



energy to inspire the world

Cubogas Presentation

ECOMONDO 2023



Snam Overview



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Snam Overview

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



€24,5 b

RAB + affiliates ('22)

≥€1,13 b

Adj. Net profit '22
(latest guidance)



Transport



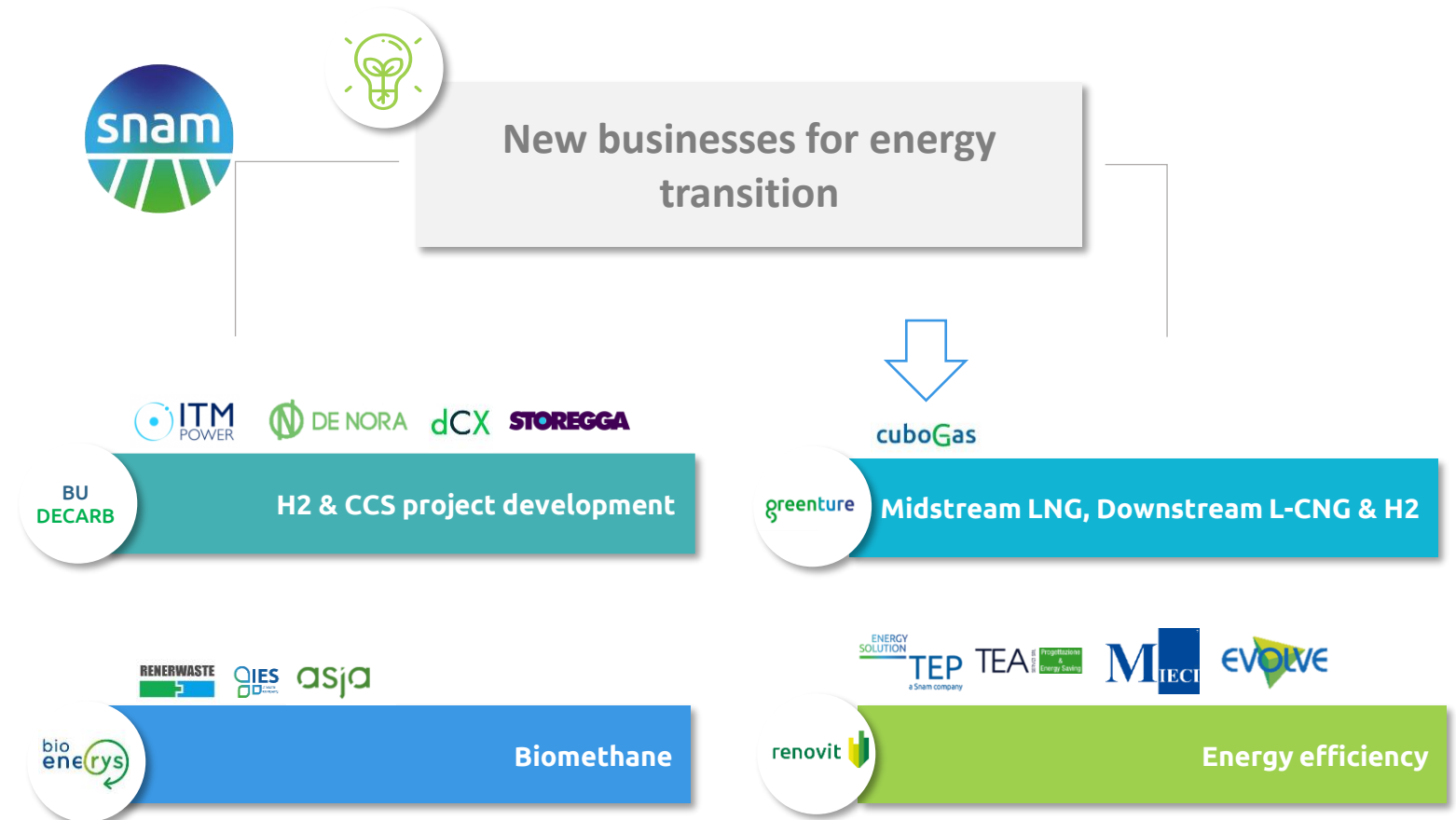
Storage



Regasification

¹ Italy e international associates, pro-quota data

² Includes FSRU online before 2024 (2x5bcm)





Cubogas Overview



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Cubogas is an international leader in compression solutions, within Snam group

Snam, leading infrastructure operator in Europe, supports the development of new businesses fully dedicated to energy transition...



