



***F*FORNOVOGAS** **50**
WE MOVE ENERGY YEARS 

Complete solutions for Gas Compression

INDICE

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STORIA DI FORNOVO GAS

1969 - FORNOVO GAS viene fondata dal Dr. Carlo Bauzone

1985 – **FG** inizia la distribuzione di gas metano con cisterne e carri bombolai

1997 – **FG** viene qualificata da Nuovo Pignone come centro autorizzato di service

2004 – **FG** realizza la propria linea di compressori e soluzioni per gas metano

2019 –

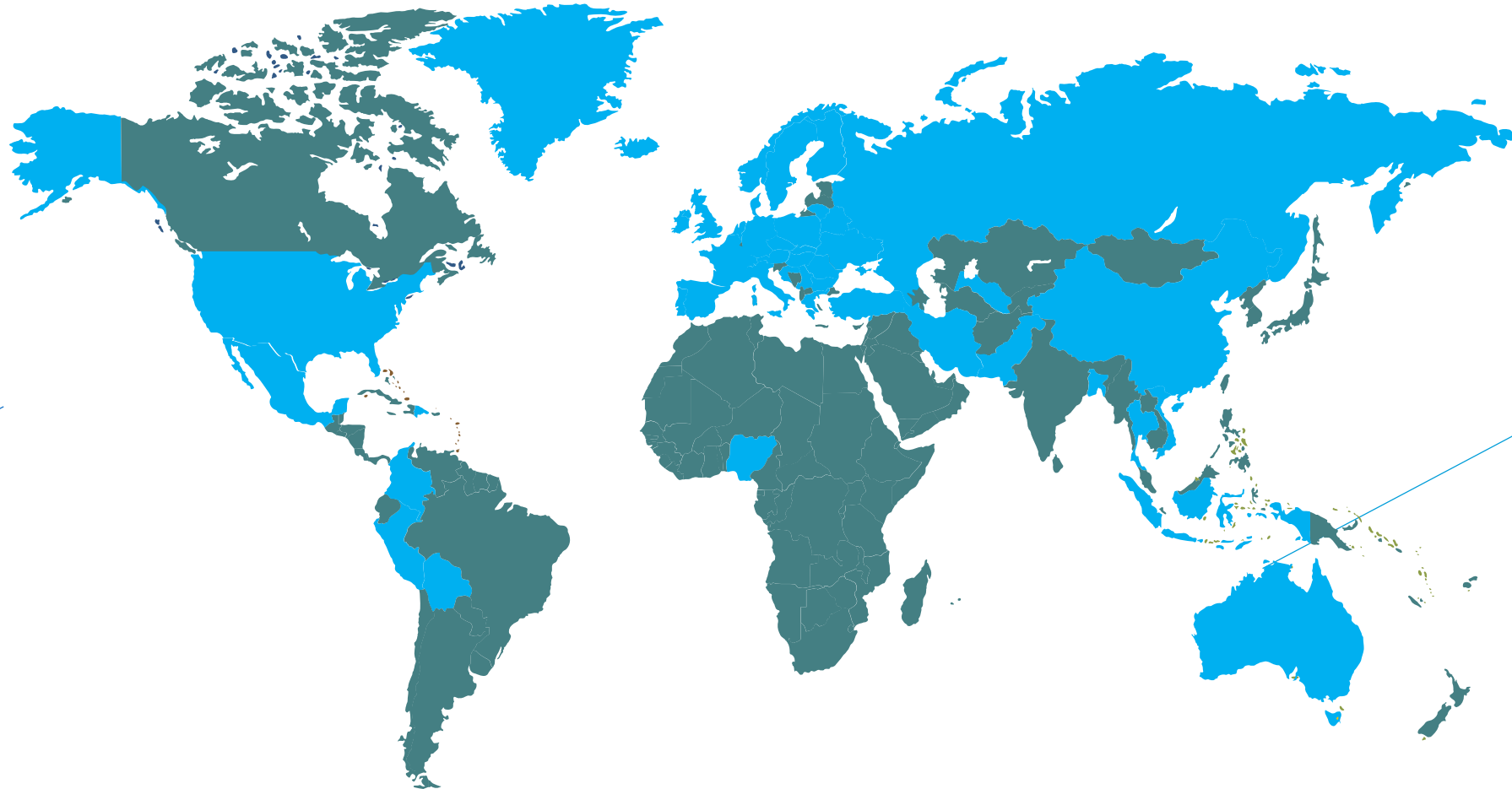
- > 1.300 Compressori installati nel Mondo
- > 85 Employees
- > 30M€ Turnover / Year



WORLDWIDE EXPERIENCE

Più di 1300 compressori installati in tutto il mondo in differenti applicazioni e condizioni climatiche

