

# Complete, dependable renewable gas compressors







## regaco – who we are

### **regaco is complete, dependable, and renewable gas compressors**

We provide everything from consultancy, calculation, planning and risk assessment to the final establishment of complete turn-key biogas filling stations for biogas-gas driven vehicles.

We are proud to be among Scandinavia's leading companies operating and managing filling stations for biomethane as CNG and LBG.

We are a strong and experienced partner for every firm, municipality, and other organisations requiring the secure delivery of sustainable and climate-friendly fuels for transport.

### **Vision**

**regaco** aims to be Europe's leading supplier of high-quality products and solutions within the production, distribution, and use of green gases. Our goal is to create a future in which green gases play a central role in the energy mix. We contribute to the target of reducing CO<sub>2</sub> emissions from energy production and heavy transport by 70% by 2030.

### **Mission**

**regaco** provides components, equipment, and services for biogas filling stations, biogas upgrading and liquefaction plants for agricultural, energy, and transport companies.

**regaco** is involved throughout the entire process, from concept to construction including 24/7 service, with standardized and innovative solutions of high quality, focusing on competitive total costs.





## Our products and services

**regaco's** filling stations are complete and compliant with the latest legislation in the field. This ensures a safe filling station with a long service life. **regaco's** filling stations are delivered in a NORDKAP enclosure, where everything is pre-installed and prepared before shipment to the installation site. The filling equipment and site layout are tailored to customer demands and specifications.



### BIOGAS FILLING STATIONS (CBG)

We offer a wide range of options for compressed biogas, including both slow-filling and public fast-filling stations. With the NORDKAP silent™ option, noise reduction is possible, catering to capacities from 2 to over 90 vehicles.



### DISCHARGING FLAK/CONTAINERS

For areas outside the natural gas grid, we have developed a FLAK/Container system, enabling the discharging of trailers to 15 bar g, thereby reducing logistics and investment costs.



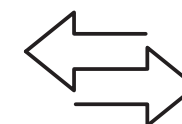
### DEEP KNOW-HOW AND CONSULTING

We have highly skilled personnel in our field and offer assistance in both planning and execution of biogas-related projects.



### LBG/LNG FILLING STATIONS

Turn-key LBG and L-CBG filling stations. With a long reference-list of stations in operation throughout Europe.



### REVERSE COMPRESSION AND BIOMETHANE INJECTION STATIONS

The NORDKAP compressor solution is specifically designed to meet the demanding requirements of gas booster and reverse grid compression applications for grid operators.





## NORDKAP by regaco – renewable gas compressor stations

The regaco NORDKAP concept is hard mechanics in a soft shell. This shell consists of a movable, insulated house, in which complete plants can be prefabricated and moved to the installation site. This results in swift commissioning of the plant and minimal assembly time on-site. Furthermore, the need for expensive civil works is minimized, and concrete foundations are eliminated.

The NORDKAP silent™ version of our filling stations incorporates advanced noise reduction technology, making it ideal for use in noise-sensitive areas such as residential neighborhoods and near daycare centers. This design ensures that the high performance and reliability of the filling stations are maintained while significantly reducing noise levels to create a more pleasant environment.

The filling stations are designed and constructed in accordance with DS/EN16923 (CBG stations), DS/EN16924 (LBG stations), and other local regulations.



### DESIGN

From the very beginning we closely cooperate with stake-holders ensuring a design that fits our customers needs.



### HANDOVER

Pressure-testing, leak-testing and comissioning. Fully functional and approved by 3rd party and authorities.



### IMPLEMENTATION

We offer complete installation and mounting – and we won't leave until we are done. By using local contractors, we ensure local know-how is closeby.



### AFTER-SALES

24/7/365 support and service hotline. Critical spareparts on stock, and trained local contractors that are ready to assist.





# Innovative and renewable biogas filling stations

## INNOVATIVE REFUELING

regaco has a great focus on innovation of both existing and new solutions.

## DATA-DRIVEN OPERATIONS

All stations are continuously monitored, and data is used to further improve operations based on operational performance.

## TOTAL COST OF OWNERSHIP

Our main focus is on the TCO of our stations. All stations are built for long-term operation with long service intervals, ensuring a low total cost of ownership and minimal downtime.

## HIGH DEPENDABILITY

All vehicles using our stations are being filled. We are proud to say that we have a dependability rate to date above 99.9%.

## HEAVY DUTY MACHINERY

All equipment is designed for continuous operation. 8600 hours per year.

