

## Generator set data sheet

**Model:** C1500D6E  
**Frequency:** 60 Hz  
**Fuel type:** Diesel  
**kW rating:** 1500 Standby  
                   1364 Prime  
                   1364 Data Center Continuous  
**Emissions level:** EPA NSPS Stationary Emergency Tier 2

Exhaust emission data sheet:	EDS-3088
Exhaust emission compliance sheet:	EPA-2066
Sound performance data sheet:	MSP-4122
Cooling performance data sheet:	MCP-2177
Prototype test summary data sheet:	PTS-717
Standard set-mounted radiator cooling outline:	A062V279
Optional set-mounted radiator cooling outline:	A062V279

Fuel consumption	Standby				Prime				Data Center Continuous			
	kW (kVA)				kW (kVA)				kW (kVA)			
Ratings	1500 (1875)				1364 (1705)				1364 (1705)			
Load	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full	1/4	1/2	3/4	Full
US gph	31.7	56.8	81.9	102.5	29.5	51.8	75.1	95.3	29.5	51.8	75.1	95.3
L/hr	120	215	310	388	112	196	285	361	112	196	285	361

Engine	Standby rating	Prime rating	Data Center Continuous rating
Engine manufacturer	Cummins Inc.		
Engine model	QSK38-G18		
Configuration	Cast iron, V12 cylinder		
Aspiration	Turbocharged and low temperature after-cooled		
Gross engine power output, kWm (bhp)	1659(2225)	1500 (2011)	1500 (2011)
BMEP at set rated load, kPa (psi)	5853 (849)	5240 (760)	5240 (760)
Bore, mm (in.)	159 (6.26)		
Stroke, mm (in.)	159 (6.26)		
Rated speed, rpm	1800		
Piston speed, m/s (ft/min)	9.54 (1878)		
Compression ratio	14.7:1		
Lube oil capacity, L (gal)	117 (30.9)		
Overspeed limit, rpm	2070		
Regenerative power, kW	124		

## Fuel flow

Maximum return fuel flow, L/hr (US gph)	397 (105)
Maximum fuel inlet restriction, kPa (in Hg)	25 (7.4)
Maximum fuel inlet temperature, °C (°F)	70 (158)

Air	Standby rating	Prime rating	Data Center Continuous rating
Combustion air, m <sup>3</sup> /min (cfm)	125 (4408)	122 (4303)	122 (4303)
Maximum air cleaner restriction, kPa (in H <sub>2</sub> O)	3.7 (15)		
Alternator cooling air, m <sup>3</sup> /min (cfm)	195 (6886)		

## Exhaust

Exhaust flow at set rated load, ft <sup>3</sup> /min (L/sec)	10631 (5017)	10235 (4830)	10235 (4830)
Exhaust temperature, °C (°F)	499 (930)	486 (908)	486 (908)
Maximum back pressure, kPa (in Hg)	10.1 (3)		

## Standard set-mounted radiator cooling

Ambient design, °C (°F)	40.0 (104)		
Fan load, kW <sub>m</sub> (HP)	66 (88.5)		
Coolant capacity (with radiator), L (US gal)	272 (72)		
Cooling system air flow, m <sup>3</sup> /min (cfm)	994.5 (35121)		
Total heat rejection, MJ/min (Btu/min)	64.4(61041)	59.31 (56215)	59.31 (56215)
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)	0.12 (0.5)		
Maximum fuel return line restriction kPa (in Hg)	33.8 (10)		

## Optional set-mounted radiator cooling

Ambient design, °C (°F)	50.0 (122)		
Fan load, kW <sub>m</sub> (HP)	73.5 (98.6)		
Coolant capacity (with radiator), L (US gal)	272 (72)		
Cooling system air flow, m <sup>3</sup> /min (acfm)	1377 (48615)		
Total heat rejection, MJ/min (Btu/min)	64.4(61041)	59.31 (56215)	59.31 (56215)
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)	0.12 (0.5)		
Maximum fuel return line restriction, kPa (in Hg)	33.8 (10)		

## Weights

Unit dry weight kgs (lbs)	9231 (20351)
Unit wet weight kgs (lbs)	9721 (21431)

### Notes:

<sup>1</sup> Weights represent a set with standard features. See outline drawing for weights of other configurations.

## Derating factors

Standby -	<p><u>Standard cooling system:</u> Full genset power available up to 1463 m (4800 ft) and ambient temperatures up to 40 °C (104 °F). Above these conditions, derate of 8% per 304.8 m (1000 ft) and 33.7% per 10 °C (50 °F).</p> <p><u>Enhanced cooling system:</u> Full genset power available up to 671 m (2200 ft) and ambient temperatures up to 50 °C (122 °F). Above these conditions, derate of 11% per 304.8 m (1000 ft) and 33.7% per 10 °C (50 °F).</p>
Prime For Standby -	<p><u>Standard cooling system:</u> Full genset power available up to 1706.9 m (5600 ft) and ambient temperatures up to 50 °C (122 °F). Above these conditions, derate of 4% per 304.8 m (1000 ft) and 34.6% per 10 °C (50 °F).</p> <p><u>Enhanced cooling system:</u> Full genset power available up to 853.4 m (2800 ft) and ambient temperatures up to 50 °C (122 °F). Above these conditions, derate of 4% per 304.8 m (1000 ft) and 34.6% per 10 °C (50 °F).</p>
Data Center Continuous -	<p><u>Standard cooling system:</u> Full genset power available up to 1706.9 m (5600 ft) and ambient temperatures up to 50 °C (122 °F). Above these conditions, derate of 4% per 304.8 m (1000 ft) and 34.6% per 10 °C (50 °F).</p> <p><u>Enhanced cooling system:</u> Full genset power available up to 853.4 m (2800 ft) and ambient temperatures up to 50 °C (122 °F). Above these conditions, derate of 4% per 304.8 m (1000 ft) and 34.6% per 10 °C (50 °F).</p>

## Ratings definitions

Emergency Standby Power (ESP):	Prime Power (PRP):
<p>Applicable for supplying power to varying electrical loads 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, Data shown above represents gross engine performance and capabilities as per ISO 3046-1, obtained and corrected in accordance with ISO 15550</p>	<p>Applicable for supplying power to varying electrical loads for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, Data shown above represents gross engine performance and capabilities as per ISO 3046-1, obtained and corrected in accordance with ISO 15550</p>

## Formulas for calculating full load currents:

Three phase output	Single phase output
$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$	$\frac{\text{kW} \times \text{SinglePhaseFactor} \times 1000}{\text{Voltage}}$

**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](http://power.cummins.com)

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