~4.000.000 Nm³/day compressi



APPLICAZIONI

Biogas – Biometano - LNG



Alimentazione Turbine a Gas Co.Generazione



CNG



Oil & Gas



- Well Head
- Gas Storage
- Flare and Vent gas recovery
- Boil Off Gas

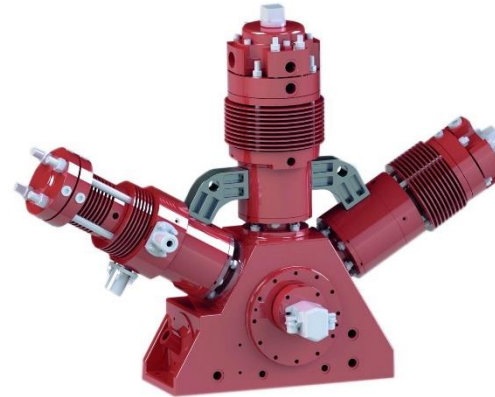
PRODUCT RANGE

SA50



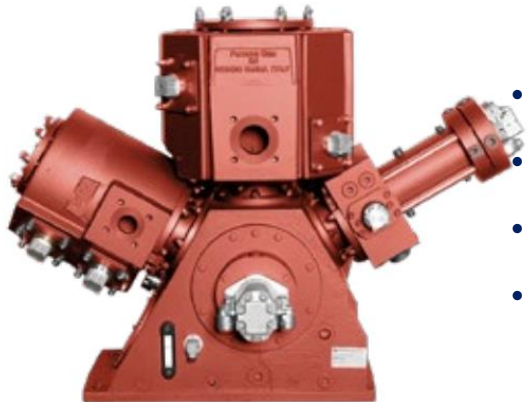
- Power: 2,2 kW
- Inlet P range: 0,1 – 5 bar (g)
- Outlet P range: up to 14 bar (g)

SA200



- Power: 22 - 55 kW
- Inlet P range: 0,1 – 220 bar (g)
- Outlet P range: up to 290 bar (g)
- Flow rate: up to 2.000 Sm³/h

DA300



- Power: 75 - 400 kW
- Inlet P range: 0,1 – 220 bar (g)
- Outlet P range: up to 375 bar (g)
- Flow rate: up to 8.000 Sm³/h

DA500



- Power: 300 - 1000 kW
- Inlet P range: 0,1 – 50 bar (g)
- Outlet P range: up to 275 bar (g)
- Flow rate: up to 20.000 Sm³/h

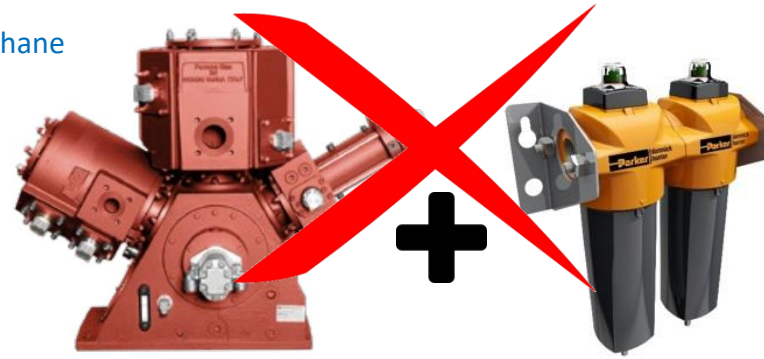
TECNOLOGIE DI COMPRESSIONE

Compressore LUBRIFICATO



- Totalmente **inadatto** ad applicazioni BioMethane
- **Inquinamento** del Biometano con olio
- **Consumo elevato di Olio**
- Tecnologia **Obsoleta**

Compressore NON LUBRIFICATO



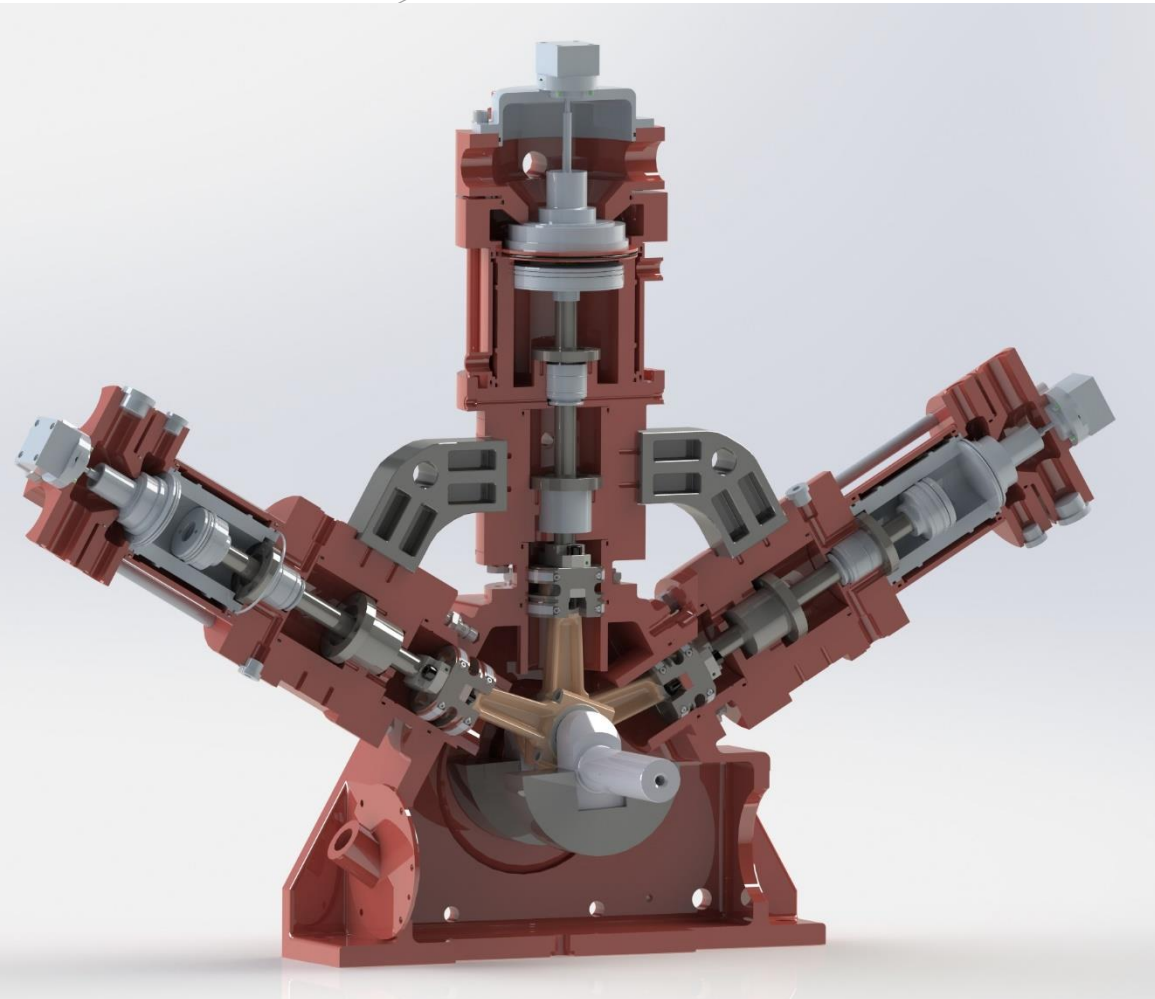
- Scelta **NON IDEALE** per Biomethane
- Necessità di **filtri ridondanti**
- **Manutenzione costante dei filtri**
- **Consumo di Olio** che richiede rabbocco
- Rischio di **contaminazione olio nel gas**