## BUILT FOR HARSH WEATHER

Our stations are built for Scandinavian weather conditions and come in corrosion-resistant materials, ensuring a long lifetime of >20 years.

## NOISE REDUCTION TECHNOLOGY

Features advanced noise reduction technology, making it ideal for installation in residential areas and other noise-sensitive environments. Enjoy efficient performance with minimal noise pollution.

Nordkap Mini













Nordkap Maxi





# Technical specifications






NORDKAP MINI	MINI-22	MINI-45	Station capacities	Avg. Refueling (kg)	M22	M45
Number of compressors	1	1	Small passenger car 	15	42	80
Rated Power (kW)	22	45	Van 30 	30	21	40
Suction Pressure (barg)	0.5	0.5	Small truck 	60	11	20
Delivery pressure (barg)	250	250	Large truck 	80	8	15
Capacity (Nm3/h)	65	124	Bus or garbage truck 	120	6	10
Capacity (Kg/h)	52	100	Refueling hours per day	12		
Integrated high pressure storage capacity (L)	-	-	* 1 Nm3 biomethane = 0,8 kg			
Additional storage	Upon request	Upon request				
Dimensions m (L x W x H)	2.75 x 2.3 x 2.75	2.75 x 2.3 x 2.75				

NORDKAP MAXI SLOWFILL*	MAXI S45*	MAXI S75*	MAXI S90*	Station capacities	Avg. Refueling (kg)	M45	M75	M90
Number of compressors	1**	1**	1**	Small passenger car 	15	94 - 195	164 - 510	198 - 642
Rated Power (kW)	45	75	90	Van 30 	30	47 - 98	82 - 255	99 - 321
Suction Pressure (barg)				Small truck 	60	24 - 49	41 - 127	50 - 161
Delivery pressure (barg)	250	250	250	Large truck 	80	18 - 37	31 - 96	37 - 120
Capacity (Nm3/h)***				Bus or garbage truck 	120	12 - 24	21 - 64	25 - 80
Capacity (Kg/h)***				Refueling hours per day	12			
Integrated high pressure storage capacity (L)	-	-	-	* 1 Nm3 biomethane = 0,8 kg				
Additional storage	Upon request	Upon request						
Dimensions m (L x W x H)	2.75 x 2.3 x 2.75	2.75 x 2.3 x 2.75						

\* Available as NORDKAP Silent and as NORDKAP Super Silent

\*\* Redundancy (extra compressor) available on request

\*\*\* Capacity is affected by inlet pressure

NORDKAP MAXI FASTFILL*	MAXI D90*	MAXI D132*	MAXI D160*	Station capacities	Avg. Refueling (kg)	MAXI D90	MAXI D132	MAXI D160
Number of compressors	2**	2**	2**	Small passenger car 	15	421 - 1.310	507 - 1.571	661 - 1.927
Rated Power (kW)	2 x 90	2 x 132	2 x 160	Van 30 	30	211 - 655	253 - 786	331 - 963
Suction Pressure (barg)				Small truck 	60	105 - 328	127 - 393	165 - 482
Delivery pressure (barg)	250	250	250	Large truck 	80	79 - 246	95 - 295	124 - 361
Capacity (Nm3/h)***				Bus or garbage truck 	120	53 - 164	63 - 196	83 - 241
Capacity (Kg/h)***				Refueling hours per day	10			
Integrated high pressure storage capacity (L)	2400	2400	2400	* 1 Nm3 biomethane = 0,8 kg				
Additional storage	Upon request	Upon request	Upon request					
Dimensions m (L x W x H)	~17.5 x 3.5 x 3.7	~17.5 x 3.5 x 3.7	~17.5 x 3.5 x 3.7					

\* Available as NORDKAP Silent and as NORDKAP Super Silent

\*\* Redundancy (extra compressor) available on request

\*\*\* Capacity is affected by inlet pressure





# Equipment and accessories

X = Standard equipment (included)  
O = Optional  
N/A = Not applicable or possible

Inlet system	MINI	MAXI SLOWFILL	MAXI FASTFILL
Gas connetion by flange	X	X	X
Gas filter	X	X	X
Pressure regulator	X	N/A	N/A

Compressor system	MINI	MAXI SLOWFILL	MAXI FASTFILL
Electric motor with soft start	X	X	X
Air cooling, over roof	X	X	X
Water cooling	N/A	O	O
Oil lubricated	N/A	X	X
Non-lubricated	X	O	O
Blow-down vessel	X	X	X
Emergency shutdown	X	X	X
Earthing/Ground of electrical equipment	X	X	X

