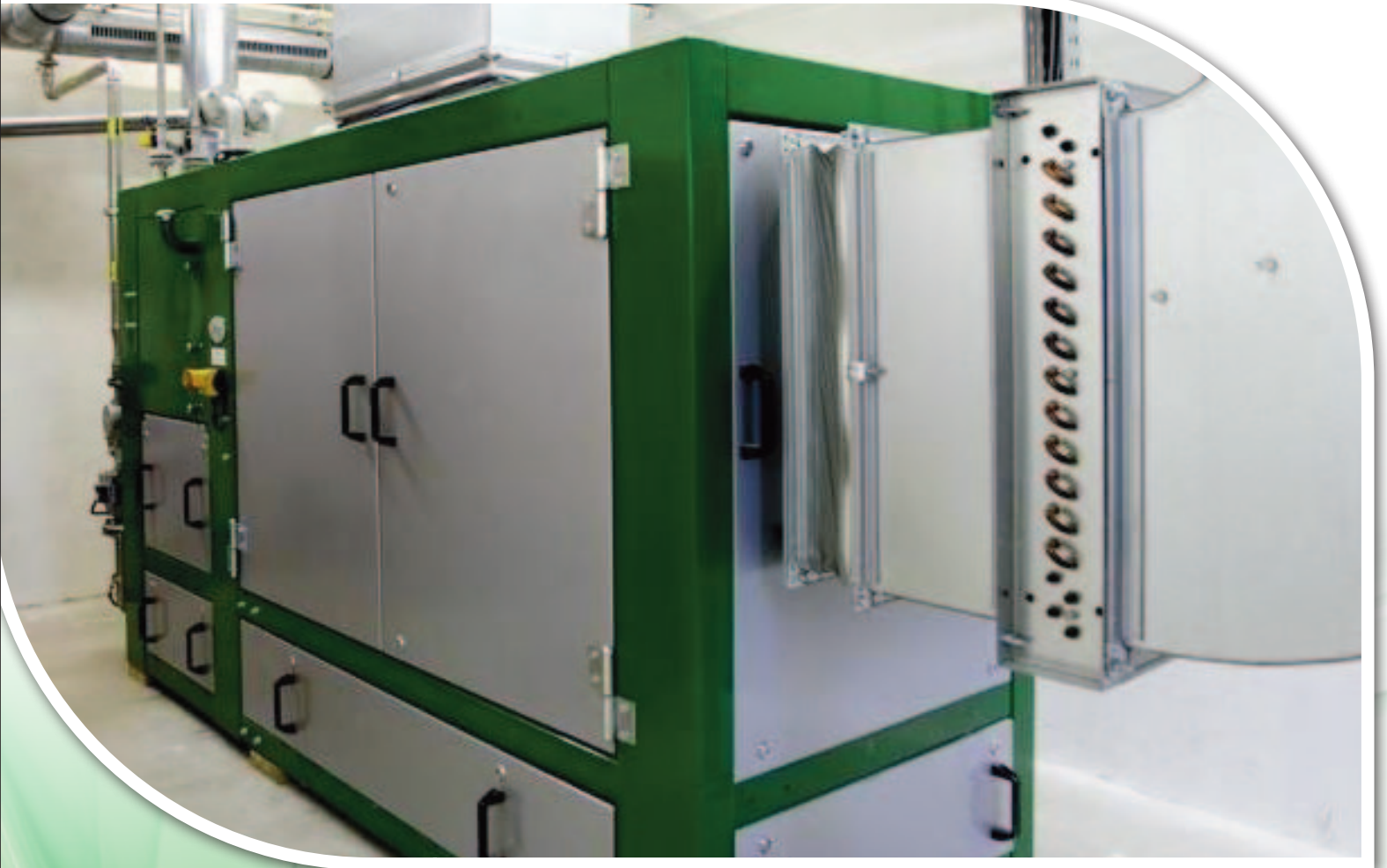




CENERGY®
Advanced Clean Energy Technologies



CHP Modules | 80 kW/h up to 4,000 kW/h

Cogeneration - Energy with Added Value

2G Innovative Technologies

Energy Cost Reduction for Facilities,
Commercial, Manufacturing, & Industrial

 **NATURAL GAS**

BEST IN CLASS NATURAL GAS CHP TECHNOLOGIES

COGENERATION MODULES WITH A HIGHER DEGREE OF EXCELLENCE

2G® Natural Gas CHP and Tri-Generation Modules

Designed, developed, and manufactured for reliable energy conversion.