COMPRESSORE OIL FREE

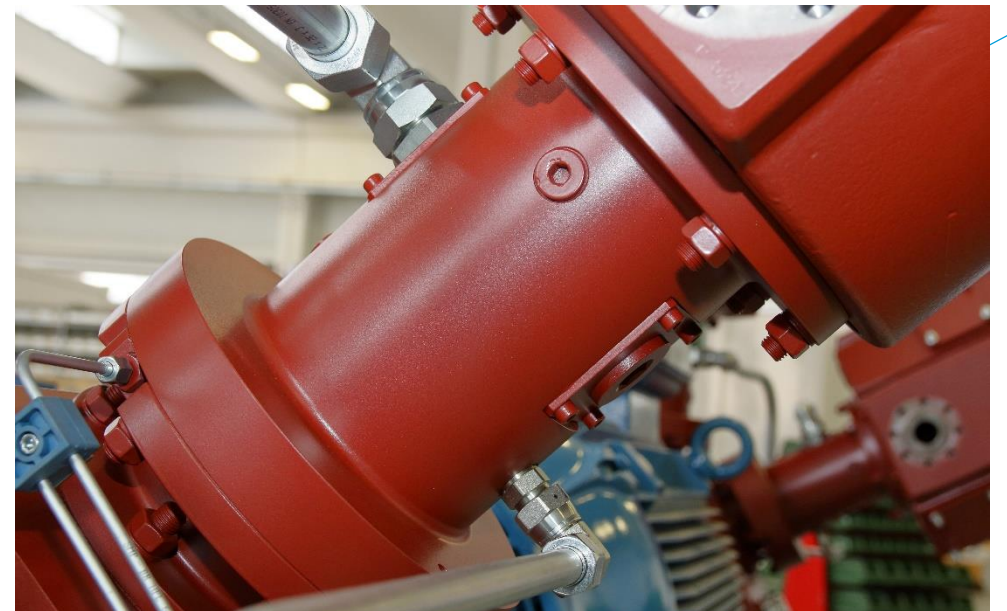


OIL FREE

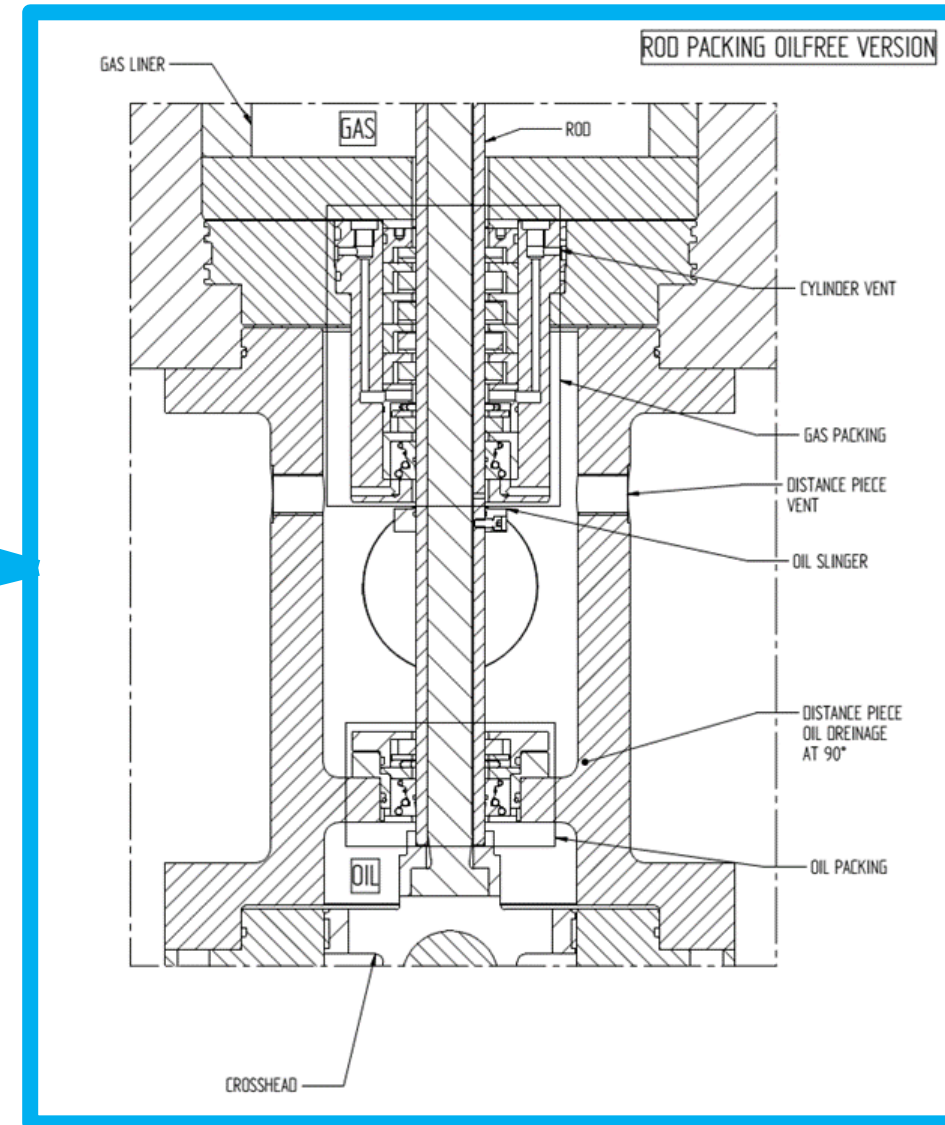
