



energy to inspire the world

Cubogas Presentation

Q1 2024



Snam & Cubogas Overview



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Snam Overview

Snam has embarked on a repositioning process towards new businesses linked to energy transition



New businesses for energy transition

Key figures

€24,5 b

RAB + affiliates ('22)

≥€1,13 b

Adj. Net profit '22
(latest guidance)

#1
>37.000 km

Transport

#1
~20 bcm capacity

Storage

Top5
~20 bcm/y capacity²

Regasification

¹ Italy e international associates, pro-quota data
² Includes FSRU online before 2024 (2x5bcm)



Nuovo Pignone technology.
90+ years of experience in the field, with 4.000+ units operating worldwide



International business
with more than 80% of sales abroad and 40+ countries served

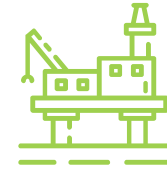
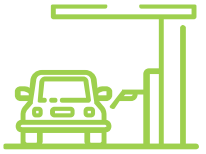


Strong focus on H2 development and, potentially, other gases (e.g. CO2)



Natural gas applications on several industries
ranging from mobility, to biomethane and gas recovery / drainage

• Cubogas main applications



CNG online station (public and private)

CNG stations directly connected to the pipeline

Virtual pipelines

Compressors specifically designed for virtual pipelines

Self-Refill Mobile Station & Trailer (g-MRU/e-MRU)

Mobile refueling unit that can reach end user's sites to refuel vehicles

Biomethane / reverse flow

Biomethane compression following its upgrade from biogas in treatment plant

Gas gathering / drainage solutions

Solutions to recover venting and to drain gases

LNG Boil off recovery

Cubogas package compressing natural gas coming from a LNG storage boil-off and delivering it to the pipeline

Industrial / Oil & Gas

Solutions for applications such as gas recompression in wells, powering turbines, underground storage and many others

Hydrogen

Cubogas technology for storage, distribution and application infrastructure (HRS included)

CO2

Specific solutions for carbon capture, usage and liquefaction

Cubogas: reliability and safety in gas compression



Cubogas applications: A quick overview



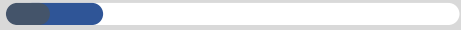
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• Cubogas main products: AVTN & BVTN solutions



A Series

POWER **37 – 110kW**



INLET PRESSURE **0.5 – 100 bar**



CAPACITY **100 – 1900 Sm³/h**



- Available with or without soundproof enclosure
- Available with or without internal storage
- 2, 3 or 4 stages of compression
- Electric motor driven V-belt coupled
- Suitable for CNG applications up to 110 kW
- Touch screen power-control panel
- Integrated blowdown system
- Air-cooling for gas and oil compressor
- frame



1B Series

POWER **Up to 110kW**



INLET PRESSURE **20 – 200 bar**



CAPACITY **545 – 3750 Sm³/h**

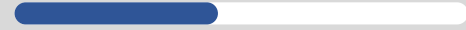


- Available with or without soundproof enclosure
- 1 or 2 stages according to inlet pressure
- Electric motor driven V-belt coupled
- Suitable for CNG applications up to 110 kW
- Integrated blowdown system
- Air cooled
- Water jacket cylinder
- Touch screen power-control panel



2B Series

POWER **Up to 250kW**



INLET PRESSURE **0.5 – 100 bar**



CAPACITY **300 - 4000 Sm³/h**



- Available with or without soundproof enclosure
- Available with or without internal storage
- 2, 3 or 4 stages
- Electric motor driven V-belt or direct couple
- Suitable for CNG applications up to 250 kW
- Air-cooling for gas
- Liquid cooled
- Touch screen power-control panel



4B Series

POWER **20 – 600kW**



INLET PRESSURE **1 – 100 bar**



CAPACITY **600 – 9800 Sm³/h**



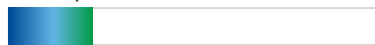
- Available with or without soundproof enclosure
- 2, 3, 4 or 5 stages
- Electric motor driven V-belt, direct couple
- Suitable for CNG applications in range of 200 – 600 kW
- Touch screen power-control panel
- Air or water cooled