Genuine “Plug & Play” All-In-One Modules

Connection-ready systems and adequate technology with unmatched functionality.



High Flexibility with Maximum Efficiency

The most advanced Biogas & Specialty Gas Cogeneration Technology available.



A new Generation of Decentralized Energy Generation Technology

Our advanced 2G® Natural Gas energy generation technology “combined heat and power” (CHP), also known as co-and tri-generation solution, is an efficient, clean, and reliable approach to generating power and thermal energy from a single fuel source. By installing a CHP system designed to meet the thermal and electrical base-loads of a facility, cogeneration can greatly increase the overall operational efficiency while decreasing energy costs, and reducing the emission of greenhouse gases.

Our CHP technology is a seamless system integration for a variety of applications easily connected to existing building infrastructures. Natural gas has one of the lowest CO₂ emission values of fossil fuels. With its well-developed supply system (network grid), this natural resource has enormous potential to increase efficiency in the energy sector. Highly profitable energy generation modules from 2G® provide customers independence and significant savings.

2G® Natural Gas CHP systems are composed of advanced and optimized natural gas engines, components, and materials skillfully incorporated into one connection-ready cogeneration module to be more efficient, stronger and longer-lasting than ordinary and conventional CHP designs. Our systems are designed for unsurpassed operation economy. We created the next generation of energy efficient natural gas CHP modules.

2G® CHP technology is an integrated energy system that can be modified depending upon the needs of the energy end user. Onsite electrical power generation provides many advantages, combined with waste-heat recovery for heating, cooling, steam, dehumidification, or other process applications. A compact CHP design with integrated controls-and switchgear, thermal energy distribution system, and advanced enclosure options.

❑ CHP Cogeneration

For a wide range of commercial and industrial applications

❑ CHPC & Tri-Generation

Utilizing Thermal Energy for Heating & Cooling

Natural Gas Product Line

2G[®] provides efficient Energy Conversion Technology in various system configurations sized between 80kWh and 4,000kWh. Larger cogeneration modules are available upon special request. We manufacture a diverse product portfolio suitable for a wide range of conditions and uses - from small Natural Gas CHP's, to large Energy Conversion Systems for complex applications. Explore our product line to find out how 2G[®] leads the industry with the most innovative and technologically advanced Cogeneration Systems.

