



# COMPANY PROFILE 2024



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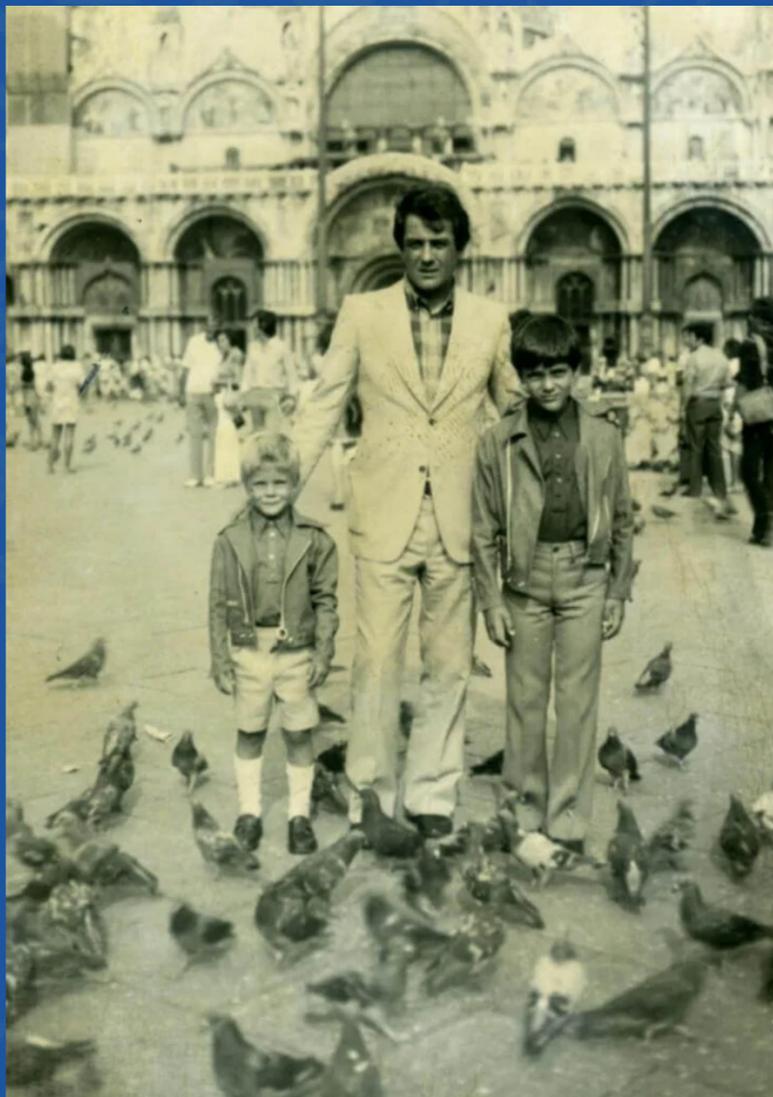
### QUALITY



# ABOUT US

## MILESTONES

A FAMILY BUSINESS THAT HAS GONE INTERNATIONAL, KNOWN FOR ITS DEDICATION WORLDWIDE



**1969**

Carlo Bauzone **founds** Fornovo Gas.

**1985**

The company starts **distributing methane gas** by means of tankers and truck trailers.

**2004**

**First reciprocating compressor** fully developed by Fornovo Gas' technology.

**2005**

**First oil-free reciprocating compressor** installation for biomethane application

**2011**

Expansion of the headquarters with the construction of a new operational facility dedicated to R&D.

**2018**

Development of the horizontal reciprocating compressor **DA500**

**2019**

Fornovo Gas operates in **60 countries**.

**2021**

A range of **hydrogen reciprocating compressors** is created.

**2022**

Fornovo Gas is one of the first 1000 Italian companies to become a **Benefit Corporation**.



# BENEFIT SOCIETY

Fornovo Gas is an example of how a company can integrate **business goals** with an **ethical vision**. The benefit company model is based on the principles of **social responsibility** and **sustainability**.

As a company we decided to adopt this model to **contribute to a better world**.

To achieve sustainable development, it is important to harmonize **3 basic elements**:

# 1

## ENVIRONMENTAL PROTECTION



# 2

## SOCIAL INCLUSION



# 3

## RESPONSIBLE GOVERNANCE



1

# ENVIRONMENTAL PROTECTION



## GOAL REDUCE CO2 EMISSION

WITH



### INSTALLATION OF SOLAR PANELS

Decreasing our CO2 emission of 50% by 2024

=

**ZERO CO2 emission by 2025**



### SUSTAINABILITY CREDITS

Acquisition of 150 sustainability credits

=

**150 tons of CO2**



# SOCIAL INCLUSION



GOAL

## GREAT WORKPLACE ENVIRONMENT

BY Investing in **training** and **development** of its employees, **promoting skills** and **personal growth** :



### SPECIFIC TRAINING COURSES

**Managerial** team building, **trainings** regarding ESG and various **specific programs** for the development of **young talents**.



### WELFARE

More than **100.000 euro**/per year



### BONUSES

More than **78.000 euro**/per year in bonuses for: **childbirth**, **parenting** and work-life balance, and culture or **obtaining a degree**



### SMART WORKING

Offering **flexibility**, time and cost savings, **productivity**, contributing to **sustainability**, and improving **employee well-being**.