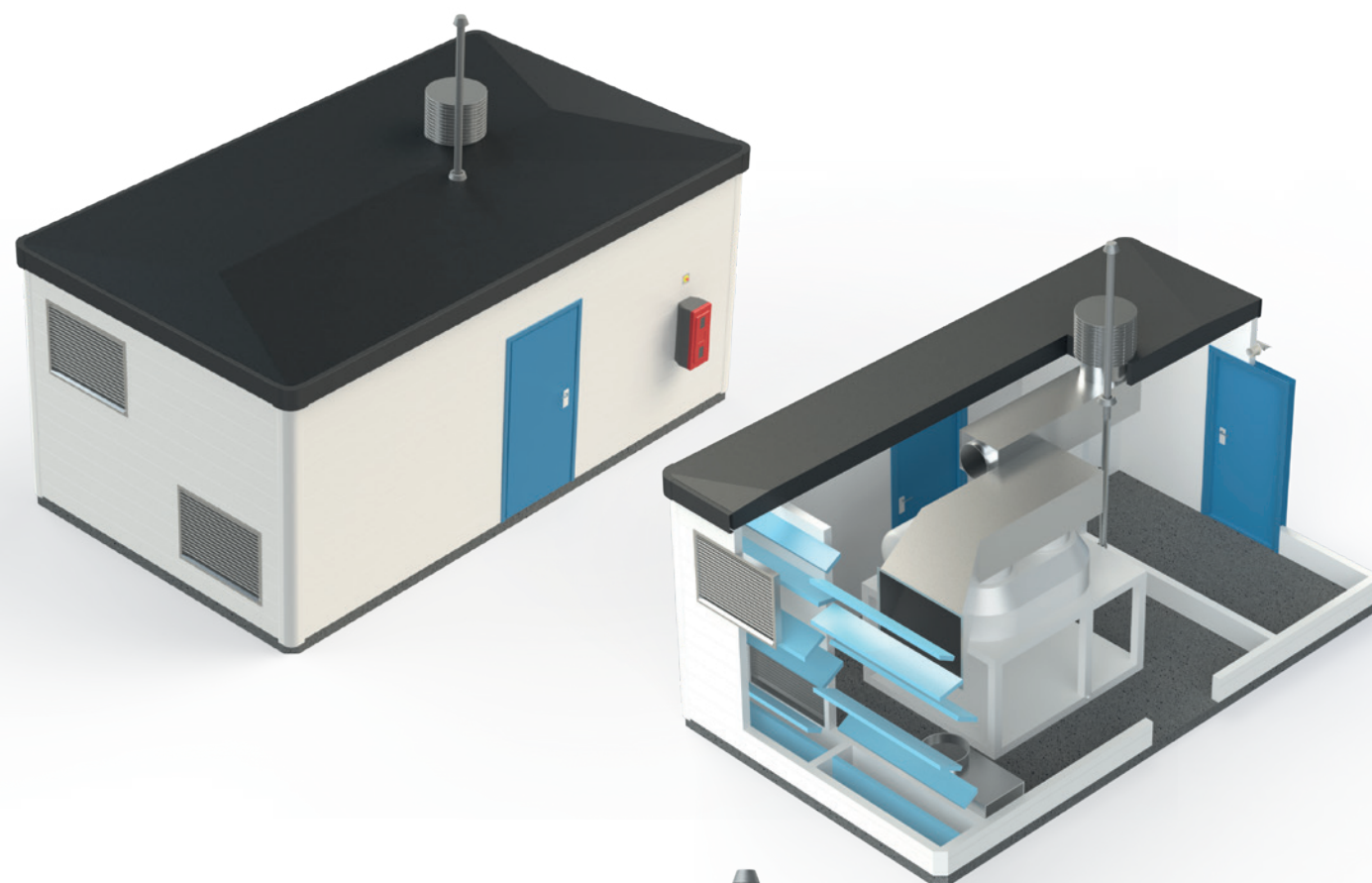
Compressor house and control system	MINI	MAXI SLOWFILL	MAXI FASTFILL
ATEX plan (IEC 60079)	X	X	X
2D situation plan with escape route (ISO16923:2016)	X	X	X
Concrete foundation skid	O	X	X
Gastight control room, EX-Zone 2	O	O	O
PROFINET - Bus system	X	X	X
Siemens based PLC system	X	X	X
Touch panel and controls	X	X	X