Model	Configuration	Electrical Capacity	Thermal Capacity	Frequency	Voltage	BTU/ekW
2G <i>patruus</i> [®] 80 NG	Base Module or Container	80kW/h 100kVA	130kW	60Hz 50Hz	480V 400V	9,808
2G <i>patruus</i> [®] 100 NG	Base Module or Container	100kW/h 125kVA	154kW	60Hz 50Hz	480V 400V	9,120
2G <i>patruus</i> [®] 160 NG	Base Module or Container	160kW/h 200kVA	248kW	60Hz 50Hz	480V 400V	8,906
2G <i>patruus</i> [®] 200 NG	Base Module or Container	200kW/h 250kVA	296kW	60Hz 50Hz	480V 400V	9,405
2G <i>patruus</i> [®] 265 NG	Base Module or Container	265kW/h 331kVA	416kW	60Hz 50Hz	480V 400V	9,227
2G <i>patruus</i> [®] 280 NG	Base Module or Container	280kW/h 350kVA	403kW	60Hz 50Hz	480V 400V	8,957
2G <i>patruus</i> [®] 380 NG	Base Module or Container	380kW/h 475kVA	538kW	60Hz 50Hz	480V 400V	8,700
2G <i>patruus</i> [®] 400 NG	Base Module or Container	400kW/h 500kVA	567kW	60Hz 50Hz	480V 400V	9,020
2G <i>agenitor</i> [®] 206 NG*	Base Module or Container	220kW/h 275kVA	244kW	60Hz* 50Hz	480V 400V	8,550
2G <i>agenitor</i> [®] 306 NG*	Base Module or Container	250kW/h 312kVA	313kW	60Hz* 50Hz	480V 400V	8,360
2G <i>agenitor</i> [®] 312 NG*	Base Module or Container	450kW/h 562kVA	626kW	60Hz* 50Hz	480V 400V	8,233
2G <i>twin-pack</i> [®] 500 NG* with <i>agenitor</i> [®]	Container Module	500kW/h 625kVA	546kW	60Hz* 50Hz	480V 400V	8,360
2G <i>twin-pack</i> [®] 530 NG	with <i>patruus</i> [®] Container Module	530kW/h 662kVA	832kW	60Hz 50Hz	480V 400V	9,227
2G <i>avus</i> [®] 540 NG	Base Module or Container	540kW/h 675kVA	667kW	60Hz 50Hz	480V 400V	9,131
2G <i>avus</i> [®] 600 NG	Base Module or Container	600kW/h 750kVA	736kW	60Hz 50Hz	480V 400V	8,291
2G <i>avus</i> [®] 800 NG	Base Module or Container	800kW/h 1000kVA	969kW	60Hz 50Hz	480V 400V	8,226
2G <i>avus</i> [®] 1060 NG	Base Module or Container	1059kW/h 1324kVA	1332kW	60Hz 50Hz	480V 400V	8,739
2G <i>avus</i> [®] 1200 NG	Base Module or Container	1200kW/h 1500kVA	1308kW	60Hz 50Hz	480V 400V	7,728
2G <i>avus</i> [®] 1426 NG	Base Module or Container	1426kW/h 1782kVA	1533kW	60Hz 50Hz	480V 400V	8,770
2G <i>avus</i> [®] 1550 NG	Base Module or Container	1550kW/h 1938kVA	1778kW	60Hz 50Hz	480V 400V	8,002
2G <i>avus</i> [®] 2000 NG	Base Module or Container	2000kW/h 2500kVA	2276kW	60Hz 50Hz	480V 400V	7,903
2G <i>avus</i> [®] 2390 NG	Base Module or Container	2390kW/h 2988kVA	2449kW	60Hz 50Hz	480V 400V	8,281
2G <i>avus</i> [®] 3000 NG	Base Module or Container	3000kW/h 3750kVA	3062kW	60Hz 50Hz	480V 400V	8,331

**agenitor*[®] in 60Hz / 1800rpm / 480V configuration only available upon special request and prior approval.



filiUS[®] - series



patruus[®] - series



agenitor[®] - series



avus[®] - series

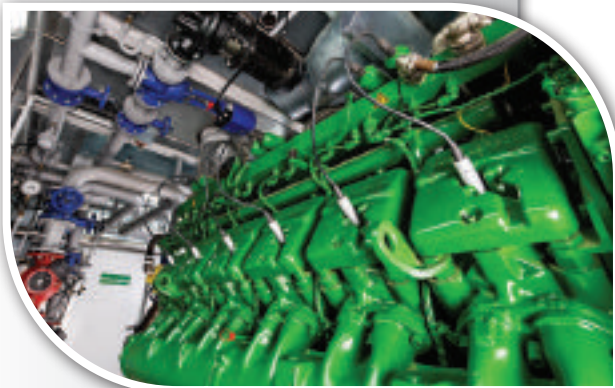
NATURAL GAS CO- AND TRI-GENERATION CHP SYSTEMS - TECHNICALLY SUPERIOR BY DESIGN

Comprehensive Standard Scope of Supply

- Advanced & Solid Frame Structure
- High Efficiency Baseload Engine
- Extra Large Oil Capacity Sump
- Auto Makeup Lubrication System
- Double-Bearing Synchronous Generator
- Pre-Pressure Regulation Options
- Gas Train & Fuel System
- Advanced Two-Stage Fuel/Air Mixer
- Micro Process Digital Electronic Ignition
- Heat Value Fluctuation Detection
- Multi Level Heat Extraction System
- Thermal Circulation System with Pumps
- Thermo Hydronic System w. Exp. Tank
- Heat Exchanger (Jacket & Exhaust)
- Exhaust System / Silencer
- Ultra Low Emissions Capability
- Thermal Heat Extraction & Pumps
- Super Silent Advanced Cooling System
- General Digital Control System
- Utility Grade Switchgear
- Protection Devices & Relays
- Electronically operated Circuit Breaker
- On-Line Remote Control & Monitoring
- Comprehensive Factory Testing
- Manufactured, tested, and certified in Accordance with CSA, UL, NEMA, IEEE, and all applicable US Standards