Cubogas: some solutions for pipelines and large gas infrastructures

LNG Boil - Off Recovery



Inlet pressure **21 Barg**



Outlet pressure **70 Barg**

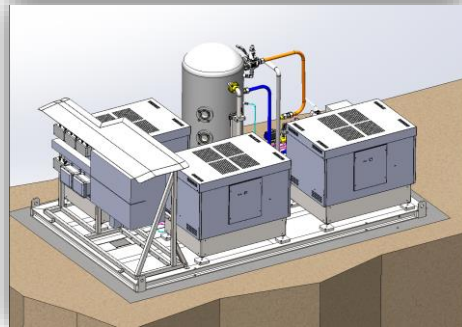


Capacity **3.500 Sm³/h**



On shore regasification terminal

Gas Recovery from Turbocompressors



Inlet pressure **0.02 Barg**



Outlet pressure **72 Barg**

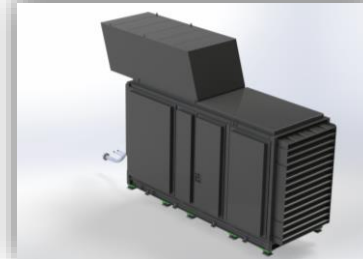
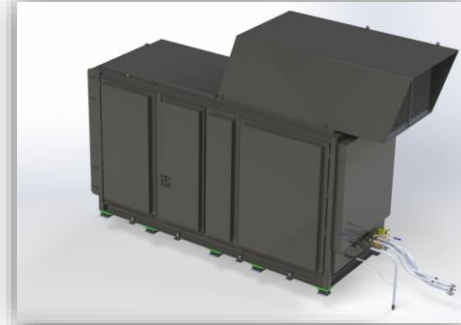


Capacity **42 Sm³/h**



Pipeline compression site

Pipeline Maintenance downstream of the compression center



Inlet pressure (min.) **3 Barg**



Outlet pressure **75 Barg**

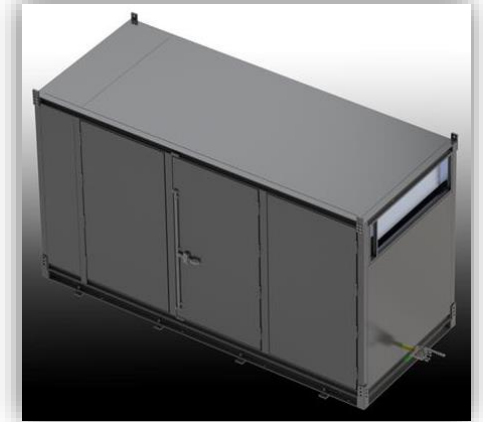


Capacity **14.500 Sm³/h**



Pipeline compression sites

Reverse Flow



Inlet pressure (min.) **3 Barg**



Outlet pressure **70 Barg**



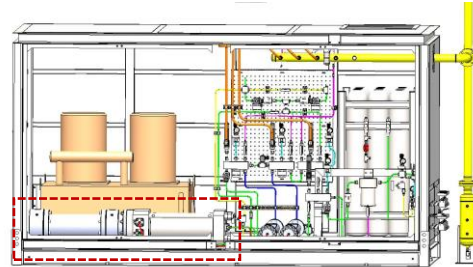
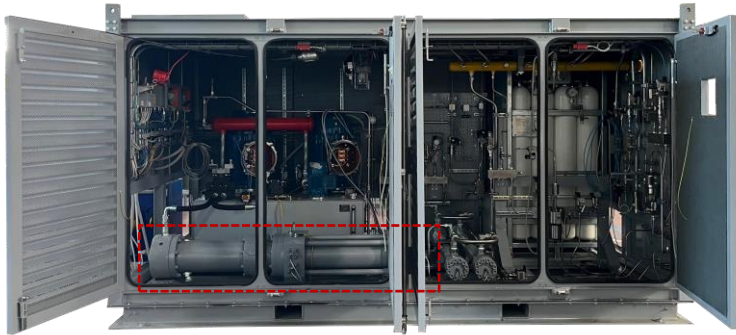
Capacity **500 Sm³/h**



Biomethane plant

Cubogas H2 compression main offering

Booster/BiBooster



Booster

Inlet pressure **300/400 Barg**



Outlet pressure **900 Barg**



Capacity **80 kg/h**



Main technical features

Technology Readiness Level

. Available for Sales



BiBooster

Inlet pressure **25/35 Barg**



Outlet pressure **900 Barg**

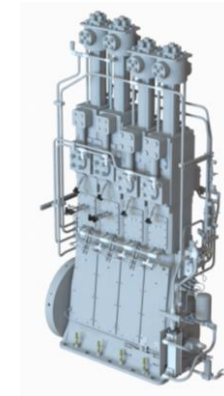


Capacity **30 kg/h**



Design phase

BVTN Vertical Recip



Inlet pressure **25/35 Barg**



Outlet pressure **400 Barg**



Capacity **180 kg/h**



Main technical features

Technology Readiness Level

. Assembled and ready to be tested



Biomethane applications



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Cubogas biomethane main offering