## 2 SOCIAL INCLUSION



# GOAL SUPPORT OUR COMMUNITY

BY



### SPONSORING

The **local** youth **soccer team**



### SUPPORT

Some of the **town's major** summer **events**



### DONATE

to the **Italian Red Cross** worth **46.000 euro** in 2023



### DONATE

to those impacted by the **flood in Emilia Romagna** in 2023



### PROMOTING

The **sustainable** and **responsible Forestal management** of the **Tuscan-Emilian Apennine** Biosphere Reserve



3

## RESPONSIBLE GOVERNANCE



GOAL

# EFFECTIVE BUSINESS MANAGEMENT

WITH

### TRANSPARENCY

Fornovo Gas adopts **transparent** and **accountable** governance practices, ensuring the **trust of stakeholders**.

### ETHICAL VALUES

The company is committed to following **ethical values** and **respecting human rights**, contributing to a more **egalitarian society**.

# OUR COMPANY

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## CERTIFIED QUALITY

ISO 9001- ISO 14001- ISO 45001

55

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## EXPERIENCE

In the compression market for 55 years



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## MADE IN ITALY

All products are designed and manufactured in Italy



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## WORLDWIDE

Hundreds of customers all over the world

# OUR WORKPLACE

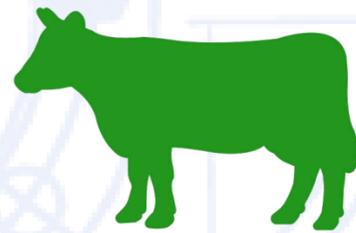
**5.193** m<sup>q</sup>  
**WORKSHOP**



**1.055** m<sup>q</sup>  
**OFFICES**



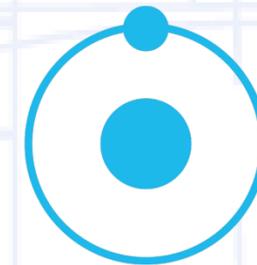
# APPLICATIONS



**BIOGAS-BIOMETHANE-BIOLNG**



**CO<sub>2</sub>**



**HYDROGEN**



**OIL & GAS**



**FUEL GAS BOOSTING**

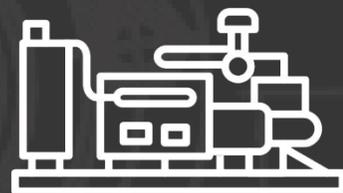


**CNG**

# INDUSTRY

FORNOVO GAS supplies compressors for many different applications in industry, such as co-generation plants and gas turbine boosting

## APPLICATIONS



### POWER GENERATION

FUEL GAS BOOSTING  
WELL HEAD WELL DEPLETION  
GAS STORAGE, INJECTION AND LIFT  
FLARE AND VENT GAS RECOVERY  
REFINERY, MINERY, GAS SERVICES  
TECHNICAL GASES  
BOIL OFF GAS RECOVERY  
SMALL SCALE LNG PRODUCTION PLANT



### OIL & GAS



### TECHNICAL GASES

# BIOGAS

Hundreds of compressors installed in Biogas and Biomethane production plants across Europe and around the world have made Fornovo Gas an acknowledged world leader in Green Energy Excellence.

## APPLICATIONS

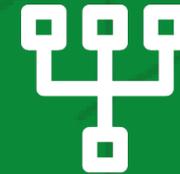


### BIOMETHANE LIQUEFACTION

GRID INJECTION  
BIO-LNG PLANT  
CO2 LIQUEFACTION PLANT  
CYLYNDER TRAILER FILLING  
BOIL OFF GAS RECOVERY



### BIOMETHANE INJECTION



### BIOMETHANE DISTRIBUTION



### BIOMETHANE STORAGE

# CNG

We have more than 50 years of experience in the design and production of superior quality CNG compressors and CNG solutions, installed all around the world with the support of our network of carefully selected, international partners

