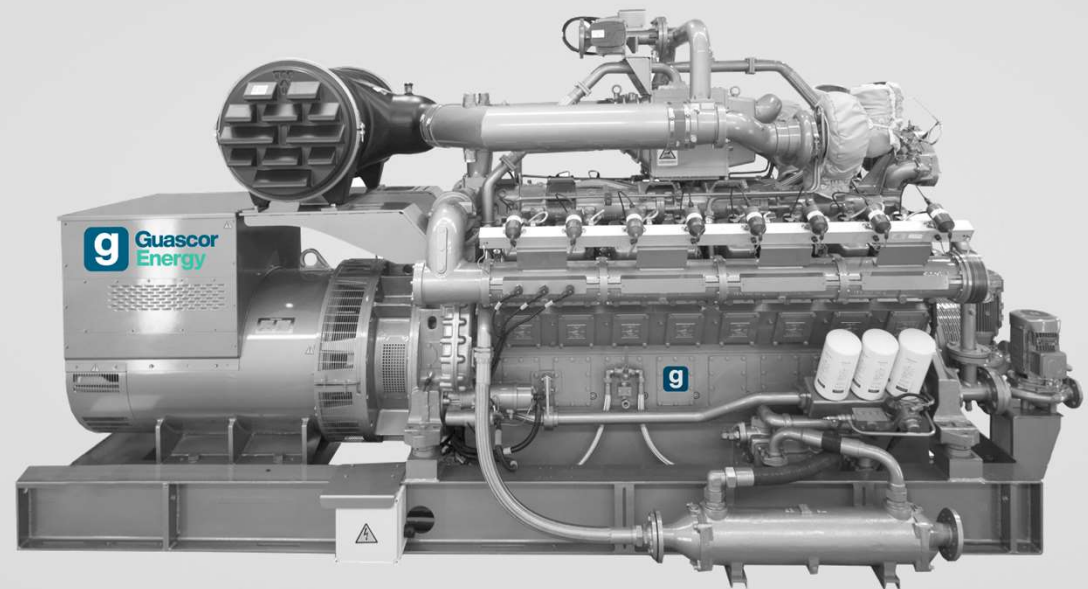


# S series gas engines and gen-sets biogas

1,200/1,500/1,800 rpm



## G-18SL & G-24SL

| Engine Parameters <sup>2)</sup>                   | English Units | Metric Units      | G-18SL    |          |         |          |         |          | G-24SL    |          |         |          |         |          |  |
|---|---------------|-------------------|-----------|----------|---------|----------|---------|----------|-----------|----------|---------|----------|---------|----------|--|
|   |               |                   | rpm       |          | 1,200   | 1,500    |         | 1,800    |           | 1,200    |         | 1,500    |         | 1,800    |  |
| Speed   |               |                   | rpm       |          | 1,200   | 1,500    |         | 1,800    |           | 1,200    |         | 1,500    |         | 1,800    |  |
| Engine power <sup>2)</sup>                        | bhp           | kWb               | 338       | (252)    | 422     | (315)    | 469     | (350)    | 449       | (335)    | 562     | (419)    | 607     | (453)    |  |
| Cylinder arrangement                              |               |                   | in Line 6 |          |         |          |         |          | in Line 8 |          |         |          |         |          |  |
| Mean effective pressure                           | psi           | bar               | 203       | (14.0)   | 203     | (14.0)   | 188     | (13.0)   | 203       | (14.0)   | 203     | (14.0)   | 183     | (12.6)   |  |
| Bore  | inch          | mm                | 5.98      | (152)    | 5.98    | (152)    | 5.98    | (152)    | 5.98      | (152)    | 5.98    | (152)    | 5.98    | (152)    |  |
| Stroke  | inch          | mm                | 6.50      | (165)    | 6.50    | (165)    | 6.50    | (165)    | 6.50      | (165)    | 6.50    | (165)    | 6.50    | (165)    |  |
| Displacement                                      | cu.in         | litre             | 1,095     | (18.0)   | 1,095   | (18.0)   | 1,095   | (18.0)   | 1,460     | (24.0)   | 1,460   | (24.0)   | 1,460   | (24.0)   |  |
| Mean piston speed                                 | in/s          | m/s               | 260       | (6.6)    | 325     | (8.3)    | 390     | (9.9)    | 260       | (6.6)    | 325     | (8.3)    | 390     | (9.9)    |  |
| Compression ratio                                 |               |                   | 11.6:1    |          |         |          |         |          | 11.6:1    |          |         |          |         |          |  |
| Combustion air mass flow                          | lbs/hr        | kg/h              | 2,800     | (1,270)  | 3,351   | (1,520)  | 3,858   | (1,750)  | 3,549     | (1,610)  | 4,409   | (2,000)  | 4,960   | (2,250)  |  |
| Packaged ventilation air flow <sup>2)</sup>       | scfm          | m <sup>3</sup> /h | 10,383    | (17,640) | 12,978  | (22,050) | 14,420  | (24,500) | 1,380.2   | (23,450) | 17,263  | (29,330) | 18,664  | (31,710) |  |
| Engine coolant capacity (main/aux.) <sup>3)</sup> | gal.          | litre             | 19/7      | (70/25)  | 19/7    | (70/25)  | 19/7    | (70/25)  | 24/7      | (90/25)  | 24/7    | (90/25)  | 24/7    | (90/25)  |  |
| Lube oil capacity <sup>3)</sup>                   | gal.          | itre              | 23        | (86)     | 23      | (86)     | 23      | (86)     | 31        | (116)    | 31      | (116)    | 31      | (116)    |  |
| Lube oil consumption <sup>4)</sup>                | lbs/bhp.hr    | g/kWh             | 0.00058   | (0.35)   | 0.00058 | (0.35)   | 0.00058 | (0.35)   | 0.00058   | (0.35)   | 0.00058 | (0.35)   | 0.00058 | (0.35)   |  |