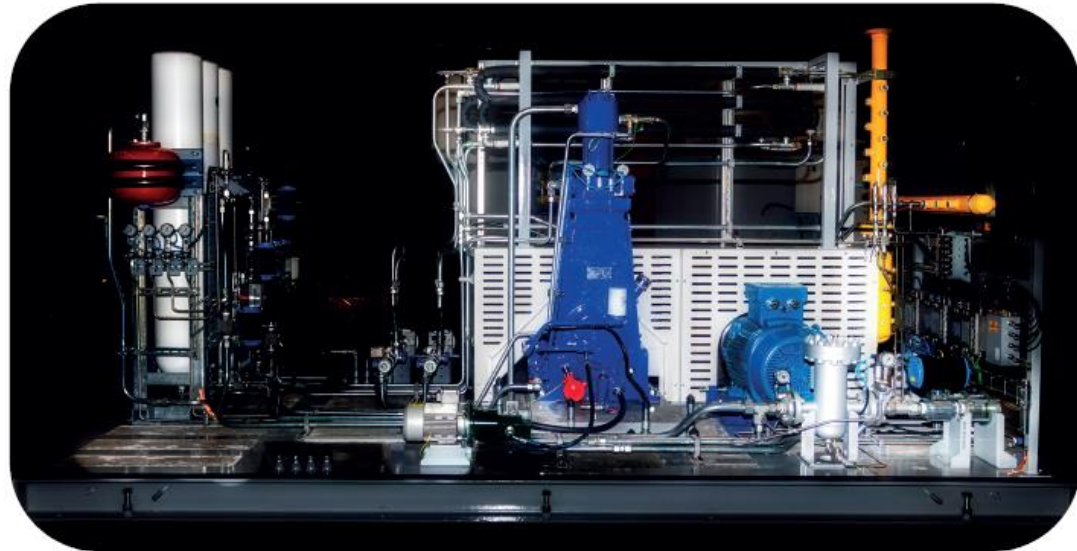
Biomethane Compressors

Recip. Compressors Full Range

Available in different configurations, they can process up to 10.000 scmh

Range of applications:

- **gas injection** in the grid
- **virtual pipelines** and **RNG filling** of vehicles and fleets.
- **nano-liquefaction**: the key component to transform methane into liquid LNG