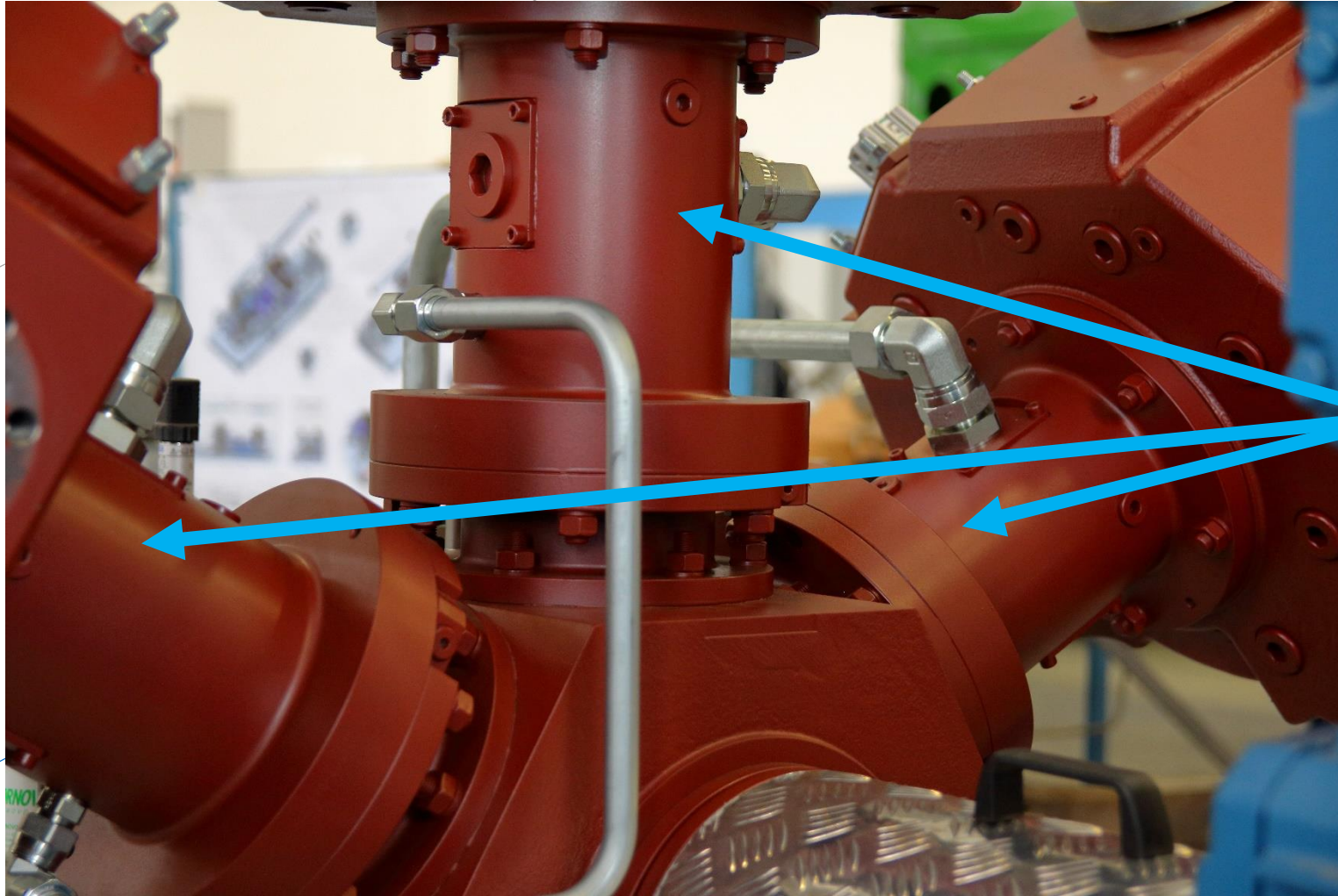
More than 100 installations in Europe