Remote monitoring and control	MINI	MAXI SLOWFILL	MAXI FASTFILL
Automatic notification system on shutdown	X	X	X
Remote monitoring of system status	X	X	X
Remote alarm monitoring	X	X	X
Remote control of system*	X	X	X
* (not critical emergency functions)			

High pressure gas storage	MINI	MAXI SLOWFILL	MAXI FASTFILL
Gas storage	O	O	X
3-bank priority panel	O	O	X
3-bank control system	O	O	X

Other options
Fast-fill dispensers
Payment terminals
Slowfill/Time-fill dispensers
Mass flow meter on discharge line





## NORDKAP silent™

NORDKAP silent™ – an advanced version of our popular filling station, designed with a focus on noise reduction without compromising the optimal performance.

NORDKAP silent™ is created to deliver a reliable and efficient filling station while ensuring a low noise level, making it possible to install near residential areas, daycare centers, and other noise-sensitive environments.

### Advantages of NORDKAP silent™

**LOW NOISE LEVEL:** The integrated noise reduction in the walls of NORDKAP silent™ significantly reduces noise, contributing to a more pleasant and quiet environment. This is especially important when the filling station is placed near residential areas or places where children are present, such as daycare centers.

**ENVIRONMENTALLY FRIENDLY:** NORDKAP silent™ is designed with consideration for the environment. The lower noise pollution contributes to a better quality of life for surrounding residents and users.

**OPTIMAL PERFORMANCE:** Despite the extensive noise reduction, NORDKAP silent™ still delivers high performance and reliability, ensuring efficient operation without compromise.

**AESTHETIC DESIGN:** With its modern and elegant design, NORDKAP silent™ fits perfectly into any urban environment while maintaining a stylish and professional appearance.

**NO VISUAL DIFFERENCE** to the original NORDKAP enclosure as the noise abating equipment and ventilation ducts are integrated as part of the enclosure.

NORDKAP silent™ is the ideal choice for businesses and institutions looking to reduce noise pollution while maintaining high efficiency and reliability. Experience the benefits of a quiet and efficient filling station with NORDKAP silent™.



# NORDKAP compressor stations for Reverse compression and Biomethane Injection

## Introduction to Reverse Compression

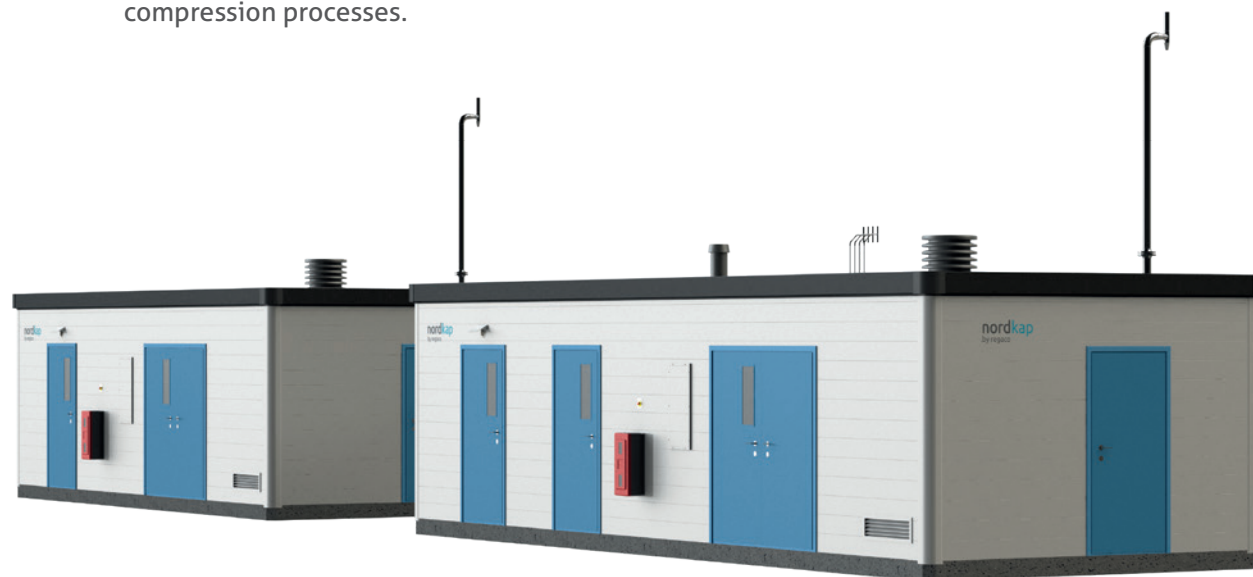
Reverse compression plays a crucial role in maintaining the stability and efficiency of gas distribution networks. In scenarios where the gas supply exceeds demand or when the direction of flow needs to be reversed, reverse compression becomes necessary. This process ensures that excess gas can be efficiently redirected back into the grid or stored, maintaining optimal pressure levels and preventing potential disruptions.