## APPLICATIONS



**CNG MOTHER STATION**



**CNG DAUGHTER STATION**



**NGV STATION**

# HYDROGEN

## APPLICATIONS



PIPELINE INJECTION



INDUSTRIAL ENERGY/ FEADSTOCK



SYNGAS BOOSTING



POWER TO GAS

## ADVANTAGES



EASIER MAINTENANCE



EXCELLENT FLEXIBILITY



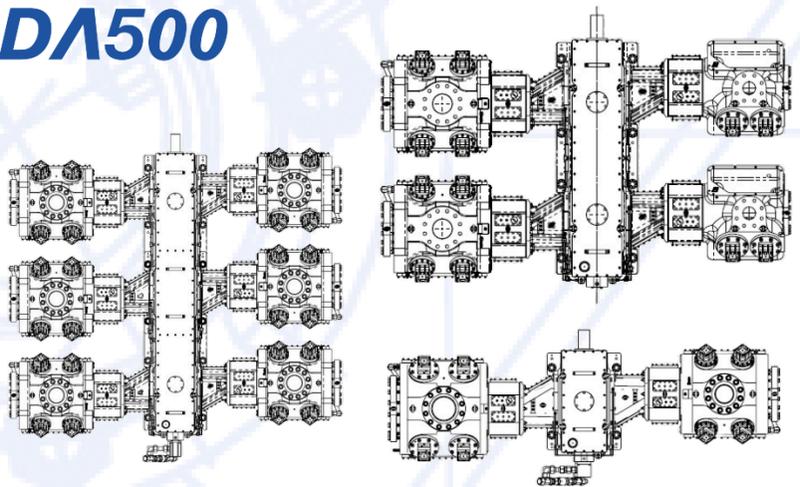
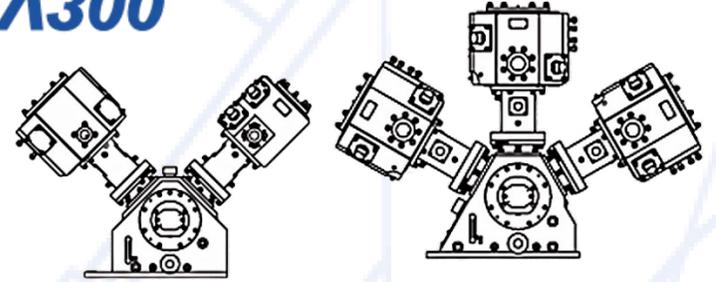
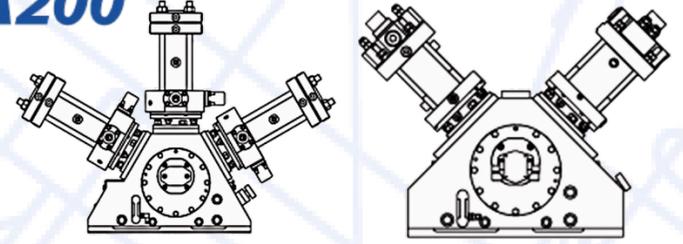
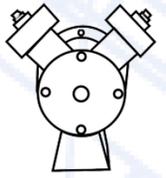
LOW COST OPERATIONS



ULTRA HIGH PURITY

# PRODUCT RANGE



POWER kW	MODEL	CYLINDER						APPLICATION																
		Bore (mm)	Acting	Strokes (mm)	MAWP (bar g)	Cooling air water	Distance Piece Type	Features Options	CH4	Bio CH4	N2	CO2	Sour Gas	Toxic Gas	H2	Syngas								
1800	<b>DA500</b> 	500	DOUBLE ACTING	80	17,5	air	B-C	Bone dry gas seals	CH4	Bio CH4	N2	CO2	Sour Gas	Toxic Gas	H2	Syngas								
		400			34,7	water			B-C	NO LUBE	OIL FREE	LUBE	B-C	Packing Nitrogen buffer										
		300			62				B-C															
		220			70,5				B-C															
		185			100				B-C															
		150			140				B-C															
		115	275		B-C																			
		370-190	48	TANDEM	110	48			B-C	Cylinder lubrication system														
		240-140	143			B-C																		
		160-80	275			B-C																		
100-55	500	B-C																						
315	<b>DA300</b> 	320	DOUBLE ACTING	100	10		B	Bone dry gas seals	CH4	Bio CH4	N2	CO2												
		240			40				B	Ni-plated surface treatment														
		150			90				B															
		90			133				B															
		90	220		B																			
		200-130	90	TANDEM	100	90			B	Packing Nitrogen buffer														
		100-50	275			B																		
		100-50	375			B																		
100-50		B																						
55	<b>SA200</b> 	150	SINGLE ACTING	65	50		B-C	Bone dry gas seals	CH4	Bio CH4	N2	CO2	Sour Gas	Toxic Gas	H2	Syngas								
		80			100				B-C															
		50-25	306		TANDEM	65		306		B-C	Ni-plated surface treatment													
		40-20	500					B-C																
		40-20	500					B-C																
7	<b>SA50</b> 	65	SINGLE ACTING	40	14		-	-	CH4	Bio CH4	N2	CO2												
		45			14																			
		37			42																			