1) Reference gas (CH4 62.5%, CO2: 36 AND N2: 1.5%) for other biogas qualities consult Guascor Energy Engines

2) Engine performance data acc. to ISO 3046/1

3) Assumes intake air flow at delta T = 5°C including combustion air

4) Not Including pipes and heat exchangers

5) Mean lube oil consumption between maintenance steps

## G-18SL & G-24SL

| Energy Balance                        | English Units  | Metric Units | G-18SL        |               |               |               | G-24SL          |                 |  |  |  |  |
|---------------------------------------|----------------|--------------|---------------|---------------|---------------|---------------|-----------------|-----------------|--|--|--|--|
| Generator efficiency <sup>5) 6)</sup> | %              | %            | 95.5          | 96.5          | 96.1          | 95.9          | 96.6            | 96.1            |  |  |  |  |
| Electrical power <sup>5) 6)</sup>     | Btu x 1,000/hr | kWe          | 241           | 304           | 336           | 321           | 405             | 435             |  |  |  |  |
| Jacket (HT) water heat                | Btu x 1,000/hr | kW           | 607.8 (178)   | 754.6 (221)   | 816.0 (239)   | 959.5 (281)   | 1,038.0 (304)   | 1,188.2 (348)   |  |  |  |  |
| Intercooler (LT) water heat           | Btu x 1,000/hr | kW           | 150.2 (44)    | 143.4 (42)    | 239.0 (70)    | 174.1 (51)    | 211.7 (62)      | 269.7 (79)      |  |  |  |  |
| Exhaust heat - cooled to 120°C        | Btu x 1,000/hr | kW           | 341.4 (100)   | 460.9 (135)   | 583.9 (171)   | 525.8 (154)   | 614.6 (180)     | 805.8 (236)     |  |  |  |  |
| Engine radiation heat                 | Btu x 1,000/hr | kW           | 37.6 (11)     | 58.0 (17)     | 54.6 (16)     | 58.0 (17)     | 78.5 (23)       | 68.3 (20)       |  |  |  |  |
| Generator radiation heat              | Btu x 1,000/hr | kW           | 38.7 (11)     | 37.6 (11)     | 46.6 (14)     | 46.9 (14)     | 48.6 (14)       | 60.3 (18)       |  |  |  |  |
| Fuel consumption <sup>7)</sup>        | Btu x 1,000/hr | kW           | 2,140.8 (627) | 2,663.2 (780) | 3,086.6 (904) | 3,045.7 (892) | 3,602.2 (1,055) | 4,134.9 (1,211) |  |  |  |  |
| Mechanical efficiency                 | %              |              | 40.2          | 40.4          | 38.7          | 37.6          | 39.7            | 37.4            |  |  |  |  |
| Electrical efficiency                 | %              |              | 38.4          | 39.0          | 37.2          | 36.0          | 38.4            | 35.9            |  |  |  |  |
| Thermal efficiency                    | %              |              | 51.4          | 51.0          | 53.1          | 54.5          | 51.8            | 54.7            |  |  |  |  |
| Total efficiency                      | %              |              | 89.7          | 90.0          | 90.3          | 90.5          | 90.1            | 90.7            |  |  |  |  |

5) At 60 Hz, U = 0.48 kV, power factor = 1

6) At 50 Hz, U = 0.4 kV, power factor = 1

7) With a tolerance of + 5 %

Data is for continuous rating, at sea level, and at an ambient temperature of 77F (25°C)

Data for special gas and dual gas operation on request.

The values given in this data sheet are for information purposes only and not binding.