- Target of **+160 L-CNG refueling stations by 2027** (70 already operative)
- Award of **PNRR tender (15M€)** to build **#8 H2 refuelling stations**
- Ambition to handle the **development of SNAM green infrastructure**

...and is strongly committed to H2 economy development



Set up of **domestic ecosystem**

cuboGas



Production of **equipment**

Hyaccelerat^{or}
powered by Snaminnova

R&D of **innovative technologies**



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

cuboGas

Cubogas S.r.l., Greenture subsidiary based in **Cherasco (Piemonte)**, is a global leader in design, development and production of **technological compression solutions** for natural gas, biomethane and hydrogen



90+ years of experience in the field, with **4.000+ units installed** worldwide



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



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



CNG daughter station (public and private)

CNG stations where the NG is delivered to the stations through trailers



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



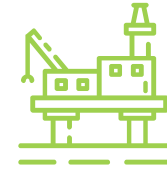
Gas gathering / drainage solutions

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**

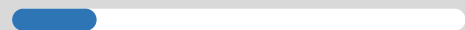


- Available with or without soundproof enclosure
- Available with or without internal storage
- 2, 3 or 4 stages of compression
- Electric motor driven V-belt coupled
- Suitable for CNG applications up to 110 kW
- Touch screen power-control panel
- Integrated blowdown system
- Air-cooling for gas and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

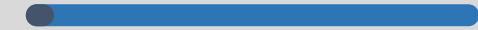


- Available with or without soundproof enclosure
- Available with or without internal storage
- 2, 3 or 4 stages
- Electric motor driven V-belt or direct couple
- Suitable for CNG applications up to 250 kW
- Air-cooling for gas
- Liquid cooled
- Touch screen power-control panel



4B Series

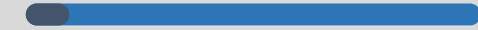
POWER **20 – 600kW**



INLET PRESSURE **1 – 100 bar**



CAPACITY **600 – 9800 Sm³/h**



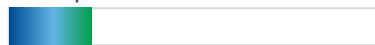
- Available with or without soundproof enclosure
- 2, 3, 4 or 5 stages
- Electric motor driven V-belt, direct couple
- Suitable for CNG applications in range of 200 – 600 kW
- Touch screen power-control panel
- Air or water cooled