# **COMPRESSOR FEATURES**

**SA50**

**COMPACT, LOW POWER, V-TYPE HEAVY DUTY COMPRESSOR**

**SINGLE ACTING CYLINDERS**

**PRESSURIZED CRANKCASE UP TO 5 BAR**

**FULL OIL-LESS COMPRESSION (NO OIL NEEDED)**

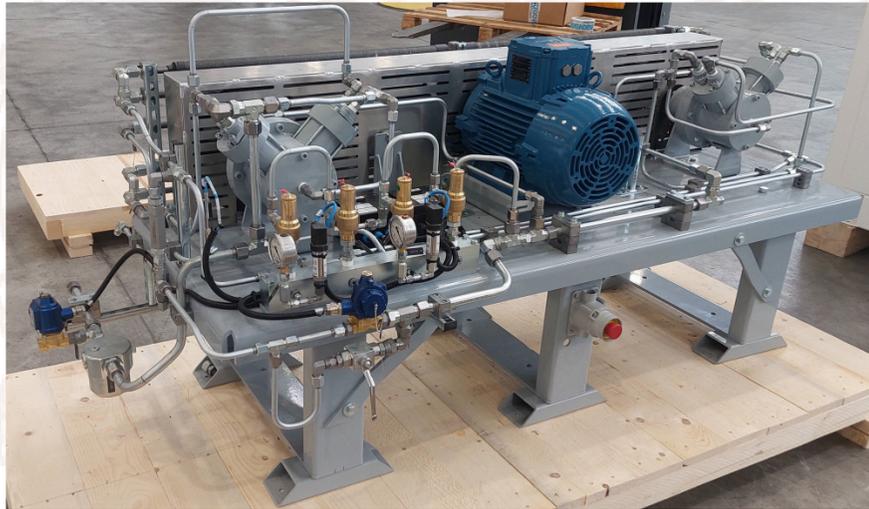
**AVAILABLE AS A SINGLE OR DOUBLE SHAFT CONFIGURATION**

**UP TO THREE COMPRESSION STAGES**

**TYPICAL APPLICATION: VENT GAS RECOVERY**



# REFERENCE



Model	SA50
Nr. of Stages	3
Shaft Power	3,7 kW
Inlet pressure	0,45 bar g
Outlet pressure	12 bar g
Flowrate	24 Nm3/h



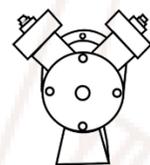
Model	SA50
Nr. of Stages	2
Shaft Power	1,4 kW
Inlet pressure	0,02 bar g
Outlet pressure	15 bar g
Flowrate	8,8 Nm3/h

## POWER kW

7

## MODEL

SA50



## CYLINDER

Bore (mm)	Acting	Strokes (mm)	MAWP (bar g)	Cooling
65	SINGLE ACTING	40	14	● ○
45			14	● ○
37			42	● ○



OIL LESS

Distance Piece Type

Features Options

CH4

Bio CH4

N2

CO2

Sour Gas

Toxic Gas

H2

Syngas

## APPLICATION



# COMPRESSOR FEATURES

**SA200**

**CROSSHEAD** EQUIPPED, **LOW-POWER, V/W-TYPE** HEAVY DUTY COMPRESSOR

**SINGLE ACTING/TANDEM** CYLINDERS

**DISTANCE PIECE TYPE B AND C** AVAILABLE WITH DIFFERENT BUFFER OPTIONS

**NON-LUBED** CYLINDERS

UP TO **FIVE** COMPRESSION **STAGES**

TYPICAL APPLICATIONS: **NATURAL GAS, TECHNICAL GASES, HYDROGEN**



# REFERENCE



Model	SA200
Nr. of Cylinders	2
Shaft Power	13 kW
Inlet pressure	14 bar A
Outlet pressure	30 bar A
Flowrate	226 Nm3/h



Model	SA200
Nr. of Cylinders	3
Shaft Power	36 kW
Inlet pressure	29 bar g
Outlet pressure	75 bar g
Flowrate	403 Sm3/h

## POWER kW

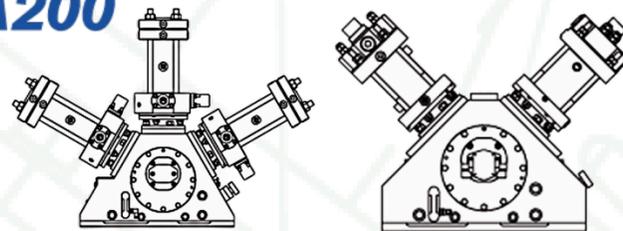
## MODEL

## CYLINDER

## APPLICATION

55

SA200



Bore (mm)	Acting	Strokes (mm)	MAWP (bar g)	Cooling	Distance Piece Type	Features Options	CH4	Bio CH4	N2	CO2	Sour Gas	Toxic Gas	H2	Syngas		
150	SINGLE ACTING	65	50	☉	NO LUBE	BONE DRY GAS SEALS	█	█	█	█	█	█	█	█		
80			100	☉			█	█	█	█	█	█	█	█		
50-25	TANDEM		306	☉			OIL FREE	Ni-plated surface treatment	█	█	█	█	█	█	█	█
40-20			500	○					█	█	█	█	█	█	█	█
									Packings Nitrogen buffer							