## G-18SL & G-24SL

| System Parameters                             | English Units | Metric Units       | G-18SL                 |         |         |         | G-24SL                 |         |         |         |         |         |         |         |
|---|---------------|--------------------|------------------------|---------|---------|---------|------------------------|---------|---------|---------|---------|---------|---------|---------|
| Jacket (HT) water temperature max.            | °F            | °C                 | 194                    | (90)    | 194     | (90)    | 194                    | (90)    | 194     | (90)    | 194     | (90)    | 194     | (90)    |
| Jacket (HT) water flow rate min./max.         | gpm           | m <sup>3</sup> /hr | 110/264                | (25/60) | 136/264 | (31/60) | 145/264                | (33/60) | 172/264 | (39/60) | 185/264 | (42/60) | 211/264 | (48/60) |
| Intercooler stages                            |               |                    | Single                 |         |         |         | Single                 |         |         |         |         |         |         |         |
| Intercooler (LT) coolant temperature max.     | °F            | °C                 | 131                    | (55)    | 131     | (55)    | 131                    | (55)    | 131     | (55)    | 131     | (55)    | 131     | (55)    |
| Intercooler (LT) coolant flow rate min./max.  | gpm           | m <sup>3</sup> /hr | 66/132                 | 15/30   | 88/132  | 20/30   | 110/132                | 25/30   | 66/132  | 15/30   | 88/132  | 20/30   | 110/132 | 25/30   |
| Exhaust manifold type                         |               |                    | Wet                    |         |         |         | Wet                    |         |         |         |         |         |         |         |
| Exhaust temperature                           | °F            | °C                 | 655                    | (346)   | 705     | (374)   | 750                    | (399)   | 738     | (392)   | 711     | (377)   | 784     | (418)   |
| Exhaust mass flow wet                         | lbs/hr        | kg/h               | 3,064                  | (1,390) | 3,660   | (1,660) | 4,233                  | (1,920) | 3,902   | (1,770) | 4,828   | (2,190) | 5,467   | (2,480) |
| Exhaust back-pressure max.                    | psi           | mbar               | 0.65                   | (45)    | 0.65    | (45)    | 0.65                   | (45)    | 0.65    | (45)    | 0.65    | (45)    | 0.65    | (45)    |
| Maximum pressure loss in front of air cleaner | psi           | mbar               | 0.073                  | (5)     | 0.073   | (5)     | 0.073                  | (5)     | 0.073   | (5)     | 0.073   | (5)     | 0.073   | (5)     |
| EFuel pressure range                          | psi           | mbar               | 0.73 - 3.48 (50 - 240) |         |         |         | 0.73 - 3.48 (50 - 240) |         |         |         |         |         |         |         |
| Starter battery 2x12 V, capacity required     | Ampere-hour   |                    | 280                    |         |         |         | 280                    |         |         |         |         |         |         |         |

| Emissions <sup>8)</sup> | English Units | G-18SL |       |       |       | G-24SL |       |       |       |
|-------------------------|---------------|--------|-------|-------|-------|--------|-------|-------|-------|
| NOx                     | g/bhp.hr      | < 1    | < 1.1 | < 1   | < 1   | < 1.1  | < 1   | < 1.1 | < 1   |
| CO                      | g/bhp.hr      | < 1.8  | < 1.8 | < 1.8 | < 1.8 | < 1.8  | < 1.8 | < 1.8 | < 1.8 |
| THC (in C1base)         | g/bhp.hr      | < 3.5  | < 3.5 | < 3.5 | < 3.5 | < 3.5  | < 3.5 | < 3.5 | < 3.5 |
| NMHC (in C1 base)       | g/bhp.hr      | < 0.7  | < 0.7 | < 0.7 | < 0.7 | < 0.7  | < 0.7 | < 0.7 | < 0.7 |

8) Lower emission engines are available; contact a sales representative for performance data  
 - Engine performance data acc. to ISO 3046/1  
 - The values given in this data sheet are for information purposes only and not binding