BMJ internal view - basic configuration

BMJ Range of products main features

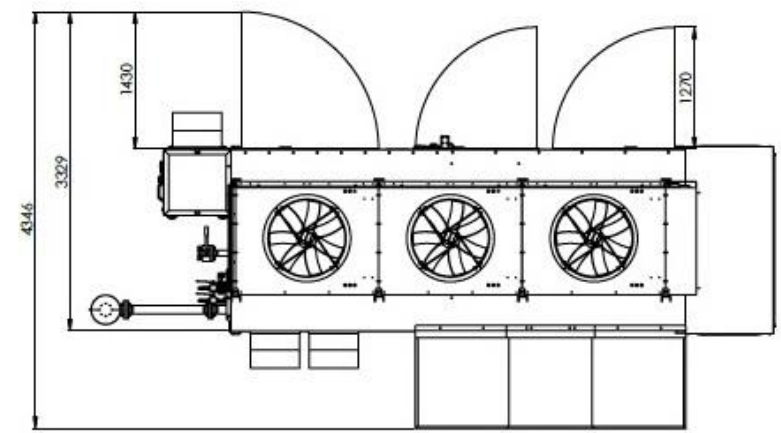
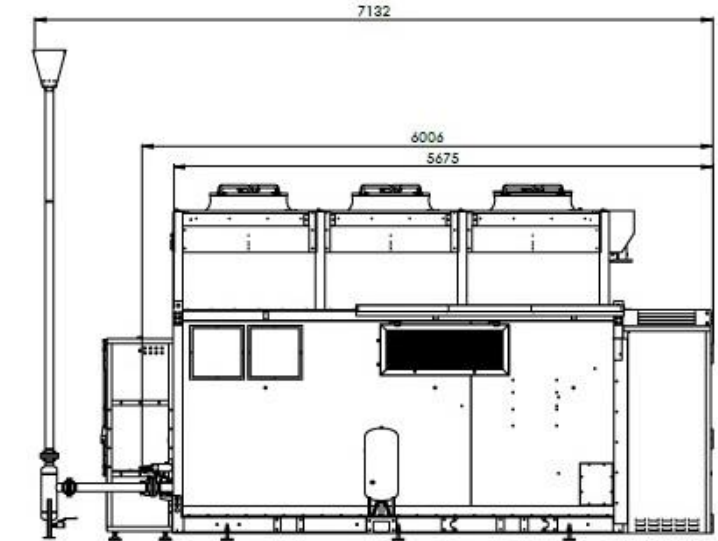
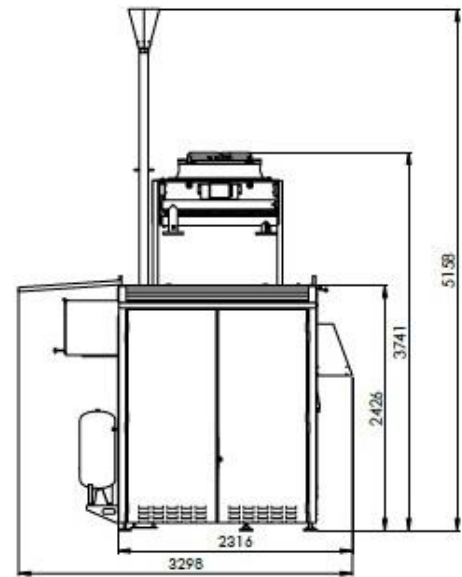
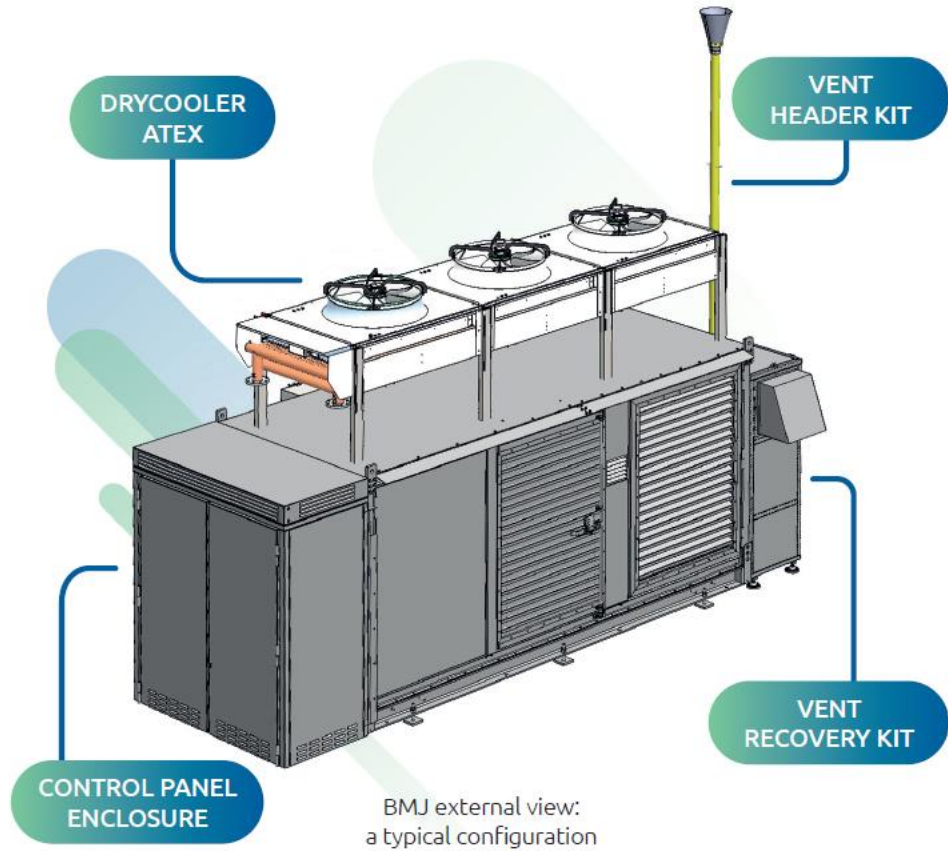
- ✓ **Specifically designed for biomethane injection** up to 1000 scmh
- ✓ **Heavy duty solutions**
- ✓ **Low speed** (always below 800rpm) for maximum reliability
- ✓ **Remote control** for predictive maintenance and quick fix of minor issues
- ✓ Maximum **standardization and modular design** to minimize CAPEX and OPEX