# **COMPRESSOR FEATURES**

**DA300**

**CROSSHEAD EQUIPPED, V/W-TYPE HEAVY DUTY COMPRESSOR**

**DOUBLE ACTING/TANDEM CYLINDERS**

**DISTANCE PIECE TYPE B AVAILABLE**

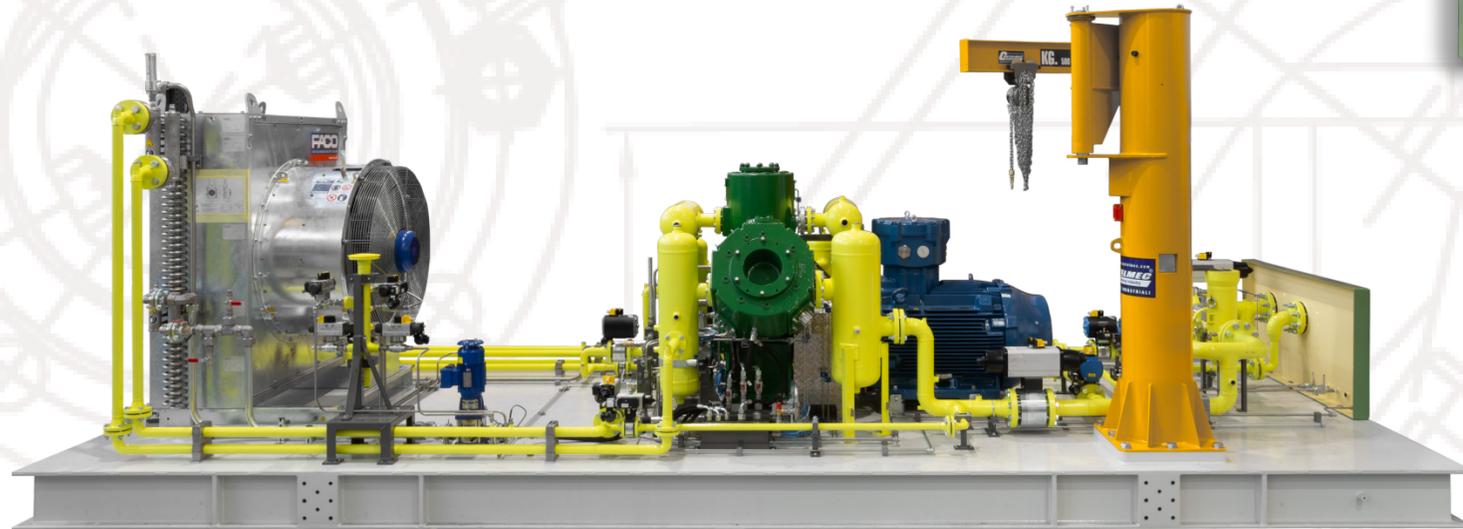
**NON-LUBED CYLINDERS**

**UP TO FIVE COMPRESSION STAGES**

**TYPICAL APPLICATIONS: CNG, BIOGAS, BIOMETHANE INJECTION, FUEL GAS AND CO2 APPLICATION**



# REFERENCE

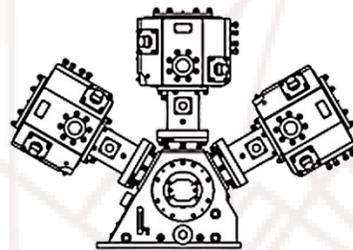
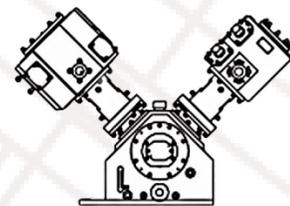


Model	3DA300 VFD
Nr. of Cylinders	3
Shaft Power	64-108 kW
Inlet pressure	3-7,5 bar g
Outlet pressure	76 bar g
Flowrate	375-873 Nm3/h

## POWER kW

315

DA300



## MODEL

Bore (mm)

320

240

150

90

90

200-130

100-50

100-50

Acting

DOUBLE ACTING

TANDEM

Strokes (mm)

10

40

90

133

220

90

275

375

MAWP (bar g)

10

40

90

133

220

90

275

375

Cooling

NO LUBE

OIL FREE

## CYLINDER

Distance Piece Type

B

B

B

B

B

B

B

B

Features Options

Bone dry gas seals

Ni-plated surface treatment

## APPLICATION

CH4



Bio CH4



N2



CO2



Sour Gas



Toxic Gas



H2



Syngas



# **COMPRESSOR FEATURES**

**DA500**

**BALANCED AND OPPOSED API 11P/ISO 13631 COMPRESSOR**

**DOUBLE ACTING/TANDEM CYLINDERS**

**DISTANCE PIECE TYPE B AND C AVAILABLE WITH DIFFERENT BUFFER OPTIONS**

**NON-LUBED CYLINDERS OR LUBED CYLINDERS**

**UP TO FIVE COMPRESSION STAGES**

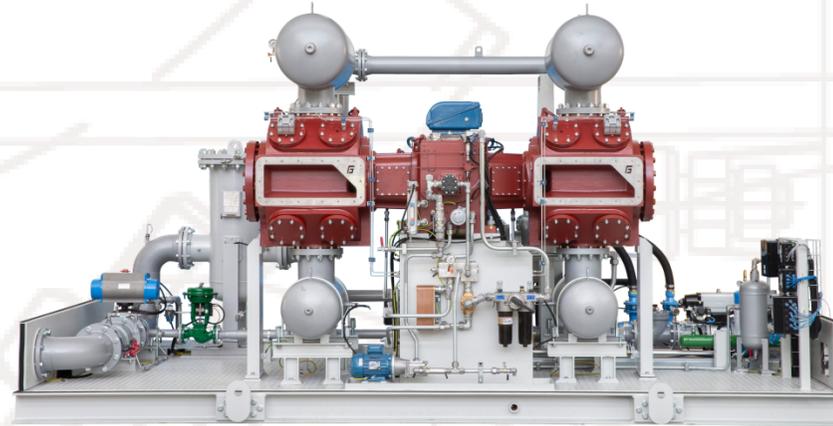
**TYPICAL APPLICATIONS: NATURAL GAS, CNG, BIOGAS, BIOMETHANE INJECTION,  
FUEL GAS, TECHNICAL GASES, HYDROGEN**