## G-36SL & G-48SL

| Engine Parameters <sup>2)</sup>                   | English Units | Metric Units      | G-36SL  |          |         |          |         |          | G-48SL  |          |         |          |         |          |
|---|---------------|-------------------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|
|   |               |                   | 1,200   |          | 1,500   |          | 1,800   |          | 1,200   |          | 1,500   |          | 1,800   |          |
| Speed   |               | rpm               | 1,200   |          | 1,500   |          | 1,800   |          | 1,200   |          | 1,500   |          | 1,800   |          |
| Engine power <sup>2)</sup>                        | bhp           | kWb               | 675     | (503)    | 845     | (630)    | 939     | (700)    | 898     | (670)    | 1,124   | (838)    | 1,215   | (906)    |
| Cylinder arrangement                              |               |                   | V12     |          |         |          |         |          | V16     |          |         |          |         |          |
| Mean effective pressure                           | psi           | bar               | 203     | (14.0)   | 203     | (14.0)   | 188     | (13.0)   | 203     | (14.0)   | 203     | (14.0)   | 183     | (12.6)   |
| Bore  | inch          | mm                | 5.98    | (152)    | 5.98    | (152)    | 5.98    | (152)    | 5.98    | (152)    | 5.98    | (152)    | 5.98    | (152)    |
| Stroke  | inch          | mm                | 6.50    | (165)    | 6.50    | (165)    | 6.50    | (165)    | 6.50    | (165)    | 6.50    | (165)    | 6.50    | (165)    |
| Displacement                                      | cu.in         | Litres            | 2,191   | (35.9)   | 2,191   | (35.9)   | 2,191   | (35.9)   | 2,921   | (47.9)   | 2,921   | (47.9)   | 2,921   | (47.9)   |
| Mean piston speed                                 | in/s          | m/s               | 260     | (6.6)    | 325     | (8.3)    | 390     | (9.9)    | 260     | (6.6)    | 325     | (8.3)    | 390     | (9.9)    |
| Compression ratio                                 |               |                   | 11.6:1  |          |         |          |         |          | 11.6:1  |          |         |          |         |          |
| Combustion air mass flow                          | lbs/hr        | kg/h              | 5,401   | (2,450)  | 6,745   | (3,060)  | 7,584   | (3,440)  | 7,319   | (3,320)  | 8,841   | (4,010)  | 9,480   | (4,300)  |
| Packaged ventilation air flow <sup>2)</sup>       | scfm          | m <sup>3</sup> /h | 20,724  | (35,210) | 25,956  | (44,100) | 28,840  | (49,000) | 27,604  | (46,900) | 34,526  | (58,660) | 37,328  | (63,420) |
| Engine coolant capacity (main/aux.) <sup>3)</sup> | gal.          | Litres            | 48/11   | (180/40) | 48/11   | (180/40) | 48/11   | (200/50) | 53/13   | (200/50) | 53/13   | (200/50) | 53/13   | (200/50) |
| Lube oil capacity <sup>3)</sup>                   | gal.          | Litres            | 46      | (174)    | 46      | (174)    | 46      | (174)    | 62      | (233)    | 62      | (195)    | 62      | (233)    |
| Lube oil consumption <sup>4)</sup>                | lbs/bhp.hr    | g/kWh             | 0.00058 | (0.35)   | 0.00058 | (0.35)   | 0.00058 | (0.35)   | 0.00058 | (0.35)   | 0.00058 | (0.35)   | 0.00058 | (0.35)   |

1) Reference gas (CH4 62.5%, CO2: 36 AND N2: 1.5%) for other biogas qualities consult Guascor Energy Engines

2) Engine performance data acc. to ISO 3046/1

3) Assumes intake air flow at delta T = 5°C including combustion air

4) Not Including pipes and heat exchangers

5) Mean lube oil consumption between maintenance steps

## G-36SL & G-48SL

| Energy Balance                        | English Units  | Metric Units | G-36SL          |                 |                 |                 | G-48SL          |                 |  |  |  |
|---------------------------------------|----------------|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|--|--|
| Generator efficiency <sup>5) 6)</sup> | %              | %            | 96.3            | 96.2            | 96.7            | 96.6            | 97              | 96.3            |  |  |  |
| Electrical power <sup>5) 6)</sup>     | Btu x 1,000/hr | kWe          | 485             | 610             | 677             | 647             | 813             | 873             |  |  |  |
| Jacket (HT) water heat                | Btu x 1,000/hr | kW           | 1,498.9 (439)   | 1,741.4 (510)   | 1,956.5 (573)   | 2,161.3 (633)   | 2,332.0 (683)   | 2,765.7 (810)   |  |  |  |
| Intercooler (LT) water heat           | Btu x 1,000/hr | kW           | 99 (29)         | 102.4 (30)      | 143.4 (42)      | 119.5 (35)      | 170.7 (50)      | 187.8 (55)      |  |  |  |
| Exhaust heat - cooled to 120°C        | Btu x 1,000/hr | kW           | 665.8 (195)     | 921.9 (270)     | 1,160.9 (340)   | 1,072.1 (314)   | 1,242.8 (364)   | 1,638.9 (480)   |  |  |  |
| Engine radiation heat                 | Btu x 1,000/hr | kW           | 61.5 (18)       | 102.4 (30)      | 102.4 (30)      | 75.1 (22)       | 112.7 (33)      | 112.7 (33)      |  |  |  |
| Generator radiation heat              | Btu x 1,000/hr | kW           | 62.3 (18)       | 66.7 (21)       | 78.9 (30)       | 77.8 (23)       | 85.8 (25)       | 112.9 (33)      |  |  |  |
| Fuel consumption <sup>7)</sup>        | Btu x 1,000/hr | kW           | 4,322.7 (1,266) | 5,364.1 (1,571) | 6,142.5 (1,799) | 6,074.3 (1,785) | 7,177.8 (2,102) | 8,299.2 (2,428) |  |  |  |
| Mechanical efficiency                 | %              |              | 39.7            | 40.1            | 38.9            | 37.5            | 39.9            | 37.3            |  |  |  |
| Electrical efficiency                 | %              |              | 38.7            | 38.9            | 37.6            | 36.3            | 38.7            | 36.0            |  |  |  |
| Thermal efficiency                    | %              |              | 52.4            | 51.6            | 53.1            | 55              | 52.2            | 55.4            |  |  |  |
| Total efficiency                      | %              |              | 90.7            | 90.4            | 90.7            | 91.3            | 90.9            | 91.3            |  |  |  |

