption (Standby)	53 l/h
Engine Model	6CTA 8.3-G2	Fuel consumption (Prime)	48 l/h
Cylinders	6 cylinders	Lubrication system oil capacity	23,8 liters
Engine Build	In line	Coolant capacity (only engine)	12,3 liters
Standard Governor/Class	Mechanical	Coolant capacity (engine and radiator)	35,6 liters
Aspiration and cooling	Turbocharged	Exhaust temperature (Prime)	513ºC
Bore and stroke	114 mm x 135 mm	Exhaust gas flow (Prime)	660 l/s
Compression Ratio	16,8 : 1	Exhaust gas back pressure max	76 mm Hg
Cubic capacity	8,3 liters	Air flow radiator	4,7 m³/s
Starting/Min ℃	Unaided / -12ºC	Intake air flow	255 l/s
Battery capacity	150 A/h	Minimum air opening to room	1,06 m²
Gross Engine output – Standby	207 kWm	Minimum discharge opening	0.71 m²
Gross Engine output – Prime	188 kWm	Radiated heat to ambient	29 kWm
Speed	1800 rpm	Tank incorporated in the base capacity	360 liters

STANDBY POWER

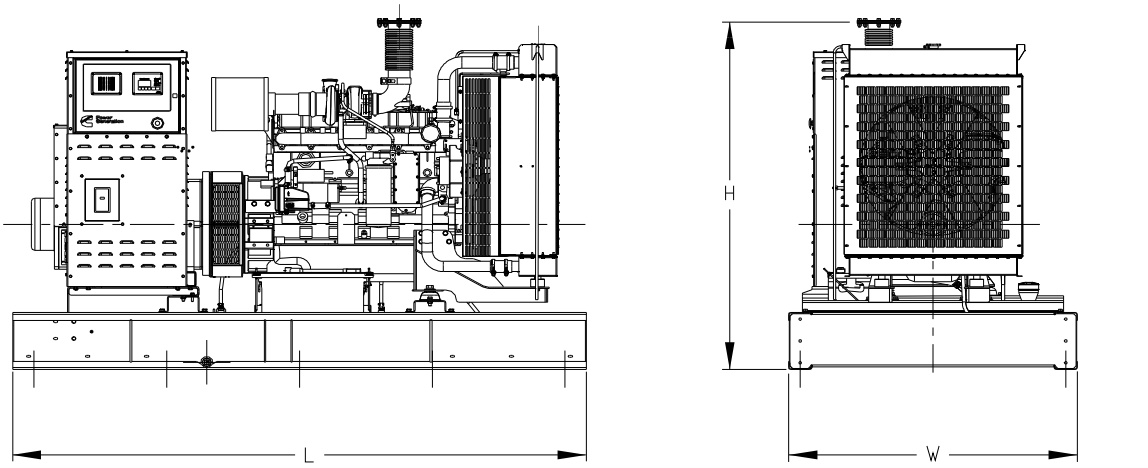
The Standby Power Rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload, utility parallel or negotiated outage operation capability is available at this rating. In installations served by unreliable utility sources (where outages last longer or occur more frequently), where operation is likely to exceed 200 hours per year, the prime power rating should be applied.

PRIME POWER

Prime power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO8528-1. A 10% overload capability is available for a period of 1 hour within a 12-hour period of operation.

All ratings are based on the following reference conditions:

- Ambient temperature: 27ºC
- Altitude above sea level: 150 meters
- Relative humidity: 60%



This outline drawing is for reference only. Do not use for installation design

Dimensions and Weights

Genset	Length (mm) L	Width (mm) W	Maximum Height (mm) H	Set weight dry (kg)	Set weight wet[1] (kg)
Open Set	2700	1360	1753	1859	2155
Enclosed Set - F187	3896	1380	2325	2708	3069

[1]Set weight wet represent a set with oil, fuel and coolant liquid.