Cubogas: some solutions for pipelines and large gas infrastructures

LNG Boil - Off Recovery



Inlet pressure **21 Barg**



Outlet pressure **70 Barg**

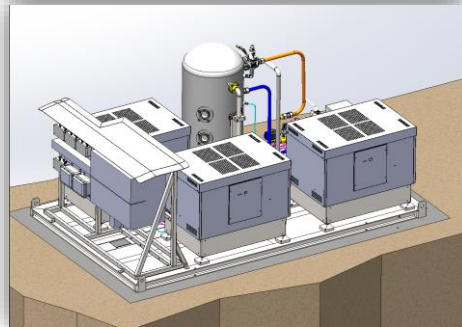


Capacity **3.500 Sm3/h**



On shore regasification terminal

Gas Recovery from Turbocompressors



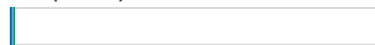
Inlet pressure **0.02 Barg**



Outlet pressure **72 Barg**

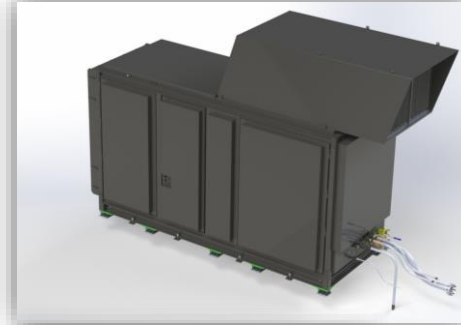


Capacity **42 Sm3/h**

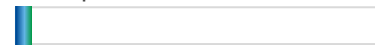


Pipeline compression site

Pipeline Maintenance downstream of the compression center



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



Outlet pressure **75 Barg**

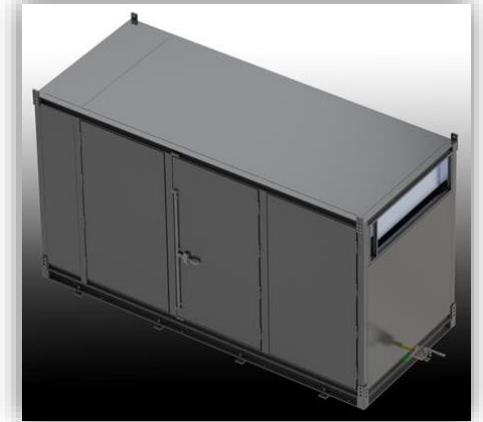


Capacity **14.500 Sm3/h**



Pipeline compression sites

Reverse Flow



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



Outlet pressure **70 Barg**



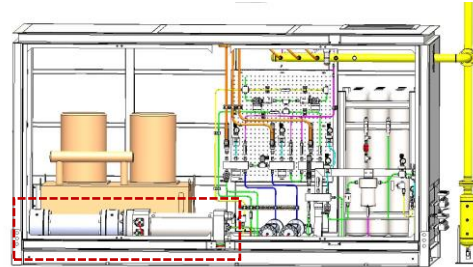
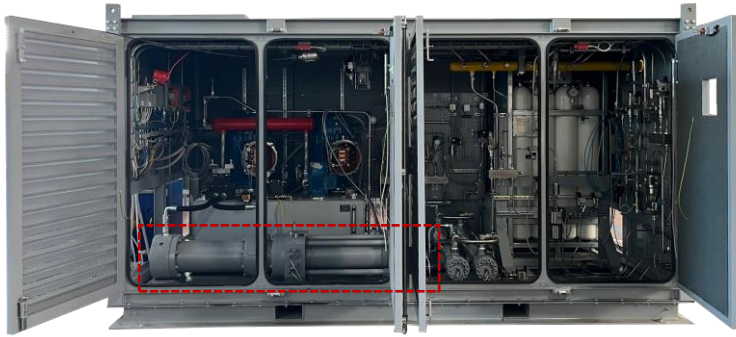
Capacity **500 Sm3/h**



Biomethane plant

Cubogas H2 compression main offering

Booster/BiBooster

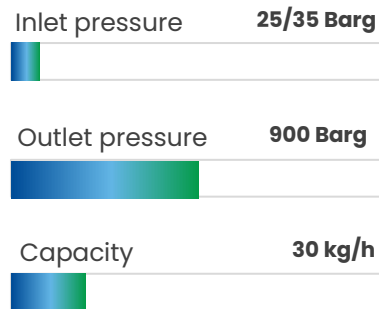
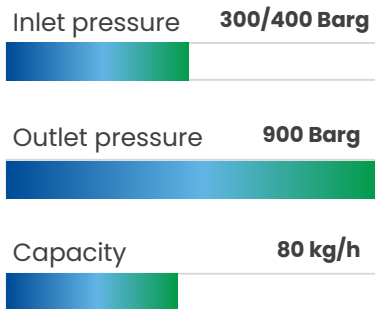


Booster



BiBooster

Main technical features

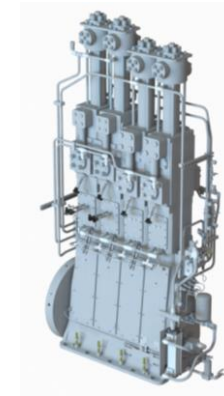


Technology Readiness Level

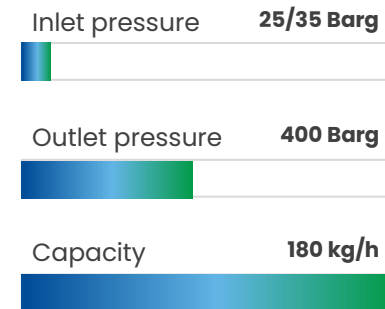
. Available for Sales

Design phase

BVTN Vertical Recip



Main technical features



Technology Readiness Level

. Assembled and ready to be tested



Biomethane applications



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Cubogas biomethane main offering