Driven By Excellence

Patented Technology, Best in Class Service



Advanced Technology “Best in Class”

Thermodynamically optimized engines with 2G-Drive® technology are ideal for natural gas CHP installations. The technology behind 2G® energy conversion systems and their controls makes them highly reliable, offering superior efficiency combined with a wide variety of unmatched advantages. The added benefits of 2G® CHP modules over conventional products, or any other competitor offering a similar size range, include a much higher level of quality, durability, practicability, cost-effectiveness, efficiency, and lower maintenance cost. The overall design of 2G® CHP modules, with its trademark compact structure, is developed to convert gaseous fuels more efficiently into usable energy, much more reliable than other so-called gensets or expensive and uneconomical ultra-low-efficient micro turbines.

2G®'s unique design allows it to generate higher revenues for the owner & operator, at the same time providing much higher reliability than other CHP systems of its size. 2G® cogeneration modules and smart system controls are acknowledged as the most advanced in the industry - best designed and fully optimized for efficiency and above all, long-term durability..



❑ Designed and made for Cogeneration

Reliable – Tens of Millions of documented Run & Operating Hours
...and counting

❑ Detecting Energy Densities and Heat Value

Automatically adjusts to changing Energy Densities

❑ Ultra-Low Emissions Capability

Up to 90% lower Emissions can be reached

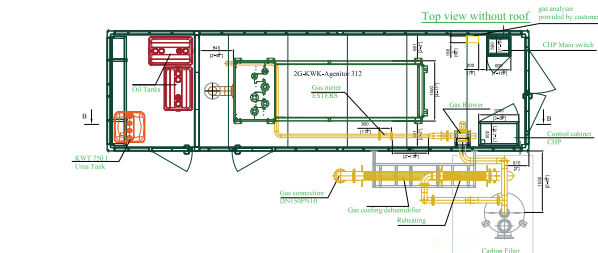
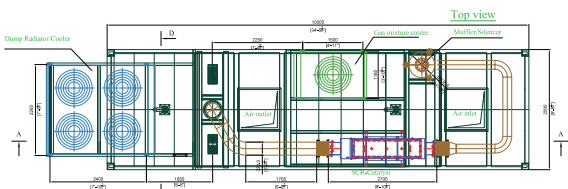
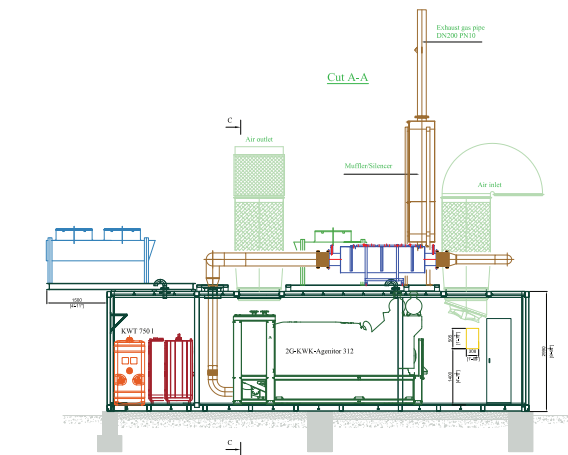
The profitability of decentralized power plants is directly related to the CHP energy conversion system installed. If the natural gas cogeneration system isn't performing well, or is inefficient and consumes too much fuel, even with best intentions the owner would not achieve the ROI he could reach with the most adequate CHP technology applied.

Genuine “Plug & Play” Natural Gas CHP Solution

2G[®] advanced Container Modules are designed for easy operation, to minimize floor space, and to contain the entire CHP cogeneration plant in one unit “all-in-one”. Due to a compact layout with integrated control-and switchgear equipment, as well as a ventilated noise protection enclosure, these modules can be placed anywhere, even in residential areas. A smart and economical alternative to traditional inside installations; highly efficient and much more cost-effective.

Your Benefits

- Reduced Cost and decreased Lead Time
- Reliability & Proven Top Performance
- All-In-One & Factory Tested
- Less technical Risk and more economical
- Versatile, flexible, and scalable
- Unrestrained Mobility



Containerized Modular Systems from 2G[®] are guaranteed less expensive than a traditional inside building installation

Containerized CHP modules provide many advantages. All heat exchanger and heat recovery systems are fully integrated. Heat circulation piping and distribution are an integral part of our containerized solutions. Insulated piping, pre-plumbing, all connection-ready.

