Generator Set Data Sheet
2000kW Continuous

Model:	**C2000 N5CD**
Frequency:	**50 Hz**
Fuel Type:	**Pipeline Natural Gas**
Emissions NOx:	**500 mg/Nm³**
LT water inlet temp:	**50°C (122°F)**
HT water outlet temp:	**90°C (194°F)**
Ambient temp capability:	**≤ 40 °C (104 °F)**

Measured sound performance data sheet:	**MSP-4005**
Prototype test summary data:	
Remote radiator cooling outline:	

Fuel Consumption (ISO3046/1)	**See Note**	**100% of Rated Load**	**90% of Rated Load**	**75% of Rated Load**	**50% of Rated Load**
Fuel Consumption (LHV) ISO3046/1, kW (MMBTU/hr)	2,3,5,7	4530 (15.47)	4106 (14.02)	3492 (11.93)	2458 (8.39)
Electrical Efficiency ISO3046/1, percent	2,5,7,8	44.2%	43.8%	43.0%	40.7%
Thermal Efficiency ISO3046/1, percent	2,5,7,13	45.9%	46.0%	46.7%	48.5%

Engine

Engine Manufacturer	Cummins
Engine Model	HSK78
Configuration	V12
Displacement, L (cu.in)	78 (4778)
Aspiration	Turbocharged and Charge Air Aftercooled
Gross Engine Power Output, kWm (hp)	2062 (2764)
BMEP, bar (psi)	22 (319)
Bore, mm (in)	190 (7.48)
Stroke, mm (in)	230 (9.06)
Rated Speed, rpm	1500
Piston Speed, m/s (ft/min)	11.5 (2264)
Compression Ratio	13.0:1
Lube Oil Capacity, L (qt)	617 (652)
Full Load Lubricating oil consumption, g/kWe-hr (g/hp-hr)	0.2 (0.15)

Fuel

Gas supply pressure to FSOV inlet, bar (psi)	0.15 - 0.45 (2.2 - 6.5)
Minimum Methane Index	70

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Starting System(s)

Electric Starter Voltage, volts	24
Minimum Battery Capacity @ 40°C (104°F), AH	179

Genset dimensions (see Note 1)

Genset Length, m (ft)	6.9 (22)
Genset Width, m (ft)	2.2 (7)
Genset Height, m (ft)	2.8 (9)
Genset Weight (wet), kg (lbs)	23166 (51072)

Energy data	See Notes	100% of Rated Load	90% of Rated Load	75% of Rated Load	50% of Rated Load
Heat Radiated to Ambient, kW (MMBTU/h)	11	214 (0.73)	193 (0.66)	163 (0.56)	113 (0.39)
Total Heat Rejected in HT Circuit, kW (MMBTU/h)	11	1180 (4.03)	1035 (3.53)	868 (2.96)	593 (2.02)
Available Exhaust heat to 120°C, kW (MMBTU/h)	11	897 (3.06)	853 (2.91)	763 (2.60)	599 (2.04)

Exhaust air flow

Exhaust Gas Flow Mass, kg/s (lb/hr)	11	3.22 (25563)	2.89 (22936)	2.43 (19272)	1.66 (13148)
Exhaust Gas Flow Volume, m³/s (cfm)	11	6.05 (12810)	5.55 (11750)	4.81 (10180)	3.51 (7430)
Exhaust Temperature After Turbine, °C (°F)	4	390 (734)	405 (760)	426 (800)	474 (886)
Max Exhaust System Back Pressure, mmHG (in H_2O)	10	36.8 (19.7)	36.8 (19.7)	36.8 (19.7)	36.8 (19.7)

Cooling circuits

Max Pressure Drop in External HT Circuit, bar (psig)	12	1.3 (19)	1.3 (19)	1.3 (19)	1.3 (19)
Maximum LT Engine Coolant Inlet Temp, °C (°F)	6	50 (122)	50 (32)	50 (32)	50 (122)

Emissions

NO_x Emissions, mg/Nm³ @5% O_2 (g/hp-h)		493 (0.94)	489 (0.94)	494 (0.97)	490 (1.01)
THC Emissions, mg/Nm³ @5% O_2 (g/hp-h)	9	1500 (2.87)	1549 (2.98)	1646 (3.22)	1817 (3.76)
CO Emissions, mg/Nm³ @5% O_2 (g/hp-h)	11	980 (1.65)	992 (1.68)	1008 (1.73)	1014 (1.83)

Continuous Rating Defintion

Applicable for supplying power continuously to a constant load up to the full output rating for unlimited hours. No sustained overload capability is available for this rating. Consult authorized distributor for rating. (Equivalent to Continuous Power in accordance with ISO8528, ISO3046, AS2789, DIN6271, and BS5514).

1) Weights and set dimesions represent a generator set with its standard features, no FSOV installed, and HV P80T alternator. See outline drawing for other configurations.

2) At ISO3046 reference conditions, altitude 1013 mbar (30in Hg), air inlet temperature 25°C (77°F)

3) According to ISO 3046/I with fuel consumption tolerance of +5%, -0%

4) With air intake at 25°C (77°F). Tolerance ± 10°C.

5) Tested using pipeline natural gas with LHV of 35.64MJ/Nm3 (905BTU/scf).

6) Inlet temperature controlled by thermostat, outlet temperature for reference only. Data taken with 50% Glycol.

7) Without engine driven coolant pumps

8) At electrical output of 1.0 Power Factor, 97% Alternator Efficiency

9) Tolerance ±15%. Values shown are measured using fuel with less than 1% NMHC by volume. Values can vary significantly depending on NMHC found in the fuel.

10) Exhaust system back pressure is at rated load and will decrease at lower loads. Minimum restriction/back pressure is 0 mm H_2O.

11) Tolerance +/- 10%

12) Pressure drop external to genset.

13) Exhaust gas cooled to 120 °C.

For more information contact your local Cummins distributor

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