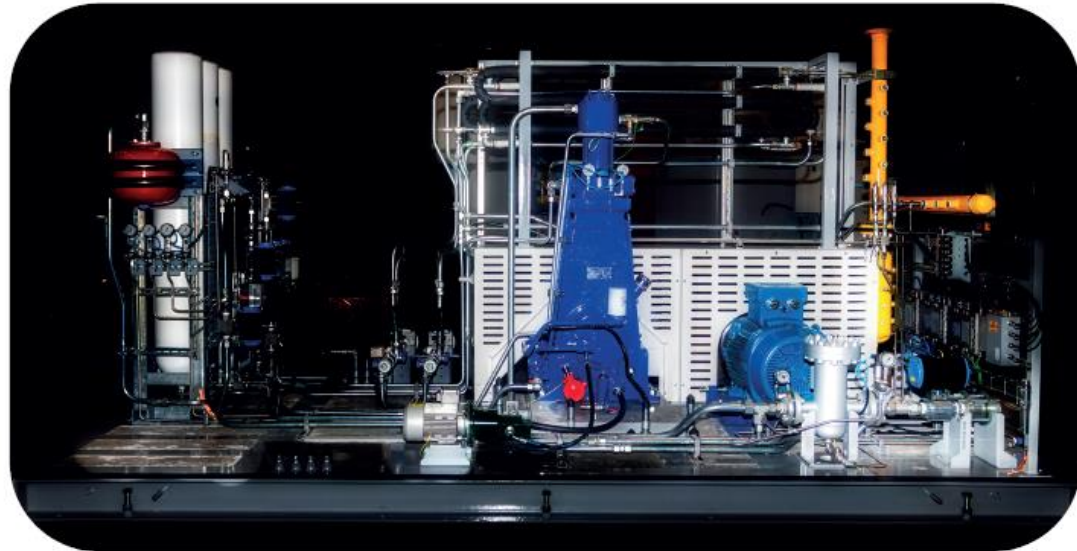
Biomethane Compressors

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

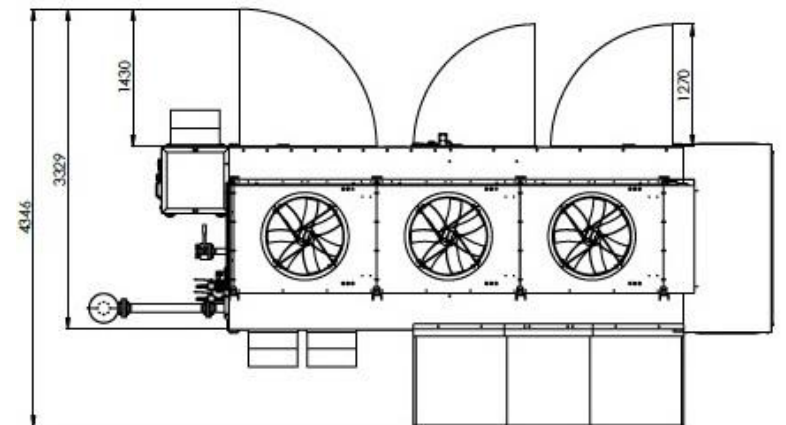
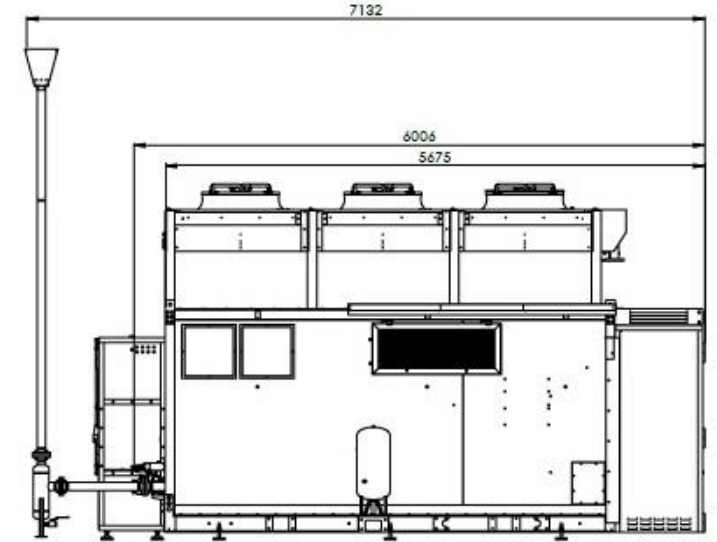
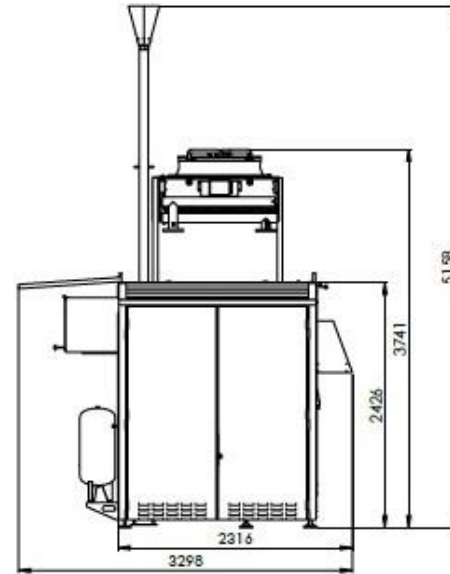
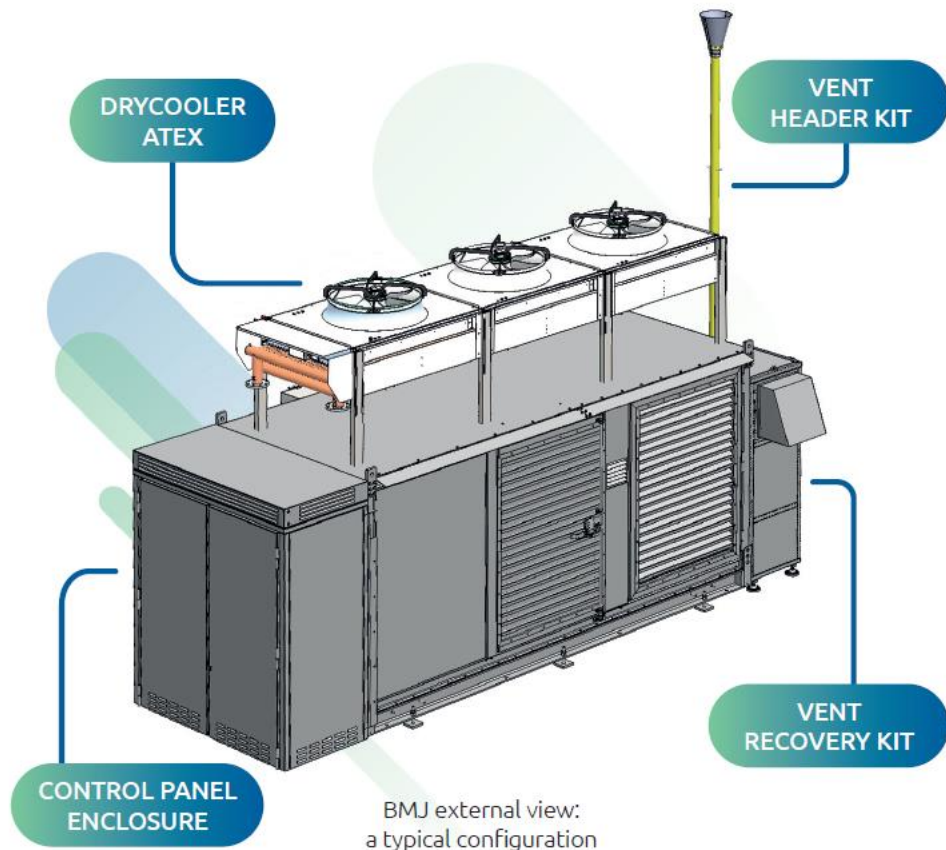
- ✓ **Specifically designed for biomethane injection** up to 1000 scmh
- ✓ **Heavy duty solutions**
- ✓ **Low speed** (always below 800rpm) for maximum reliability
- ✓ Maximum **standardization and modular design** to minimize CAPEX and OPEX
- ✓ **Remote control** for predictive maintenance and quick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

Main optionals and accessories:

- ✓ **2 Oil-Free solutions available:**
 - ✓ Specific filtering
 - ✓ 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



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**.





Thank you