Main optionals and accessories:

- ✓ **2 Oil-Free alternative solutions:**
 - ✓ Specific BVTN technology
 - ✓ API618 distance piece Type 2
- ✓ **Vent recovery system** for gas leakages
- ✓ **Sound-proof** option
- ✓ **Virtual pipeline configuration**
- ✓ **Dual outlet** (gas injection + virtual pipeline) – available for some configurations
- ✓ **Advanced after-sales servicing** (up to 24/7 intervention within 4 hours)

Cubogas biomethane main offering: shape and size

Biomethane Compressors Range





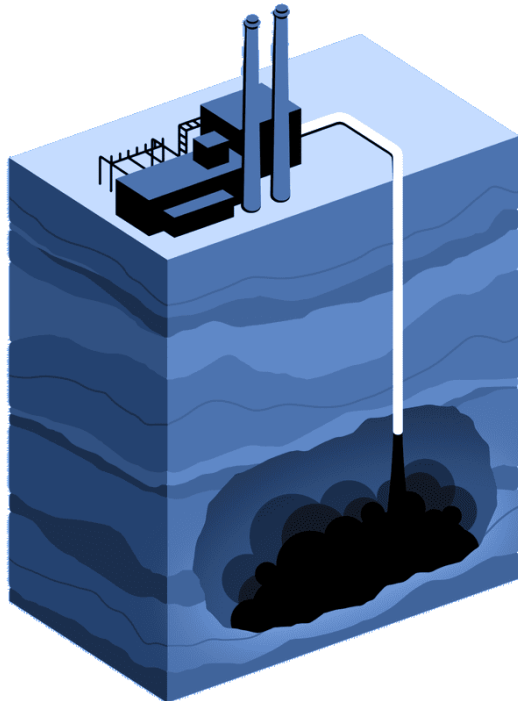
Carbon capture applications



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WHAT DOES IT MEANS “CARBON CAPTURE”?

Carbon capture refers to various techniques that trap the carbon dioxide (CO₂) produced by power plants and other industrial facilities, typically before it can be released into the atmosphere and contribute to **global warming**.



CCS

- Carbon capture and storage (CCS) is a process for trapping carbon dioxide (CO₂) and sequestering it, typically deep underground

CCUS

A related process—carbon capture, utilization, and storage (CCUS)—finds productive uses for the trapped gas.