5) At 60 Hz, U = 0.48 kV, power factor = 1

6) At 50 Hz, U = 0.4 kV, power factor = 1

7) With a tolerance of + 5 %

## G-36SL & G-48SL

| System Parameters                             | English Units | Metric Units       | G-36SL                 |         |         |         |         |         | G-48SL                 |         |         |         |         |         |
|---|---------------|--------------------|------------------------|---------|---------|---------|---------|---------|------------------------|---------|---------|---------|---------|---------|
| Jacket (HT) water temperature max.            | °F            | °C                 | 194                    | (90)    | 194     | (90)    | 194     | (90)    | 194                    | (90)    | 194     | (90)    | 194     | (90)    |
| Jacket (HT) water flow rate min./max.         | gpm           | m <sup>3</sup> /hr | 132/308                | (30/70) | 154/308 | (35/70) | 176/308 | (40/70) | 194/308                | (44/70) | 207/308 | (48/70) | 247/308 | (56/70) |
| Intercooler stages                            |               |                    | Double                 |         |         |         |         |         | Double                 |         |         |         |         |         |
| Intercooler (LT) coolant temperature max.     | °F            | °C                 | 131                    | (55)    | 131     | (55)    | 131     | (55)    | 131                    | (55)    | 131     | (55)    | 131     | (55)    |
| Intercooler (LT) coolant flow rate min./max.  | gpm           | m <sup>3</sup> /hr | 66/132                 | 15/30   | 88/132  | 20/30   | 110/132 | 25/30   | 66/132                 | 15/30   | 88/132  | 20/30   | 110/132 | 25/30   |
| Exhaust manifold type                         |               |                    | Wet                    |         |         |         |         |         | Wet                    |         |         |         |         |         |
| Exhaust temperature                           | °F            | °C                 | 658                    | (348)   | 702     | (372)   | 756     | (402)   | 732                    | (389)   | 714     | (379)   | 817     | (436)   |
| Exhaust mass flow wet                         | lbs/hr        | kg/h               | 5,908                  | (2,680) | 7,363   | (3,340) | 8,311   | (3,770) | 8,047                  | (3,650) | 9,700   | (4,400) | 10,472  | (4,750) |
| Exhaust back-pressure max.                    | psi           | mbar               | 0.65                   | (45)    | 0.65    | (45)    | 0.65    | (45)    | 0.65                   | (45)    | 0.65    | (45)    | 0.65    | (45)    |
| Maximum pressure loss in front of air cleaner | psi           | mbar               | 0.073                  | (5)     | 0.073   | (5)     | 0.073   | (5)     | 0.073                  | (5)     | 0.073   | (5)     | 0.073   | (5)     |
| EFuel pressure range                          | psi           | mbar               | 0.73 - 3.48 (50 - 240) |         |         |         |         |         | 0.73 - 3.48 (50 - 240) |         |         |         |         |         |
| Starter battery 2x12 V, capacity required     | Ampere-hour   |                    | 280                    |         |         |         |         |         | 280                    |         |         |         |         |         |

| Emissions <sup>8)</sup> | English Units | G-36SL |       |       |       | G-48SL |       |       |  |
|-------------------------|---------------|--------|-------|-------|-------|--------|-------|-------|--|
| NOx                     | g/bhp.hr      | < 1    | < 1.1 | < 1   | < 1   | < 1.1  | < 1   | < 1   |  |
| CO                      | g/bhp.hr      | < 1.8  | < 1.8 | < 1.8 | < 1.8 | < 1.8  | < 1.8 | < 1.8 |  |
| THC (in C1base)         | g/bhp.hr      | < 3.5  | < 3.5 | < 3.5 | < 3.5 | < 3.5  | < 3.5 | < 3.5 |  |
| NMHC (in C1 base)       | g/bhp.hr      | < 0.7  | < 0.7 | < 0.7 | < 0.7 | < 0.7  | < 0.7 | < 0.7 |  |