# REFERENCE



Model	DA500
Nr. of Cylinders	4
Shaft Power	600 Kw
Inlet pressure	1,5 bar g
Outlet pressure	91 bar g
Flowrate	5967 Sm3/h



Model	DA500
Nr. of Cylinders	2
Shaft Power	500 Kw
Inlet pressure	2-4 bar g
Outlet pressure	6,5 bar g
Flowrate	5019 Nm3/h

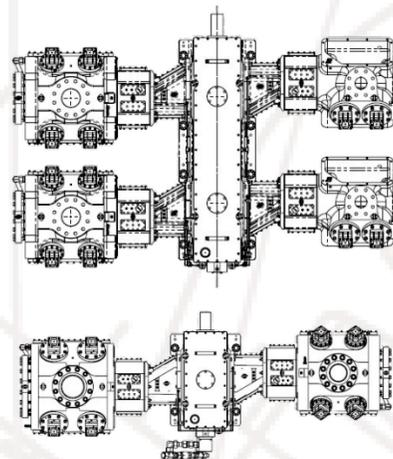
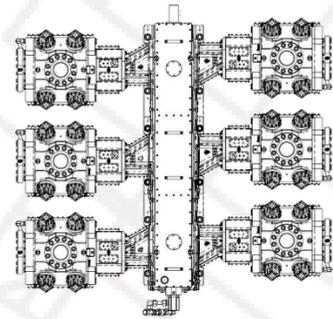
POWER  
kW

MODEL

CYLINDER

APPLICATION

1800 DA500



Bore (mm)	Acting	Strokes (mm)	MAWP (bar g)	Cooling		Distance Piece Type	Features Options	CH4	Bio CH4	N2	CO2	Sour Gas	Toxic Gas	H2	Syngas																																		
500	DOUBLE ACTING	80	17,5	air	NO LUBE	B-C	Bone dry gas seals	█	█	█	█	█	█	█	█																																		
400			34,7	water												OIL FREE	B-C	Ni-plated surface treatment	█	█	█	█	█	█	█																								
300			62																							LUBE	B-C	Cylinder lubrication system	█	█	█	█	█	█															
220			70,5																																B-C	Packings Nitrogen buffer	█	█	█	█	█	█							
185			100																																								B-C		█	█	█	█	█
150			140																																														
115	TANDEM	100	275			B-C		█	█	█	█	█	█	█																																			
370-190			48												B-C		█	█	█	█	█	█																											
240-140			143																				B-C		█	█	█	█	█																				
160-80			275																											B-C		█	█	█	█														
100-55			500			B-C		█	█	█	█	█	█	█																																			



# NO LUBE

Piston rings and rod seals are made from special **low friction** and **self-lubricating materials**, in order to keep working **temperatures** sufficiently **low** to ensure **reliability** and **lifetime** of the seals



**NO CONTAMINATION**  
of the gas environment  
with cylinder lube oil



**CYLINDER LUBE OIL**  
circuit not necessary



**ONLY CRANKCASE OIL**  
needed



**LOW QUANTITY OF OIL**  
during disposal process

# OIL FREE SYSTEM



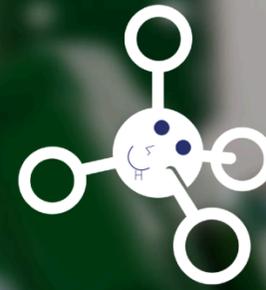
**DISTANCE PIECE TYPE B  
according to API 618**



**NO FILTER REQUIRED  
downstream of the  
compressor**



**NO CONSUMPTION  
of Crankcase Lubrication  
Oil**



**NO CONTAMINATION  
of the compressed gas**

**0**

**NO OIL  
in the gas**

# ADVANTAGES



## MINIMAL VIBRATION

Thanks to its optimized balancing



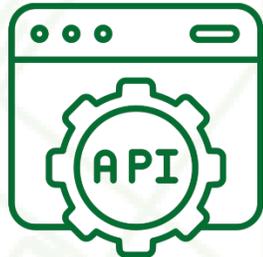
## OIL FREE

Our oil-free solution ensures no oil in the discharge, without the use of any oil separator



