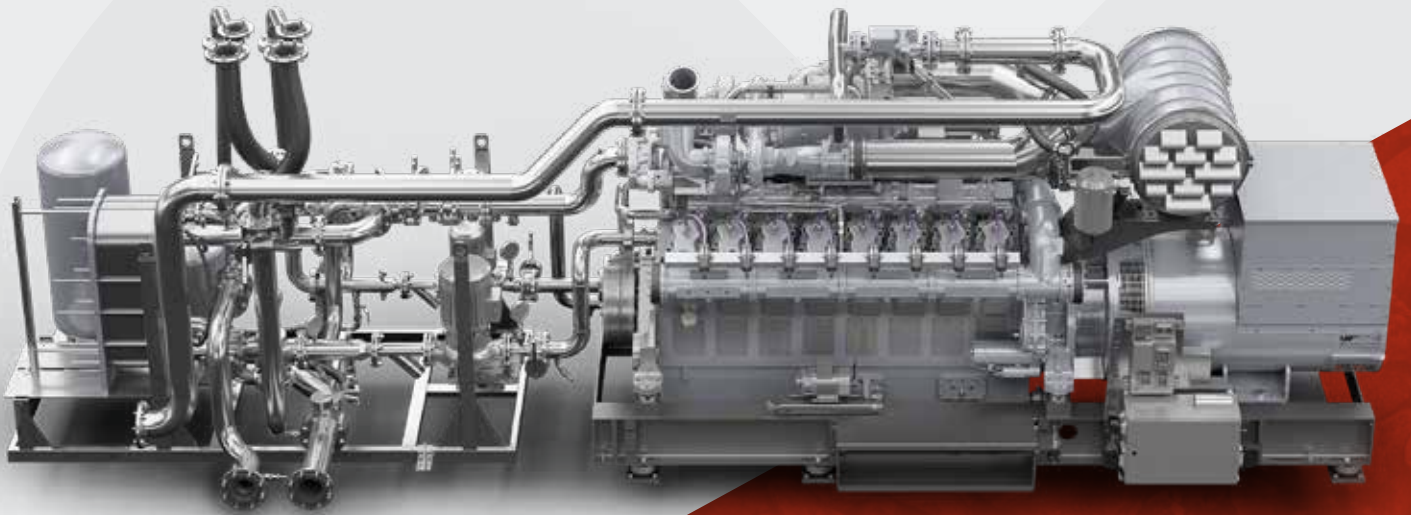


# Drivetrain

## S SERIES PROPANE ENGINES



Best-in-class solutions for  
efficient power generation

an **Engenco** company



## **DRIVETRAIN, AUSTRALIAN SUPPLIER FOR GUASCOR ENERGY.**

**Guascor Energy Engines are known in the market for their robustness and reliability. The S Series Propane engine is mastered to the highest standards across the engine value chain: starting with the design and prototyping phase, all the way through to procurement, assembly and commissioning.**

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 carbureted S Series Propane engines are an excellent solution for Power Generation, Cogeneration and Trigeneration processes, where there is no availability of pipeline-supplied fuel.

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

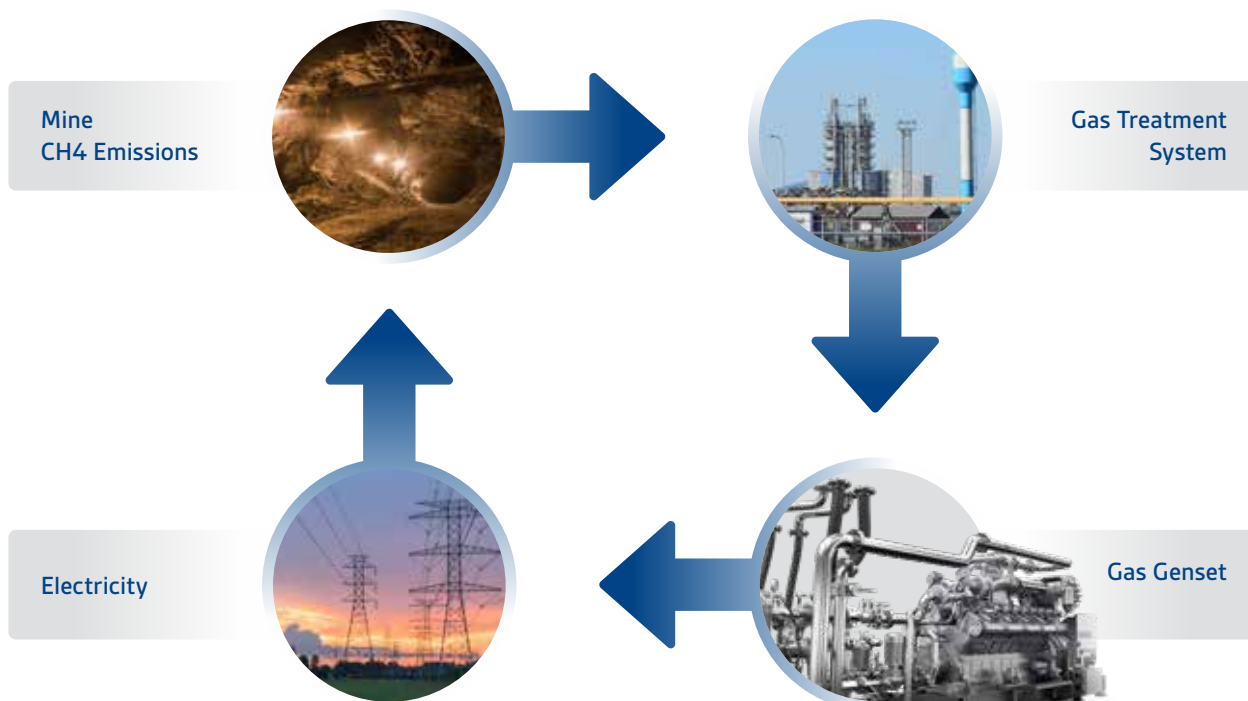
Miller cycle's high-performance design is turbocharged and features single or double-stage air cooling depending on the engine model. Different auxiliary cooling circuit temperatures are possible and an option for an oil cooler in the main circuit is also available, ideal for heat recovery applications.