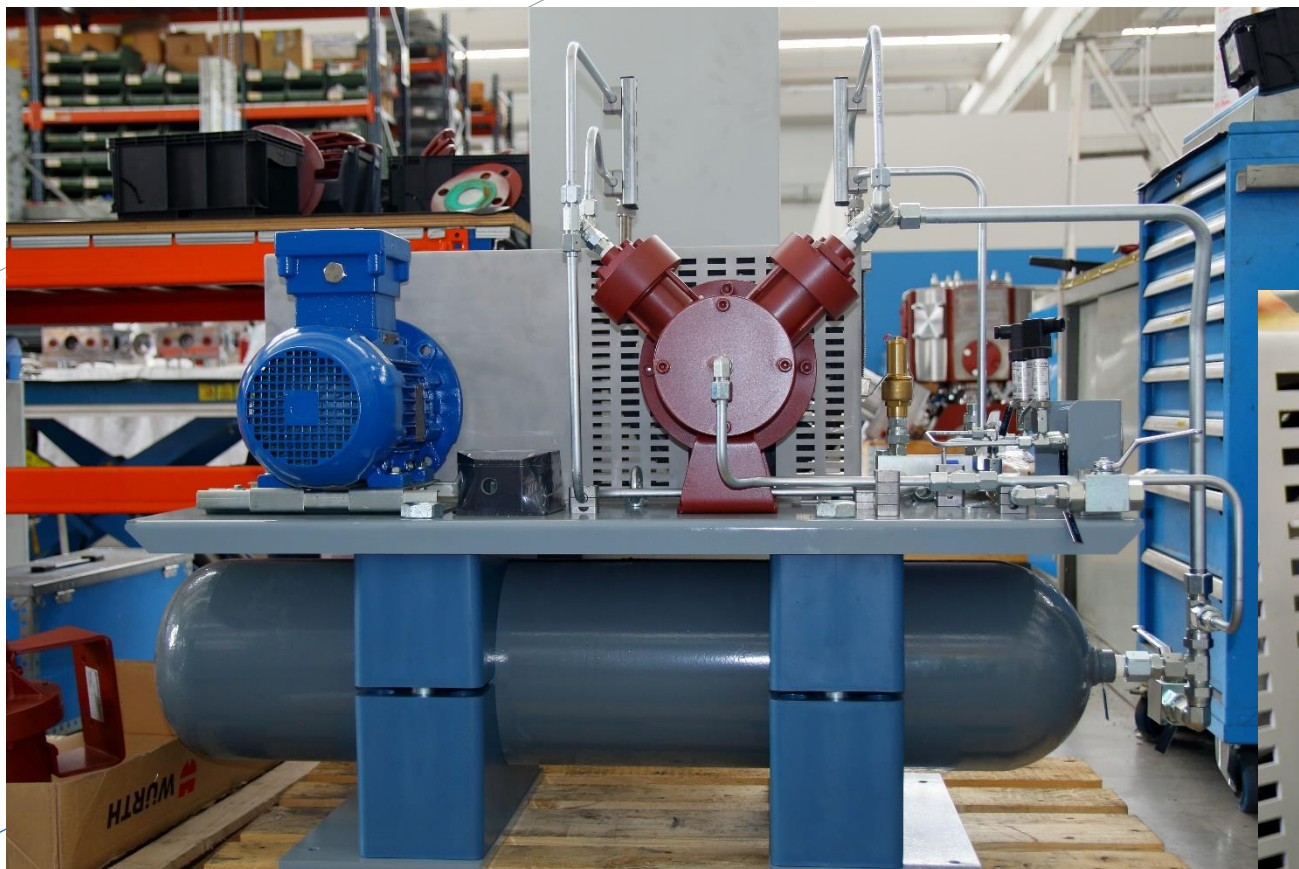
- Distance Piece Type B in accordo alle API 618
- Nessun Filtro necessario a valle del compressore
- Nessun consumo di Olio del compressore
- Nessuna contaminazione del gas compresso
- 0 ppm di olio nel gas



Caratteristiche OIL FREE



GAS RECOVERY System



Zero Emissions

- Recupero del gas in caso di fermo-macchina



SA50

In Italia come in Scandinavia

HMN Naturgas I/S

[Specifiche gara HMN, proprietario rete danese](#)

EU-Supply reference nr.: 209263

HMN
NATURGAS I/S

porting the life expectancy of no less than 20 years of operation. **No oil is allowed in the compressed biomethane and no biomethane is allowed to escape from the compressors except for emergency situations.**