8) With a tolerance of + 5 %

9) Lower emission engines are available, consult Guascor Energy Engines for performance data

## G-56SL & G-56SM

| Engine Parameters <sup>2)</sup>                   | English Units | Metric Units      | G-56SL  |          |         | G-56SM   |         |          |         |          |         |          |
|---|---------------|-------------------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|
|   |               |                   | 1,200   | 1,500    | 1,800   | 1,500    | 1,800   |          |         |          |         |          |
| Speed   |               | rpm               |         |          |         |          |         |          |         |          |         |          |
| Engine power <sup>2)</sup>                        | bhp           | kWb               | 1,057   | (788)    | 1,321   | (985)    | 1,431   | (1,067)  | 1,415   | (1,055)  | 1,475   | (1,100)  |
| Cylinder arrangement                              |               |                   | V16     |          |         | V16      |         |          |         |          |         |          |
| Mean effective pressure                           | psi           | bar               | 203     | (14.0)   | 203     | (14.0)   | 183     | (12.6)   | 217     | (15.0)   | 189     | (13.0)   |
| Bore  | inch          | mm                | 6.30    | (160)    | 6.30    | (160)    | 6.30    | (160)    | 6.30    | (160)    | 6.30    | (160)    |
| Stroke  | inch          | mm                | 6.89    | (175)    | 6.89    | (175)    | 6.89    | (175)    | 6.89    | (175)    | 6.89    | (175)    |
| Displacement                                      | cu.in         | Litres            | 3,436   | (56.3)   | 3,436   | (56.3)   | 3,436   | (56.3)   | 3,436   | (56.3)   | 3,436   | (56.3)   |
| Mean piston speed                                 | in/s          | m/s               | 276     | (7.0)    | 344     | (8.8)    | 413     | (10.5)   | 344     | (8.8)    | 413     | (10.5)   |
| Compression ratio                                 |               |                   | 12,3:1  |          |         | 12,3:1   |         |          |         |          |         |          |
| Combustion air mass flow                          | lbs/hr        | kg/h              | 8,422   | (3,820)  | 10,251  | (4,650)  | 11,773  | (5,340)  | 10,869  | (4,930)  | 11,464  | (5,200)  |
| Packaged ventilation air flow <sup>2)</sup>       | scfm          | m <sup>3</sup> /h | 32,466  | (55,160) | 40,582  | (68,950) | 43,961  | (74,690) | 43,467  | (73,850) | 45,321  | (77,000) |
| Engine coolant capacity (main/aux.) <sup>3)</sup> | gal.          | Litres            | 53/16   | (200/60) | 53/16   | (200/60) | 53/16   | (200/60) | 53/16   | (200/60) | 53/16   | (200/60) |
| Lube oil capacity <sup>3)</sup>                   | gal.          | Litres            | 72      | (272)    | 72      | (272)    | 72      | (272)    | 72      | (272)    | 72      | (272)    |
| Lube oil consumption <sup>4)</sup>                | lbs/bhp.hr    | g/kWh             | 0.00033 | (0.20)   | 0.00033 | (0.20)   | 0.00033 | (0.20)   | 0.00016 | (0.10)   | 0.00016 | (0.10)   |

1) Reference gas (CH4 62.5%, CO2: 36 AND N2: 1.5%) for other biogas qualities consult Guascor Energy Engines

2) Engine performance data acc. to ISO 3046/1

3) Assumes intake air flow at delta T = 5°C including combustion air

4) Not Including pipes and heat exchangers

5) Mean lube oil consumption between maintenance steps



## G-56SL & G-56SM

| Energy Balance                        | English Units  | Metric Units | G-56SL  |         |         |         | G-56SM  |         |         |         |         |         |
|---------------------------------------|----------------|--------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Generator efficiency <sup>5) 6)</sup> | %              | %            | 96.8    | 97.2    | 96.3    | 97.2    | 96.9    |         |         |         |         |         |
| Electrical power <sup>5) 6)</sup>     | Btu x 1,000/hr | kWe          | 763     | 957     | 1,028   | 1025    | 1066    |         |         |         |         |         |
| Jacket (HT) water heat                | Btu x 1,000/hr | kW           | 2287.7  | (670)   | 2,748.6 | (805)   | 3062.7  | (897)   | 2093.0  | (613)   | 2284.2  | (669)   |
| Intercooler (LT) water heat           | Btu x 1,000/hr | kW           | 143.4   | (42)    | 181.0   | (53)    | 187.8   | (55)    | 225.4   | (66)    | 266.3   | (78)    |
| Exhaust heat - cooled to 120°C        | Btu x 1,000/hr | kW           | 1072.1  | (314)   | 1,464.8 | (429)   | 2007.7  | (588)   | 2,222.8 | (651)   | 2,550.6 | (747)   |
| Engine radiation heat                 | Btu x 1,000/hr | kW           | 112.7   | (33)    | 126.3   | (37)    | 129.7   | (38)    | 177.5   | (52)    | 187.8   | (55)    |
| Generator radiation heat              | Btu x 1,000/hr | kW           | 86.1    | (25)    | 94.2    | (28)    | 134.8   | (39)    | 100.9   | (30)    | 116.4   | (34)    |
| Fuel consumption <sup>7)</sup>        | Btu x 1,000/hr | kW           | 6,740.1 | (1,974) | 8,413.1 | (2,464) | 9,638.9 | (2,823) | 8,880.9 | (2,601) | 9,635.5 | (2,822) |
| Mechanical efficiency                 | %              | %            | 39.9    | 40.0    | 37.8    | 40.6    | 39.0    |         |         |         |         |         |
| Electrical efficiency                 | %              | %            | 38.6    | 38.9    | 36.4    | 39.4    | 37.8    |         |         |         |         |         |
| Thermal efficiency                    | %              | %            | 52.0    | 52.2    | 54.6    | 51.1    | 52.9    |         |         |         |         |         |
| Total efficiency                      | %              | %            | 90.6    | 91.1    | 91.1    | 90.6    | 90.7    |         |         |         |         |         |

