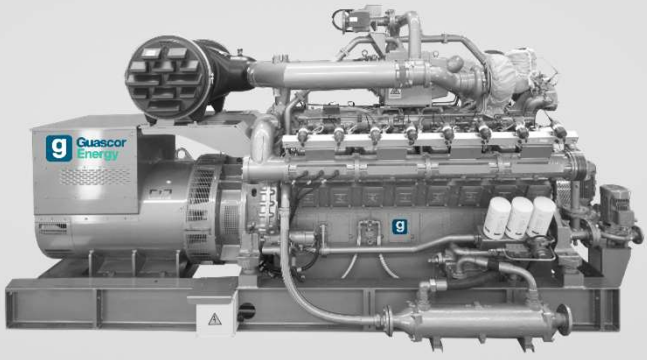
S Series Propane engines & gensets



www.guascor-energy.com

Propane gas is the ideal fuel for operators of Power Plants without access to natural gas, as a backup fuel if natural gas supplies cannot be guaranteed or as an alternative to fuel oil.

Learn burn and electronically carburetted the S Series Propane engines provide an excellent solution for Power Generation, Cogeneration and Trigeneration processes, where there is no availability of pipeline supplied fuel.

Spark-ignited lean-burn engine series based on the 4-stroke Miller cycle technology, the SM Propane gas engine family has an output range that goes from 315 to 1067 kWb at 50 and 60 Hz.

This engine series, fuelled by Propane gas, provides a high performance combined with a low life-cycle cost, which results in the best choice for those installations where the Propane fuel is available.

With a high performance Miller cycle design, this engines serie is turbocharged and feature single or double stage air cooling depending on the engine model. Different auxiliary cooling circuit temperatures are possible and an option for an oil cooler in the main circuit is also available, ideal for heat recovery applications.

With a wet exhaust manifold and reduced oil consumption, emissions control is also possible. The S Series Propane engines are supplied as a stand-alone engine, genset or in a fully containerized unit and may also include integrated GCS-Engine and GCS-Genset control systems if required.

Engine main characteristics

Characteristics	Benefits
High efficient turbochargers	Performance improvement
New design of the combustion chamber	Optimized combustion at low oil consuption
Full integrated engine control system	Control and diagnosis improvement
Fuel system	Optimized for Propane fuel

G-SM Family Propane. 1500 rpm - 500 mg/Nm3 NOx

Model	Mech. Power (kWb)	Mech. Efficiency %	Electr. Power (kWe)	Electr. Efficiency %	Therm. Power (kWth)	Therm. Efficiency %	Total Efficiency %
18SM	315	39,8	303	38,3	418	52,8	91,1
24SM	419	38,9	404	37,5	579	53,7	91,2
36SM	630	39,8	610	38,6	839	53	91,6
48SM	838	38,9	811	37,7	1166	54,1	91,8
56SM	1030	38,4	1001	37,3	1457	54,3	91,6

Technical data for 500mg/Nm3 NOx for 95% quality propane and according to ISO 3046/1 with a tolerance of +/-5. The values given in this data sheet are for information purpose only, not binding. Fuel quality according to IC-G-D-30-018. For other gas quality plase contact Guascor Energy.

G-SM Family Propane. 1800 rpm - 1g/bHPh NOx

Model	Mech. Power (kWb)	Mech. Efficiency %	Electr. Power (kWe)	Electr. Efficiency %	Therm. Power (kWth)	Therm. Efficiency %	Total Efficiency %
18SM	350	37,6	336	36,1	510	54,8	90,9
24SM	453	37,8	436	36,4	653	54,5	90,9
36SM	700	37,6	676	33,3	1029	55,3	91,6
48SM	906	37,9	874	36,5	1319	55,1	91,6
56SM	1067	37,6	1030	36,3	1557	57,9	91,2

Technical data for 1g/bHPh NOx for 95% quality propane and according to ISO 3046/1 with a tolerance of +/-5. The values given in this data sheet are for information purpose only, not binding. Fuel quality according to IC-G-D-30-018. For other gas quality plase contact Guascor Energy.

Technical data

Engine model	18SM	24SM	36SM	48SM	56SM
Number of cylinders	6	8	12	16	16
Cylinder Configuration	In line			V	
Bore (mm)	152				160
Stroke (mm)	165				175
total displacement (L)	17,96	23,95	35,93	47,90	56,30
Scope of supply	1500 / 1800				
Scope of supply	Bare engine, genset				

General Dimensions L x W x H (mm) and weight (kg)

Dimensions Engine	18SM	24SM	36SM	48SM	56SM
Width (mm)	945	945	1368	1368	1500
Length (mm)	2020	2612	2637	2637	3000
Height (mm)	1459	1459	1738	1738	2200
Dry weight engine (kg)	2700	3500	4200	4200	5800

General Dimensions L x W x H (mm) and weight (kg)

Dimensions Engine	18SM	24SM	36SM	48SM	56SM
Width (mm)	1200	1270	1664	1664	1669
Length (mm)	3024	3658	3830	4396	4669
Height (mm)	1846	1914	2132	2184	2176
Dry weight engine (kg)	4000	4940	7230	9225	10000

References

Installation	Oil refinery, Puerto Rico -60Hz-		
Engine model	Application	Electrical Power (kWe)	Thermal Power (kWt)
G-24SM	CHP	436kWe	653 kWt

G-24SM - Olein, Puerto Rico (60Hz)
Two 40-feet containerized G-24SM supplied. This solution meets 100 % of the energy needs of the installation in terms of electricity, hot and cold water.

Model	Pharma process, Puerto Rico -60Hz-		
Engine model	Application	Electrical Power (kWe)	Thermal Power (kWt)
G-48SM	CHP	874kWe	1319 kWt

G-48SM - Pfizer, Puerto Rico (60Hz)
Supplied as a containerized CHP solution, these 4 G-48SM units are the perfect fit for all the pharmaceutical process due to its reliability and high efficiency.

Model	Power Generation, Chile		
Engine model	Application	Electrical Power (kWe)	Thermal Power (kWt)
G-48SM	CHP	874kWe	1319 kWt

G-48SM - Marquesa, Chile (50Hz)
Power generation based on 2 containerized units designed to fulfill the strictest requeriments of an isolated area.

Published by
Guascor Energy

Oikia, 44
20759 Zumaia (Gipuzkoa) Spain PO Box 30
Tel: (Int'l +34) 943 86 52 00
Fax: (Int'l +34) 943 86 52 10

www.guascor-energy.com

Authorized Distributor

Kraft Power Corporation

199 Wildwood Ave
Woburn, MA 01801-2024
Tel: 315.898.8675
Email: CHP@kraftpower.com

http://kraftpower.com/guascor-engines/