Compressor data sheet - HMN GasNet - May 2018

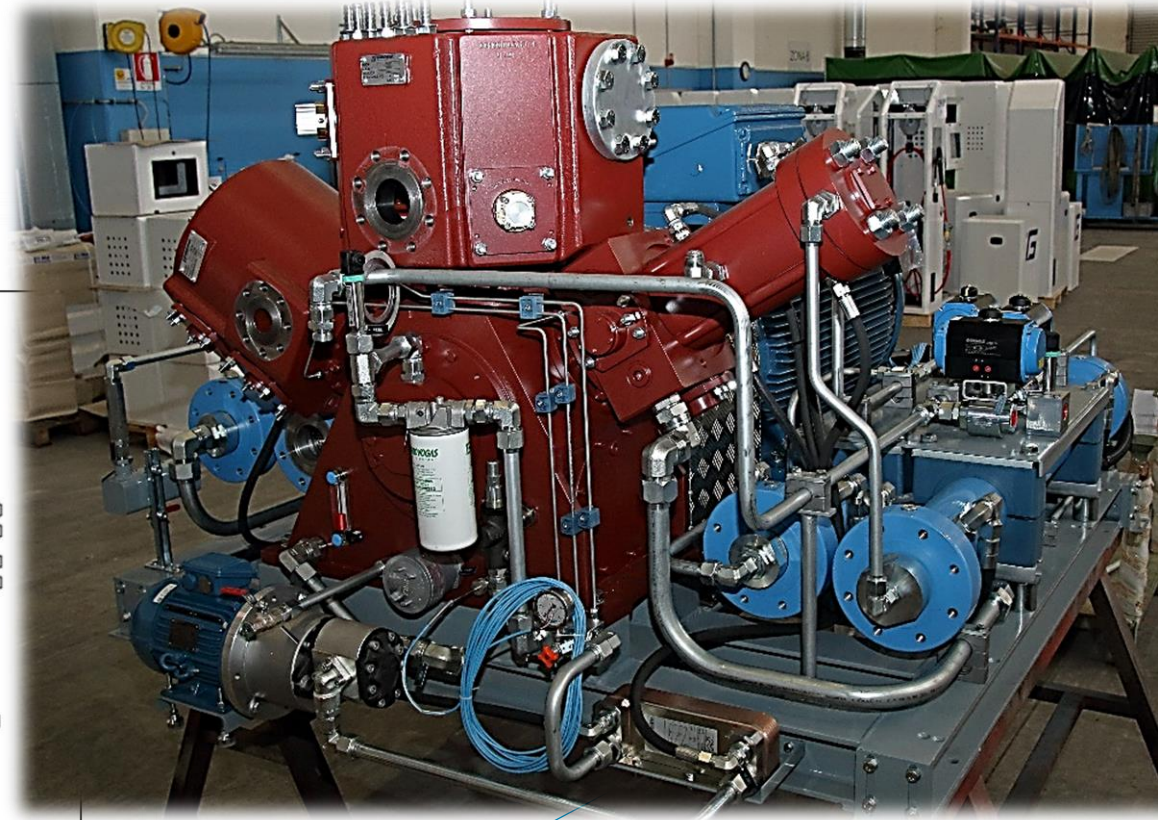
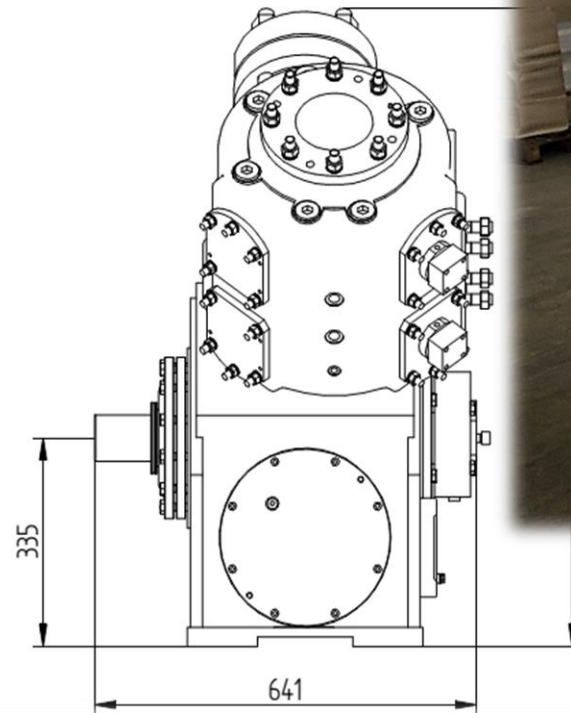
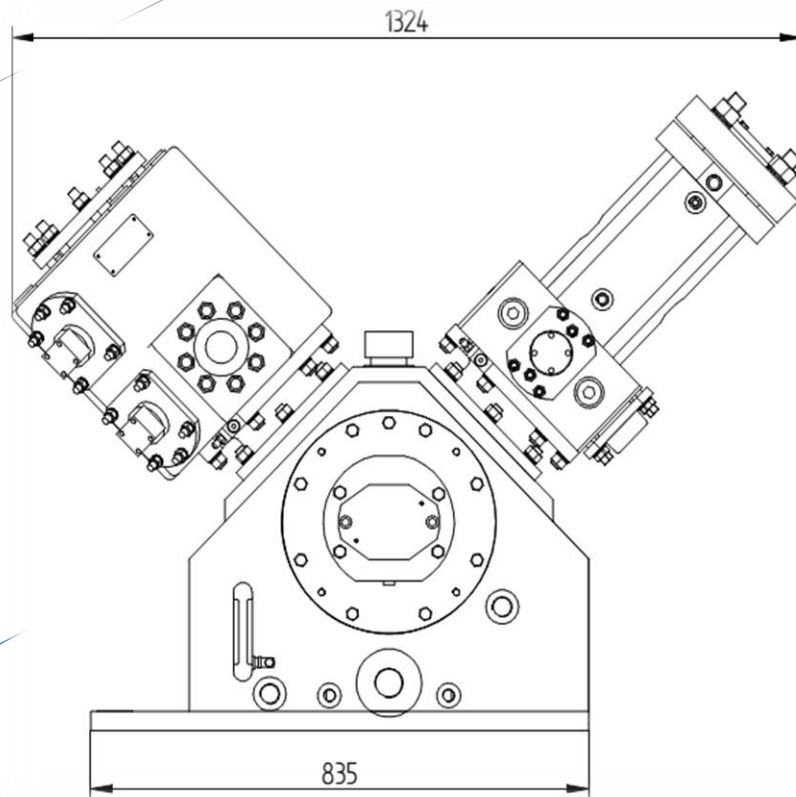
Compressor type	Design flow	Compressor size		
		Compressor size 1	Compressor size 2	Compressor size 3
		Oil free	Oil free	Oil free
	Nm ³ /h	800	1600	2400