CCS: CARBON CAPTURE AND STORAGE



APPROXIMATELY **41 ACTIVE PLANTS IN THE WORLD** AND 171 UNDER CONSTRUCTION IN EUROPE



OVER **265** UNDER CONSTRUCTION IN **NORTH AMERICA**

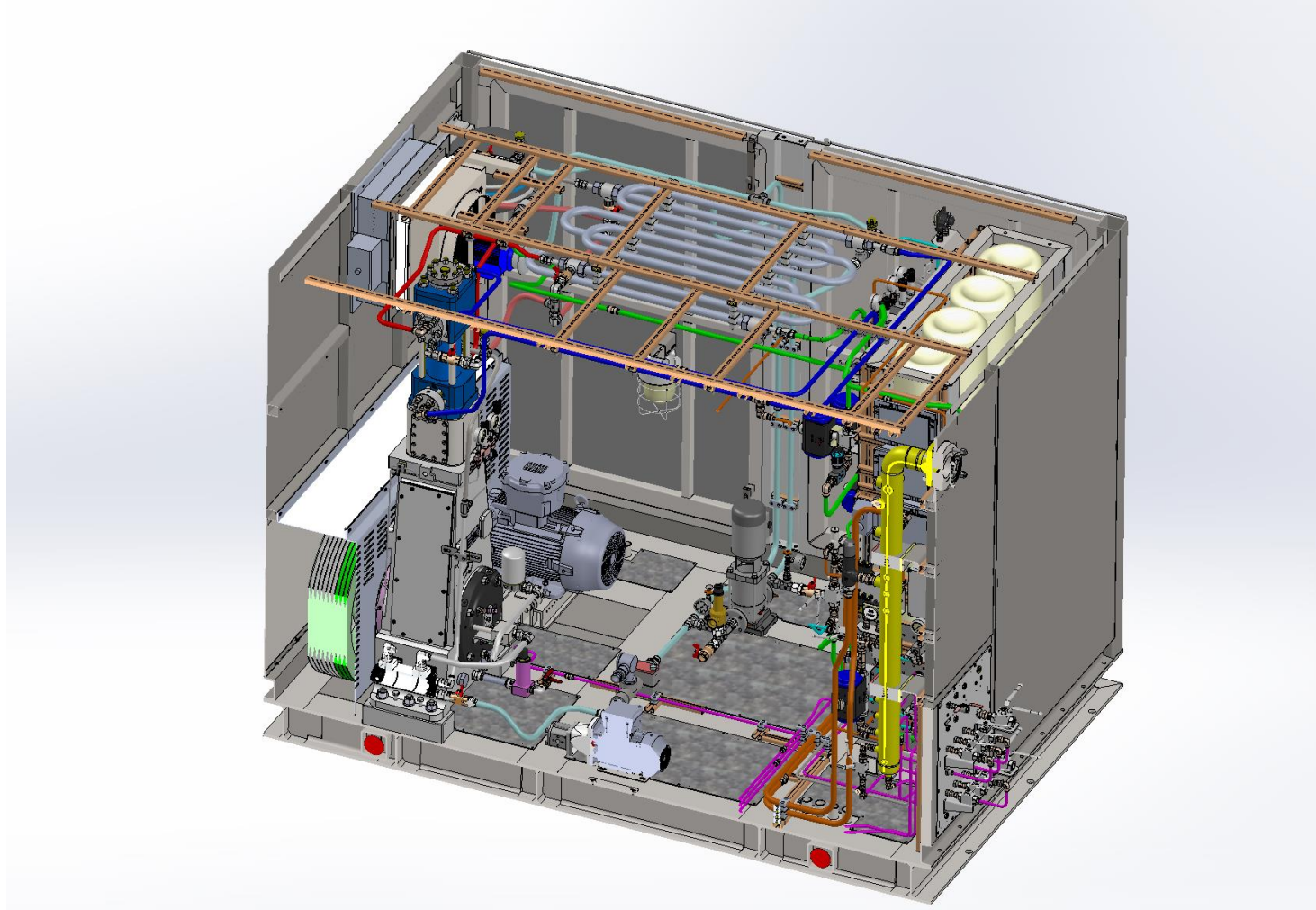


APPROXIMATELY **\$11 BILLION** OF GLOBAL **INVESTMENTS** AS HIGHLIGHTED BY THE Bloomberg NEF “ENERGY TRANSITION INVESTMENT TRENDS” REPORT



“**RAVENNA CCS**” PROJECT JOINT VENTURE SIGNED BY **SNAM** AND **ENI** IN 2022 FOR THE FIRST CO₂ STORAGE PLANT IN THE MEDITERRANEAN AREA