## Introduction to Biomethane Injection

Biomethane injection is the a when biomethane produced from a biogas plant with any given upgrading technology is injected into the gas grid. This can either be done in local, lower pressure gas grids (typically distribution grids) – or into the high grids (transmission grids).

## NORDKAP compressors stations for gas grid applications

The NORDKAP compressor solution is specifically designed to meet the demanding requirements of reverse grid compression as well as biomethane injection applications for grid operators. Built with a focus on efficiency, reliability, and ease of maintenance, our compressors offer an advanced solution for operators looking to optimize their gas compression processes.



## Key Features and Benefits

**API 618 AND CE-MARKED COMPLIANCE:** The NORDKAP compressor stations meet the highest industry standards, including API 618 and CE-marking, ensuring safety, reliability, and quality in all applications.

**ZERO EMISSIONS & NON-LUBRICATION:** Our solutions can be supplied as zero-emission compressors and options to choose between oil- and non-lubricated types.

**FLEXIBLE COOLING OPTIONS:** Available in both water-cooled and air-cooled configurations, our compressors can be tailored to suit specific environmental and operational requirements, providing versatility across diverse applications.

**HIGH-EFFICIENCY BARE SHAFT DESIGN:** Designed for maximum efficiency, the high-efficiency bare shaft ensures optimal energy consumption, reducing operating costs and enhancing overall performance.

**ENGINE OR MOTOR DRIVEN OPTIONS:** Our compressors are adaptable to various power sources, whether engine or motor driven, allowing for greater flexibility and compatibility with existing systems.

**MODULAR NORDKAP SOLUTION:** The compressor can be supplied as a modular, built-in solution that simplifies integration into existing infrastructure, reducing installation time and costs.

**MINIMUM VIBRATION DESIGN:** Featuring a balanced-opposed design, the NORDKAP compressors operate with minimum vibration, enhancing equipment longevity and reducing wear and tear, thereby lowering maintenance requirements.

**LOW MAINTENANCE COSTS WITH GENUINE PARTS:** By utilizing genuine parts and a design focused on reliability, the NORDKAP solution offers the lowest maintenance costs in its class, ensuring sustained operation with minimal downtime.

**WIDE OPERATING RANGE:** Capable of handling a large range of inlet and outlet pressures, the NORDKAP compressors are suitable for a variety of gas compression needs, providing flexibility for operators to adjust to different system demands.

**LOW ENERGY CONSUMPTION FOR STRONG TOTEX CALCULATION:** With their low energy consumption, our compressors contribute to a strong Total Expenditure (TOTEX) calculation, delivering long-term cost savings and a favorable return on investment.

**FLEXIBLE IMPLEMENTATION OF AUXILIARY SYSTEMS SUCH AS GAS CHROMATOGRAPHY:** We have the option to include Gas Chromatography before grid injection, local grid operators control cabinets etc., into our modular NORDKAP compressor enclosures.





## Reach your goals with us

**regaco** has delivered renewable gas compressors, filling stations and equipment across a wide variety of countries.

As a **regaco** customer, you can expect to receive a turnkey solution where we work closely with our customers from start to finish.

Everything is delivered as a complete package, and we do not leave the site until everything is functioning correctly and safely.

We help you reach your goal – we clearly explain what you need to do and what we do, from the first call until your bus, garbage truck, or distribution vehicle is fully fueled and ready to hit the road for the first time.

We get your system up and running quickly – typically within a maximum of 1-2 weeks from delivery to commissioning, thanks to modular construction, efficient logistics and planning.

## Contact us

You can reach us at **regaco** through various channels – by phone, email, through physical visits, or on LinkedIn.

We prioritize solving your problems, even outside of normal business hours, as we understand that issues can arise at any time. Therefore, as a customer, you should be able to reach us whenever you need assistance.

Visit us on our website:  
[regaco.eu](https://regaco.eu)



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