5) At 60 Hz, U = 0.48 kV, power factor = 1

6) At 50 Hz, U = 0.4 kV, power factor = 1

7) With a tolerance of + 5 %

## G-56SL & G-56SM

| System Parameters                             | English Units | Metric Units       | G-56SL                 |         |         |         | G-56SM                 |         |         |         |         |         |
|---|---------------|--------------------|------------------------|---------|---------|---------|------------------------|---------|---------|---------|---------|---------|
|   |               |                    |                        |         |         |         |                        |         |         |         |         |         |
| Jacket (HT) water temperature max.            | °F            | °C                 | 194                    | (90)    | 194     | (90)    | 194                    | (90)    | 194     | (90)    | 194     | (90)    |
| Jacket (HT) water flow rate min./max.         | gpm           | m <sup>3</sup> /hr | 207/308                | (46/70) | 247/308 | (56/70) | 273/308                | (62/70) | 189/308 | (43/70) | 203/308 | (46/70) |
| Intercooler stages                            |               |                    | Double                 |         |         |         | Double                 |         |         |         |         |         |
| Intercooler (LT) coolant temperature max.     | °F            | °C                 | 131                    | (55)    | 131     | (55)    | 131                    | (55)    | 131     | (55)    | 131     | (55)    |
| Intercooler (LT) coolant flow rate min./max.  | gpm           | m <sup>3</sup> /hr | 66/132                 | 15/30   | 88/132  | 20/30   | 110/132                | 25/30   | 88/132  | 25/30   | 110/132 | 25/30   |
| Exhaust manifold type                         |               |                    | Wet                    |         |         |         | Dry                    |         |         |         |         |         |
| Exhaust temperature                           | °F            | °C                 | 671                    | (355)   | 721     | (383)   | 813                    | (434)   | 927     | (497)   | 984     | (529)   |
| Exhaust mass flow wet                         | lbs/hr        | kg/h               | 9215                   | (4,180) | 11,244  | (5,100) | 12,919                 | (5,860) | 11,905  | (5,400) | 12,588  | (5,710) |
| Exhaust back-pressure max.                    | psi           | mbar               | 0.65                   | (45)    | 0.65    | (45)    | 0.65                   | (45)    | 0.65    | (45)    | 0.65    | (45)    |
| Maximum pressure loss in front of air cleaner | psi           | mbar               | 0.073                  | (5)     | 0.073   | (5)     | 0.073                  | (5)     | 0.073   | (5)     | 0.073   | (5)     |
| EFuel pressure range                          | psi           | mbar               | 0.73 - 3.48 (50 - 240) |         |         |         | 0.73 - 3.48 (50 - 240) |         |         |         |         |         |
| Starter battery 2x12 V, capacity required     |               | Ampere-hour        | 280                    |         |         |         | 280                    |         |         |         |         |         |

| Emissions <sup>9)</sup> | English Units | G-56SL |       |       |       | G-56SM |       |       |       |       |       |       |
|-------------------------|---------------|--------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
|                         |               |        |       |       |       |        |       |       |       |       |       |       |
| NOx                     | g/bhp.hr      | < 1    | < 1.1 | < 1   | < 1.1 | < 1    | < 1.1 | < 1   | < 1.1 | < 1   | < 1.1 | < 1   |
| CO                      | g/bhp.hr      | < 1.8  | < 1.8 | < 1.8 | < 1.8 | < 1.8  | < 2.2 | < 2.2 | < 2.2 | < 2.2 | < 2.2 | < 2.2 |
| THC (in C1base)         | g/bhp.hr      | < 3.5  | < 3.5 | < 3.5 | < 3.5 | < 3.5  | < 3.5 | < 3.5 | < 3.5 | < 3.5 | < 3.5 | < 3.5 |
| NMHC (in C1base)        | g/bhp.hr      | < 0.7  | < 0.7 | < 0.7 | < 0.7 | < 0.7  | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |

