



Fuel Consumption (ISO3046/1)	100% of Load	90% of Load	75% of Load	50% of Load
Fuel Consumption (LHV) ISO3046/1,kW (MMBTU/hr)	2962 (10,11)	2694 (9,20)	2293 (7,8)	1642 (5,6)
Electrical Efficiency ISO3046/1, percent	39.2 %	38.8 %	37.9 %	35.3 %
Thermal Efficiency ISO3046/1, percent	57.7 %	58 %	58.4 %	60.5 %

* LT&HT pumps are included.

Engine Data

Engine Manufacturer	CUMMINS
Engine Model	QSK60G5 / 16 cylinders - V type
Fuel Type	Natural Gas (Pipeline)
Displacement I (cu. In)	60 (3683)
Aspiration	Turbo Charged and After Cooled
Bore mm (in)	159 (6,26)
Stroke mm (in)	190 (7,48)
Rated Speed (rpm)	1500
Lube Oil Capacity, L (gal)	380 (100)
Full Load Lubricating Oil Consumption g/kWe-h (g/hp-h)	0,15 (0,11)
Electric Starter Voltage (V)	24

Fuel

Gas Supply Pressure to Engine Inlet bar (psi)	0,20 (2,9)
Min. Methane Index	61

Methane Number, MN

100%	90%	75%	50%
61	53	44	38

Genset Dimensions - Open

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Genset Length, mm (ft)	4730 (15,5)
Genset Width, mm (ft)	2099 (6,9)
Genset Height, mm (ft)	2972 (9,8)
Genset Weight, dry, kg (lbs)	TBD

Heat Power Values	100% of Load	90% of Load	75% of Load	50% of Load
Continuous Generator Electrical Output (kWe / hp)	1160	1044	870	580
Total Heat Rejected in LT Circuit kW (BTU/min)	103 (5853)	95,8 (5444)	85 (4841)	68 (3868)
Total Heat Rejected in HT Circuit kW (BTU/min)	686 (39067)	619,5 (35280)	520 (29620)	382 (21747)
Heat Radiated to Ambient kW (BTU/min)	125 (7109)	117,4 (6677)	106 (6028)	87 (4948)
Available Exhaust heat to 105°C, kW (BTU/min)	920 (52319)	848 (48224)	733 (41684)	544 (30936)

Intake Air Flow	100% of Load	90% of Load	75% of Load	50% of Load
Intake Air Flow Volume ft ³ /min (l/s)	3612 (1705)	3233 (1526)	2667 (1259)	1826 (862)

Exhaust Air Flow	100% of Load	90% of Load	75% of Load	50% of Load
Exhaust Gas Flow ft ³ /min (l/s)	8531 (4026)	7845 (3702)	6818 (3217)	4928 (2326)
Exhaust Gas Flow kg/s (lb/h)	1,94 (15397)	1,75 (13889)	1,47 (11667)	1,02 (8095)
Exhaust Gas Turbine Outlet Temperature °C (F)	469 (876)	482 (900)	491 (916)	508 (946)
Max Exhaust System Back Pressure in-Hg (kPa)	1,5 (5,1)	1,5 (5,1)	1,5 (5,1)	1,5 (5,1)

HT Cooling Circuit	100% of Load	90% of Load	75% of Load	50% of Load
HT Circuit Engine Coolant Volume l (gal)	181,7 (48)	181,7 (48)	181,7 (48)	181,7 (48)
HT Coolant Flow @ Max Ext Restriction m ³ /h (gal/min)	70 (310)	70 (310)	70 (310)	70 (310)
Max. HT Engine Coolant Inlet Temp °C (F)	80 (176)	80 (176)	80 (176)	80 (176)
HT Coolant Outlet Temperature °C (F)	90 (194)	90 (194)	90 (194)	90 (194)
Max Pressure Drop in External HT Circuit, kPa (psi)	101 (14,7)	101 (14,7)	101 (14,7)	101 (14,7)
Max Static Hd. of Coolant Above Crsht Centerline, ft (m)	16,4 (5)	16,4 (5)	16,4 (5)	16,4 (5)

LT Cooling Circuit	100% of Load	90% of Load	75% of Load	50% of Load
LT Circuit Engine Coolant Volume, l (gal)	34 (9)	34 (9)	34 (9)	34 (9)
LT Coolant Flow @ Max Ext Restriction, m ³ /h (gal/min)	23 (100)	23 (100)	23 (100)	23 (100)
Max LT Coolant Inlet Temperature °C (°F)	40 (104)	40 (104)	40 (104)	40 (104)
Nominal LT Coolant Outlet Temperature °C (F)	44 (111)	44 (111)	44 (111)	44 (111)
Max Pressure Drop in External LT Circuit, kPa (psi)	101 (14,7)	101 (14,7)	101 (14,7)	101 (14,7)
Max Static Hd. of Coolant Above Crsht Centerline, ft (m)	16,4 (5)	16,4 (5)	16,4 (5)	16,4 (5)

Emission	100% of Load	90% of Load	75% of Load	50% of Load
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NOx emissions, mg/Nm ³ @ 5% O ₂ (g/hp-h)	489 (1,06)	475 (1,04)	505 (1,13)	483 (1,15)
CO Emissions Rate mg/Nm ³ @5%O ₂ (g/hp-h)	676 (1,47)	671 (1,47)	650 (1,45)	633 (1,51)
THC Exhaust Emissions, mg/Nm ³ @ 5% O ₂ , (g/hp-h)	1330 (2,91)	1352 (2,99)	1316 (2,97)	1371 (3,29)

Alternator Characteristics

Manufacturer	Mecc Alte
Alternator Model	ECO 46-1,5S/4A
Frequency (Hz)	50
Power (kVA)	1480
Voltage (V)	400
Phase	3
A.V.R.	DER1
Voltage Regulation	0.5
Insulation Class	H
Temperature Rise Class	F
Protection Class	IP23
Weight Complete Generator (kg)	3380
Cooling Air (m ³ /min)	135

Notes:

1. With engine driven coolant pump.
2. At ISO3046 reference conditions, altitude 1013 mbar (30 in Hg), air inlet temperature 25°C (77°F).
3. Production variation/tolerance $\pm 10\%$.
4. Tolerance $\pm 15\%$.
5. According to ISO 3046/I with fuel consumption tolerance of $+5\%$ -0% .
6. With air intake at 25°C (77°F). Tolerance $\pm 5^\circ\text{F}$
7. Exhaust system back pressure is a rated load and will decrease at lower loads.
8. Outlet temperature controlled by thermostat, inlet temperature for reference only.
9. Inlet temperature controlled by thermostat, outlet temperature for reference only.
10. Weights and set dimensions are just for reference only.
11. Exhaust gas cooled to 105 °C.
12. Tested using pipeline natural gas with LHV of 33.44 mJ/Nm³ (905 BTU/ft³).
13. LT&HT pumps are included.
14. Continuous (C)

Continuous rating definition

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). This rating is not applicable to all generator set models.

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