## NOISE REDUCTION

The noise is minimal thanks to low vibrations and pulsations



## API COMPLIANCE

DA500 complies with API11P and API618P with minor deviations



## OPTIMIZED SPACE

Thanks to the compact machine layout



## EASIER MAINTENANCE

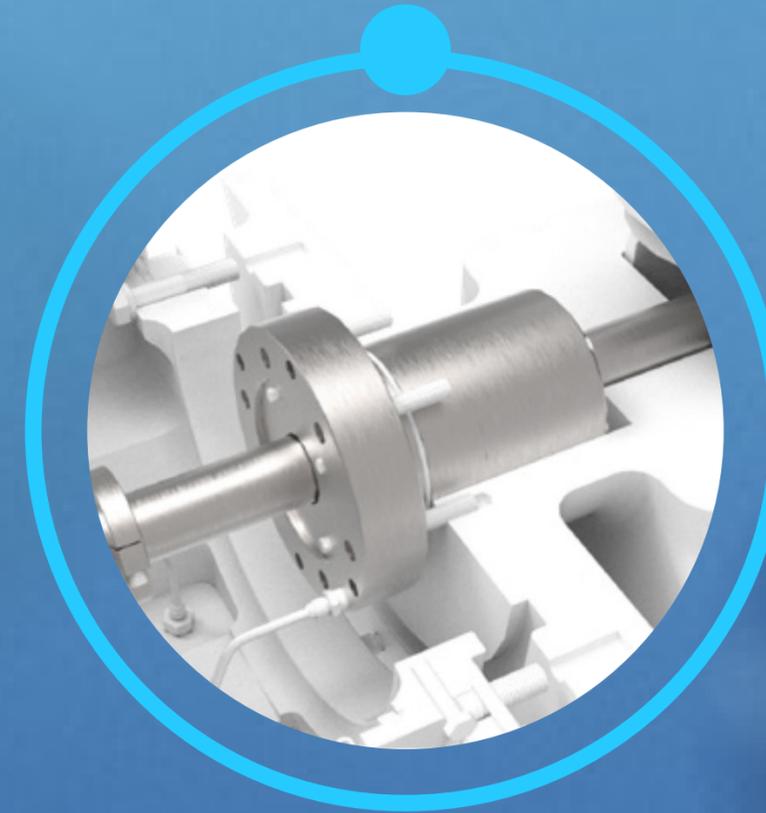
# HYD SYSTEM



  
**HOERBIGER**

## HIGH PERFORMANCE CYLINDERS

- **Piston rod** with **special treatment** to prevent embrittlement
- **Piston seals** and **valves** specifically designed for H2



## DISTANCE PIECE TYPE C

- **Gaskets** and **seals** optimized to **prevent H2 leakage**
- **Purging** of distance piece with inert gas

# SERVICE

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**SPARE PARTS**



**COMMISSIONING & START UP**



**MAINTENANCE CONTRACT**



**FIELD INTERVENTION**



**TECHNICAL TRAINING**



**SERVICE CENTERS TRAINED WORLDWIDE**

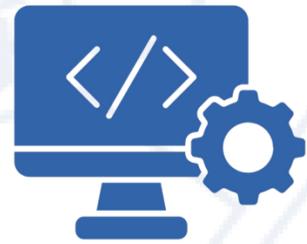


**LOGISTICS**



# CUSTOMER ORIENTED

Additional services we offer to our clients:



**SOFTWARE R&D**



**ENGINEERING SUPPORT**



**QUALIFIED SERVICE  
CENTER NETWORK**



**REMOTE CONTROL**

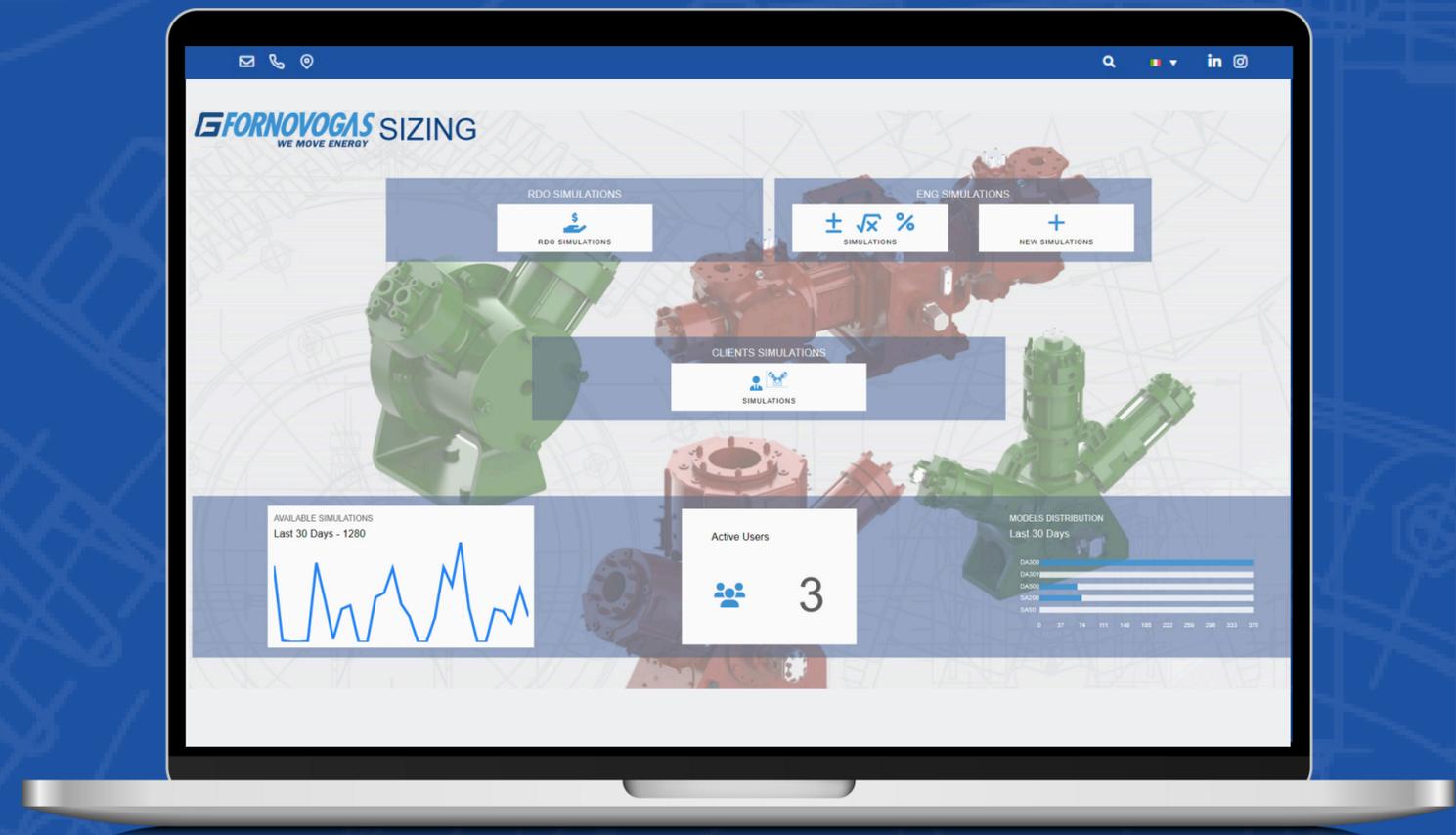
Possibility to fully sensor  
the machines for remote  
control