# CAPITALIZING COAL MINE METHANE GAS

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 GCSEngine and GCS-Genset control systems if required.

## How it works



## Main characteristics

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

# TECHNICAL DATA

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

Model	Mech. Power (kWb)	Mech. Efficiency (%)	Electr. Power (kWe)	Electr. Efficiency (%)	Term. 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 purposes only, not binding. Fuel quality according to IC-G-D-30-018. For other gas quality please contact Guascor Energy.

## SGE SM Family Propane. 1800 rpm - 1g/bPh NOx

Model	Mech. Power (kWb)	Mech. Efficiency (%)	Electr. Power (kWe)	Electr. Efficiency (%)	Term. 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/bPh 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 purposes only, not binding. Fuel quality according to IC-G-D-30-018. For other gas quality please contact Guascor Energy.

## Technical Data

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

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

Engine model	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

## Generator Package on Skid General Dimensions L x W x H (mm) and weight (kg)

Engine model	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	2173
Dry weight engine (kg)	4000	4940	7230	9225	10000



# REFERENCES

## SGE 24 SM - Olein, Puerto Rico (60Hz)

Installation	Oil refinery, Puerto Rico -60Hz-		
Engine model	Application	Electrical Power (kWe)	Thermal Power (hWt)
SGE 24SM	CHP	436 kWe	353 kWt

Two 40-foot containerized SGE 24SM supplied. This solution meets 100 % of the energy needs of the installation in terms of electricity, hot and cold water.

## SGE 48SM - Pfizer, Puerto Rico (60Hz)

Installation	Pharma process, Puerto Rico -60Hz-		
Engine model	Application	Electrical Power (kWe)	Thermal Power (hWt)
SGE 24SM	CHP	874 kWe	1319 kWt

Supplied as a containerized CHP solution, these 4 SGE 48SM units are the perfect fit for all the pharmaceutical processes due to its reliability and high efficiency.

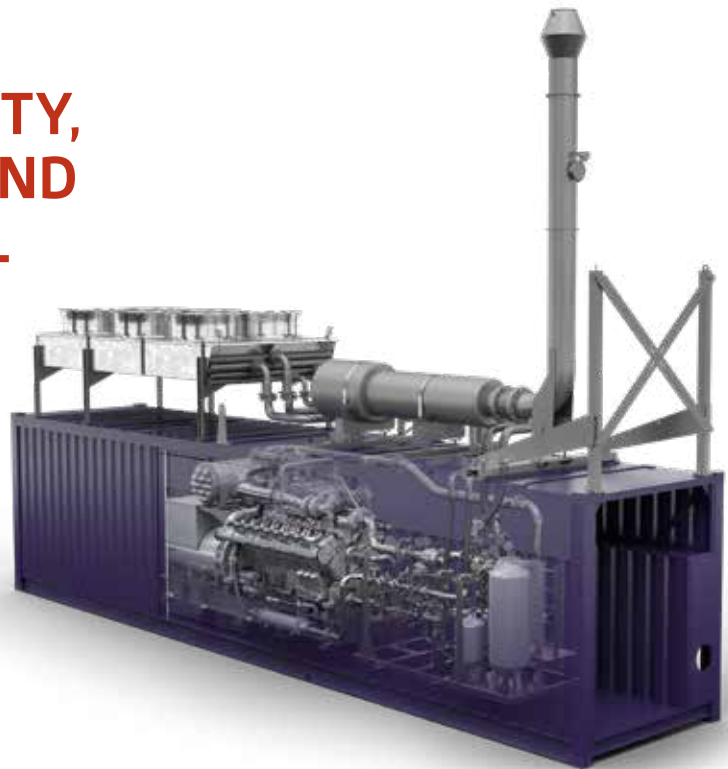
## SGE 48SM - Marquesa, Chile (50Hz)

Installation	Power Generation, Chile		
Engine model	Application	Electrical Power (kWe)	Thermal Power (hWt)
SGE 24SM	CHP	874 kWe	1319 kWt

Power generation based on 2 containerized units designed to fulfil the strictest requirements of an isolated area.



# IMPROVING SAFETY, PRODUCTIVITY AND ENVIRONMENTAL IMPACT OF COAL MINE OPERATIONS



Methane (CH<sub>4</sub>) is the second most important manmade greenhouse gas after carbon dioxide (CO<sub>2</sub>)



CH<sub>4</sub> emitted from underground coal mines may be collected to improve mine safety and to minimize greenhouse emissions while improving mine productivity



The large ventilation systems in mines result in a low methane concentration gas which under normal conditions is released to the atmosphere, contributing to global warming



The low methane coal mine gas may be recovered and transported for use in other applications such as injection in natural gas pipes, co-firing in boilers, drying processes, cogeneration or other industrial processes.



A cost-effective application is burning the low methane gas directly in a machine which is capable to handle it directly at the coal mine.



Guascor Energy has developed an engine which is able to capitalize this low methane gas producing up to 1.2MWe of decentralized power with one machine, the SGE-56HM LCMM.

For more information on sustainable power generation  
call **1800 999 922** or visit [www.drivetrainpower.com](http://www.drivetrainpower.com).



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