The floor plan allows for easy access to all system components, comfortable movement, and efficient service & maintenance. 2G[®] modules are especially built and designed for purpose, not just modified shipping containers. Standard connections and terminations are used throughout to minimize the installation and connection effort. Units are designed for fast integration and easy operation. Instal time is typically 2 days.

Our modules are very convenient for service personnel with multiple access doors and unobstructed movement inside. Designed to perfection, with attention to detail, unmatched by any alternative.

BEST IN CLASS NATURAL GAS CHP TECHNOLOGIES

COGENERATION MODULES WITH A HIGHER DEGREE OF EXCELLENCE

2G[®] Natural Gas CHP The best Solution available

Skillfully incorporated into one Connection-ready Cogeneration Module.



Advanced Architecture Quality you can trust

Multi-Module Operation, fully synchronized and optimized for maximum Efficiency.



Unique Features & The Most Intelligent Control System

Fully integrated Controls with proprietary and innovative Electronic Management.



A New Generation of Renewable Energy Generation Technology

We are committed to provide the most advanced, sound and proven cogeneration CHP technologies, as well as professional product support services to all our customers in North-and South America. Unlike genset suppliers who are not really experienced in advanced CHP, CHPC, or tri-generation applications, we are exclusively focusing on reliable, proven and complete cogeneration modules that are professionally engineered and manufactured. We are "The Experts" and CHP is all we do. Our main focus has always been to manufacture complete factory-designed and proven CHP modules. This dedication and approach provides our customers with superior performance, higher reliability, value for money, decreased operating expenses and increased return on investment.

- ❑ **Proven Reciprocating Engine Technology**
Low RPM compared to extreme high RPM axial or radial Turbines with transonic Velocities and increased Rotation Wear & Tear.
- ❑ **Low Maintenance and Minimal Downtime**
Reduced O&M, minimized Wear & Tear, and very easy to service.
- ❑ **No Slagging, no Fouling or Plugging**
No sensitive Turbine Components that are susceptible to uncontrolled precipitation.
- ❑ **50% higher Machine Life Expectancy**
Longer useful System Life Expectancy resulting in elevated ROI (Return on Investment).
- ❑ **Trusted Excellence & Proven Reliability**
Thousands of Installations and Tens of Millions of Operating Hours with high Uptime.
- ❑ **40% higher Efficiency & Fuel Economy**
The most efficient and durable CHP in its Class, and by far much more efficient compared to ultra-low-efficient Micro Turbines that provide significantly less Efficiency than the Grid.
- ❑ **Unmatched Performance Guarantee**
A superior System designed to perform.

Extensive Product Support & Customer Care

A multi-level service program designed to keep customer equipment and plants operating at peak performance. Product support is critical and 2G®'s comprehensive after-sales services are designed to protect the owner's investment during both in-warranty and post-warranty periods. Whenever assistance is required, 2G® offers experienced technicians, parts support, and flexible service options designed to meet our customer's specific needs.

Customized Service Support

2G® offers a menu of service levels, as well as a modular maintenance program that can be adapted and tailored to individual customer requirements. This includes preventive maintenance and 24/7 system monitoring. Service engineers can remotely diagnose possible problems, make on-line adjustments, and if necessary dispatch a qualified technician who is located closest to the customer.

Thousands of 2G® CHP's operating

Thousands of satisfied customers appreciate the reliability and high efficiency of 2G® cogeneration modules.

Service Contracts and Extended Warranty

Various service contract options, extended warranties, and tailor-made maintenance agreements are available.

Parts & Components

A comprehensive central parts warehouse located at 2G®'s U.S. factory in Florida guarantees high level parts availability. Regional service partners throughout the U.S. also carry spare parts. A comprehensive service network, with factory-trained and 2G certified technicians is available 24/7.



24/7 Monitoring & On-Line Diagnostics

Web-based State-of-the-Art Monitoring and Control Technology.



Top Quality Product Support and High System Availability

2G® Service Engineers and Highly Qualified Field Service Technicians 24/7 on Duty.



Customized Service Options and Operator Training

Whatever your Service Needs, 2G® has a Solution to maintain your Productivity.





CENERGY®

Advanced Clean Energy Technologies



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