# R&D SOFTWARE

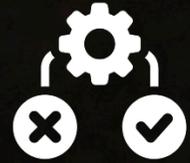
## Rapid Effective Development

Fornovo Gas developed a **proprietary system** called **R&D**, which is a **simulation software**.

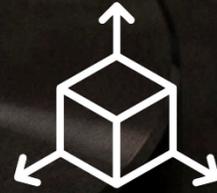
It allows to model in advance the **optimal configuration of compressors** in relation to the process in which they are inserted and to perform predictive **analysis of process feasibility, optimising costs and performance** of the process itself.



# QUALITY



**TESTING  
ON EVERY COMPRESSOR**



**3D QUALITY CONTROL ON  
CRITICAL COMPONENTS**



**HYDRAULIC TEST PERFORMED  
ON ALL PRESSURE PARTS**

## CERTIFICATIONS

### **ISO9001:2015**

Quality Management system

### **ISO14001:2015**

Health and Safety Management

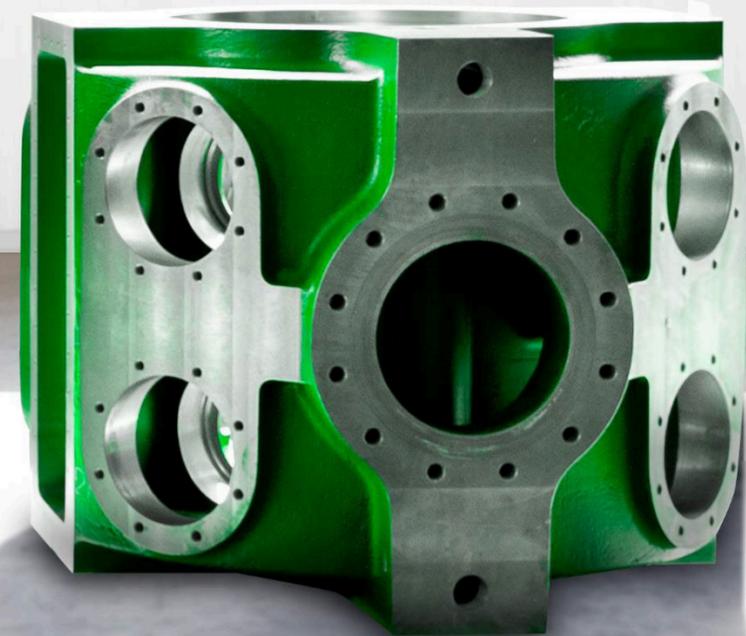
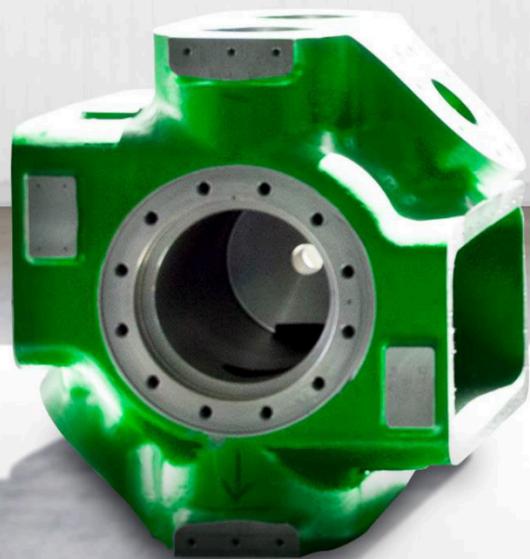
### **ISO45001:2018**

Environmental Management system

# **G FORNOVOGAS**

**WE MOVE ENERGY**

**...ALWAYS BY YOUR SIDE**



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