

Generator set data sheet



Model: C700D5
Frequency: 50 Hz
Fuel type: Diesel
kW rating: 565 Standby
 512 Prime
 454 Continuous
Emissions level: Unregulated

Exhaust emission data sheet:	
Sound performance data sheet:	
Cooling performance data sheet:	
Genset outline:	A041A446

Fuel consumption	Standby				Prime				Continuous			
	kW (kVA)				kW (kVA)				kW (kVA)			
Ratings	565 (706)				512 (640)				454 (568)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
US gph	12,2	21,1	30,4	40,7	11,4	19,3	27,5	37,0	10,6	17,2	24,3	32,2
L/h	46	80	115	154	43	73	104	140	40	65	92	122

Engine	Stanby rating	Prime rating	Continuous rating
Engine manufacturer	Cummins Inc.		
Engine model	VTA28-G5		
Configuration	12-Cylinder		
Aspiration	Turbocharged/ Aftercooled		
Gross engine power output, kWm (bhp)	612 (820)	560 (750)	492 (660)
BMEP at set rated load, kPa (psi)	1751 (254)	1599 (232)	
Bore, mm (in.)	140 (5,5)		
Stroke, mm (in.)	152 (6)		
Rated speed, rpm	1500		
Piston speed, m/s (ft/min)	7,6 (1500)		
Compression ratio	13,1:1		
Lube oil capacity, L (US gal)	83 (21,9)		
Overspeed limit, rpm	1800 ±50		

Fuel flow

Maximum fuel flow, L/hr (US gph)	337 (89)
Maximum fuel inlet restriction, kPa (in Hg)	27,09 (8)
Maximum fuel inlet temperature, °C (°F)	70 (158)
Maximum fuel return line restriction, kPa (in Hg)	22,01 (6,5)

Air

	Standby rating	Prime rating	Continuous rating
Combustion air, CFM (L/s)	1860,38 (878)	1750,19 (826)	
Maximum air cleaner restriction, kPa (in H ₂ O)	6,23 (25)		
Alternator cooling air, m ³ /min (cfm)	62 (2202)		

Exhaust

	Standby rating	Prime rating	Continuous rating
Exhaust flow at set rated load, CFM (L/s)	4339,47 (2048)	4210,21 (1987)	
Exhaust temperature, °C (°F)	507 (945)	493 (920)	
Maximum back pressure, kPa (in H ₂ O)	10,16 (40,83)		

Standard set-mounted radiator cooling

	Standby rating	Prime rating	Continuous rating
Ambient design, °C (°F)	47 (116,6)		
Fan load, kWm (HP)	30 (40,2)		
Coolant capacity (with radiator), L (US gal)	163 (43,06)		
Cooling system air flow, m ³ /min (scfm)	1068 (37486,8)		
Total heat rejection, MJ/min (Btu/min)	22,8 (21610)	20,37 (19310)	
Maximum cooling air flow static restriction, kPa (in H ₂ O)	0,12 (0,5)		

Weights

Unit Open dry weight, kgs	5630
Unit Open wet weight, kgs	5839
Unit Enclosed dry weight, kgs	
Unit enclosed wet weight, kgs	

Derating factors

Standby	Full rated power available up to 1525 m (5000 ft) elevation at ambient temperature of 40 °C (104 °F). Above these conditions, derate by an additional 4% per 300 m (984 ft), and 2% per 11 °C (1% per 10 °F). For other temperature and altitude limits, consult your local Cummins distributor.
Prime	Full rated power available up to 1220 m (4000 ft) elevation at ambient temperature of 40 °C (104 °F). Above these conditions, derate by an additional 4% per 300 m (1000 ft), and 2% per 11 °C (1% per 10 °F). For other temperature and altitude limits, consult your local Cummins distributor.
Continuous	Full rated power available up to 1220 m (4000 ft) elevation at ambient temperature of 40 °C (104 °F). Above these conditions, derate by an additional 4% per 300 m (1000 ft), and 2% per 11 °C (1% per 10 °F). For other temperature and altitude limits, consult your local Cummins distributor.

Ratings definitions

Emergency Standby Power (ESP):	Limited-Time Running Power (LTP):	Prime Power (PRP):	Base Load (Continuous) Power (COP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

Alternator data

Voltage	Connection	Temp rise degrees C	Duty¹	Winding No.	Frame Size
220	Wye, 3Phase	150	S/P/C	311	HC5F
380	Wye, 3Phase	150	S/P/C	311	HC5F
400	Wye, 3Phase	150	S/P/C	311	HC5F
440	Wye, 3Phase	150	S/P/C	311	HC5F

Notes:

¹ Standby (S), Prime (P) and Continuous ratings (C).

Formulas for calculating full load currents:

Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

Warning: Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

**For more information contact your local Cummins distributor
or visit power.cummins.com**



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