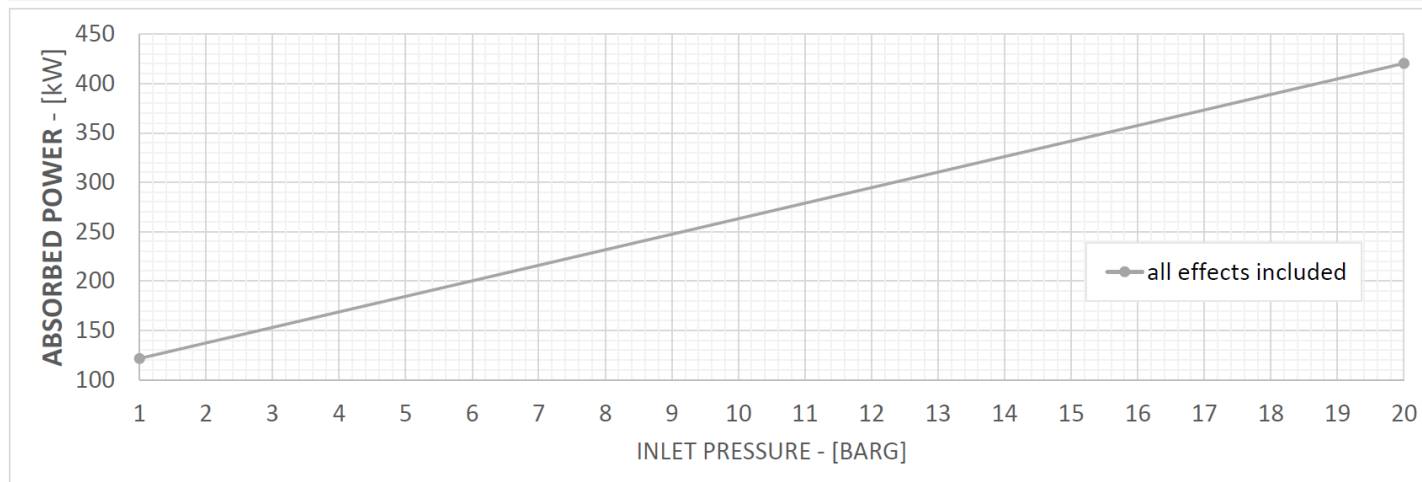
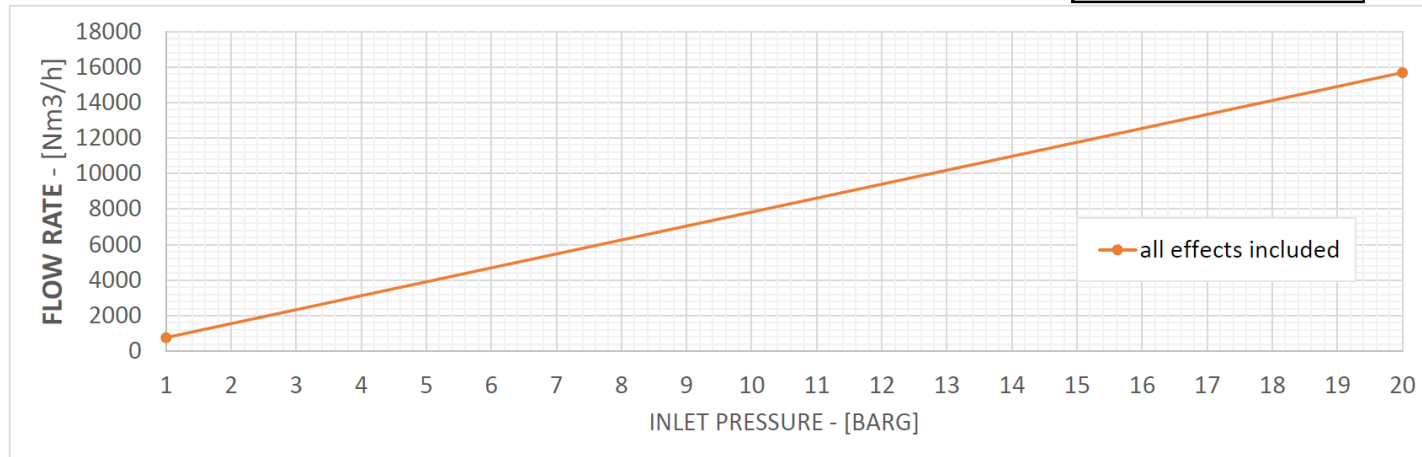
CCS: CARBON CAPTURE AND STORAGE



CUBOGAS CO₂ COMPRESSOR - PERFORMANCES

Functioning curves 4B2_110-110-110-110 : (1/1-1/1-1/2-1/2)

Pout = 30 barg
Tin = 20 °C
Load = 990 RPM



Cubogas: your reliable partner for biomethane injection

After Sales Service

Cubogas is committed to protect your **business continuity** with **remote control**, **maintenance planning**, **B2B Platform** and a wide range of international **after sales services** up to 24/7 leveraging on our **expertise** and **technical assistance network**.



Redundant systems

Strategic spares

Remote Control

24/7 servicing option

**Maintenance
planning &
management**

**International
after-sales
network**



After Sales strategies: a case study (Italy)

Regular maintenance options

- ✓ 1 full set of **consumable at site**
- ✓ **Remote monitoring**
- ✓ Expected **maintenance intervals**:
 - Filters cleaning
 - Oil & consumable substitution
 - General check on the system

Extraordinary maintenance options

- ✓ Arrangement of a set of **strategic spares at site** (bare compressor, motor, valves...)
- ✓ 24/7 availability (remote)
- ✓ Priority intervention at site (within 4 hours from the call)
- ✓ Expected **operativity restore**:
 - Within 12 hours in case the spare is at site
 - Within 72 hours in case the spare is available at Cubogas



Thank you

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