9) Lower emission engines are available, consult Guascor Energy Engines for performance data

## Dimensions and other data

| Dimensions Engine | English Units | Metric Units | G-18SL |         |  | G-24SL  |         |  | G-36SL  |         |  | G-48SL  |         |  | G-56SL/G-56SM |         |  |
|-------------------|---------------|--------------|--------|---------|--|---------|---------|--|---------|---------|--|---------|---------|--|---------------|---------|--|
| Width             | in.           | mm           | 37.205 | (945)   |  | 37.205  | (945)   |  | 53.858  | (1,368) |  | 53.858  | (1,368) |  | 61.024        | (1,550) |  |
| Length            | in.           | mm           | 79.528 | (2,020) |  | 102.835 | (2,612) |  | 103.819 | (2,637) |  | 123.740 | (3,143) |  | 118.110       | (3,000) |  |
| Height            | in.           | mm           | 57.441 | (1,459) |  | 57.441  | (1,459) |  | 68.425  | (1,738) |  | 68.425  | (1,738) |  | 86.614        | (2,200) |  |
| Dry weight engine | lb            | kg           | 5,952  | (2,700) |  | 7,716   | (3,500) |  | 9,259   | (4,200) |  | 12,015  | (5,450) |  | 12,787        | (5,800) |  |

| Dimensions 60 Hz Genset | English Units | Metric Units | G-18SL  |         |  | G-24SL  |         |  | G-36SL  |         |  | G-48SL  |         |  | G-56SL/G-56SM |          |  |
|-------------------------|---------------|--------------|---------|---------|--|---------|---------|--|---------|---------|--|---------|---------|--|---------------|----------|--|
| Width                   | in.           | mm           | 47.244  | (1,200) |  | 50.000  | (1,270) |  | 65.512  | (1,664) |  | 65.512  | (1,664) |  | 65.709        | (1,669)  |  |
| Length                  | in.           | mm           | 119.055 | (3,024) |  | 144.016 | (3,658) |  | 150.787 | (3,830) |  | 173.071 | (4,396) |  | 183.819       | (4,669)  |  |
| Height                  | in.           | mm           | 72.677  | (1,846) |  | 75.354  | (1,914) |  | 83.937  | (2,132) |  | 85.984  | (2,184) |  | 85.669        | (2,176)  |  |
| Dry weight genset       | lb            | kg           | 8,818   | (4,000) |  | 10,891  | (4,940) |  | 15,939  | (7,230) |  | 20,338  | (9,225) |  | 22,046        | (10,000) |  |

### Noise emissions\*

| Engine Noise dB(A) | HZ (Frec. Band) | G-18SL |       |       | G-24SL |       |       | G-36SL |       |       | G-48SL |       |       | G-56SL |       |       | G-56SM |       |
|--------------------|-----------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|
|                    |                 | 1,200  | 1,500 | 1,800 | 1,200  | 1,500 | 1,800 | 1,200  | 1,500 | 1,800 | 1,200  | 1,500 | 1,800 | 1,200  | 1,500 | 1,800 | 1,500  | 1,800 |
| 125                | -               | -      | -     | -     | 59     | 72    | 70    | -      | 70    | -     | 66     | 73    | 70    | 71     | 76    | 73    | 76     | 73    |
| 250                | 70              | 73     | 76    | 73    | 82     | 86    | 69    | 81     | 74    | 70    | 83     | 84    | 79    | 92     | 87    | 92    | 87     | 87    |
| 500                | 82              | 83     | 88    | 79    | 87     | 84    | 76    | 86     | 90    | 76    | 88     | 84    | 81    | 89     | 85    | 89    | 85     | 85    |
| 1,000              | 84              | 87     | 91    | 85    | 90     | 89    | 82    | 88     | 85    | 81    | 90     | 88    | 83    | 89     | 87    | 89    | 89     | 87    |
| 2,000              | 81              | 84     | 87    | 83    | 89     | 87    | 83    | 86     | 87    | 80    | 89     | 89    | 84    | 89     | 91    | 89    | 89     | 91    |
| 4,000              | 76              | 79     | 83    | 77    | 86     | 83    | 79    | 80     | 82    | 73    | 82     | 83    | 79    | 85     | 86    | 85    | 85     | 86    |
| LpA, Σ dB(A)       | 88              | 90     | 94    | 88    | 95     | 94    | 87    | 92     | 93    | 85    | 95     | 93    | 89    | 97     | 95    | 97    | 97     | 95    |



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