[Specifiche UNI/TR 11537 su iniezione Biometano in rete di trasporto e distribuzione](#)

Caratteristica	Simbolo	Valore	Unità di Misura
Idrogeno	H ₂	≤ 0,5	% vol
Fluoro	F	≤ 3	mg/Sm ³
Cloro	Cl	≤ 1	mg/Sm ³
Olio da compressore	-	-	-
Polveri	-	-	-

Quantità di olio accettato = ZERO (0)

Configurazione Standard non lubrificato



APPLICAZIONI NEL BIO-METANO

UPGRADING TYPES

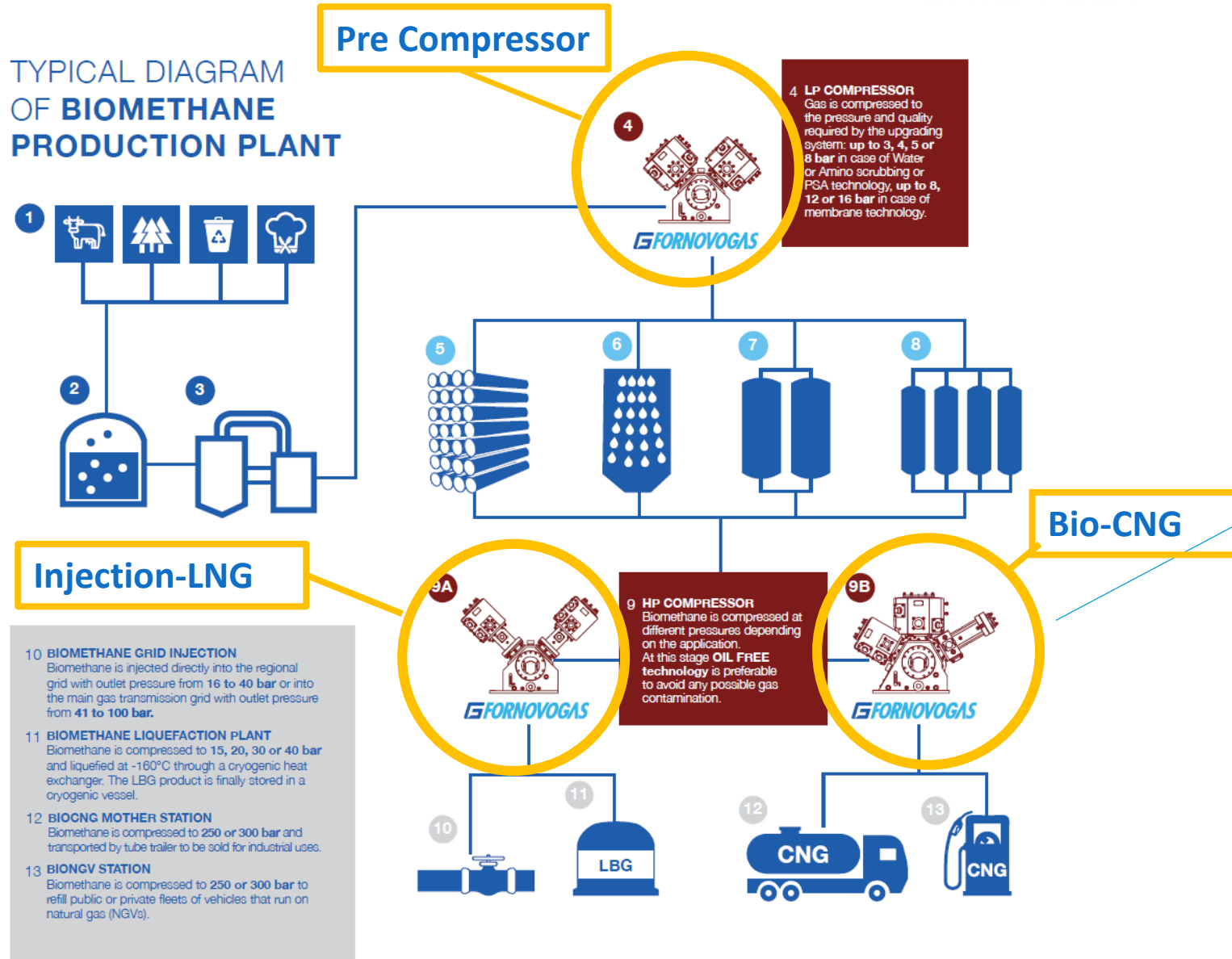
5- by Membranes

6-by Water Scrubbing

7-by Amino Scrubbing

8-by PSA (Pressure Swing Absorption)

TYPICAL DIAGRAM OF BIOMETHANE PRODUCTION PLANT

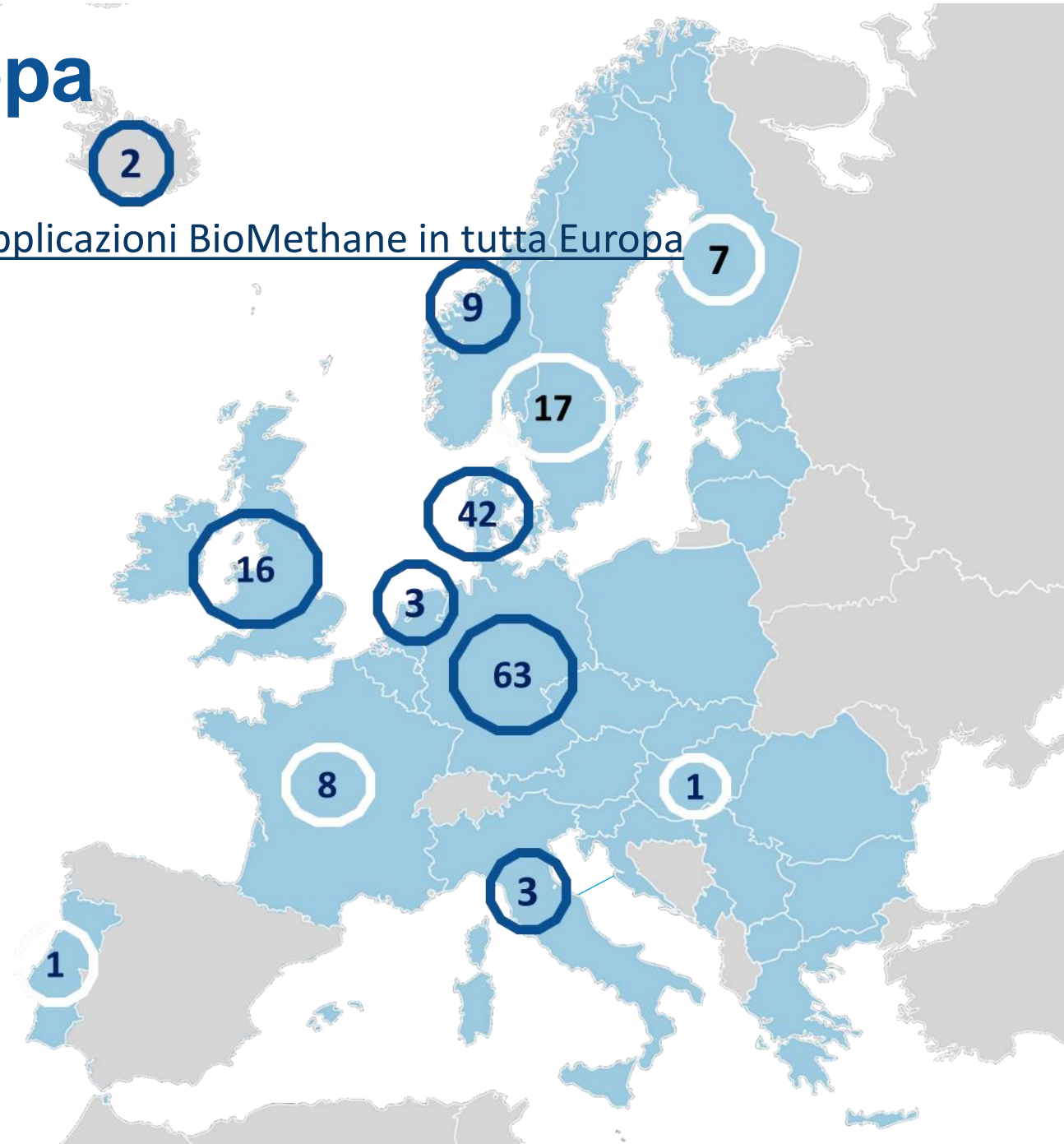


Installazioni in tutta Europa

Più di 172 compressori (October 2019) installati per applicazioni BioMethane in tutta Europa

172 compressors already operational in Biomethane production plant in Europe

27 new compressors to be commissioned in 2020



Installazioni – Gas Injection

Model: 3DA300 Gasvector

Service: Grid Injection

Gas: Bio-Methane

Features:

- 3x50% DA300 OIL FREE
- Flow: 1200 m³/h
- Pin: 12 barg
- Pout: 65 barg
- 53dB(A) @ 1 m ±3dB(A)



CAVIRO Extra (Faenza)

Referenze – Biomethane



GERMANY (63)

FRANCE (8)



DENMARK (42)



SCANDINAVIA (77)

ITALY (3)



UNITED KINGDOM (16)

References WorldWide

AGA

HMN
NATURGAS

avacon

e.on

 **Gas
Networks
Ireland**

**NGF
nature
energy**

Gasum

GRTgaz

ENGIE

THANK YOU FOR YOUR ATTENTION

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