



ENGINEERED SKID SOLUTIONS FOR

RENEWABLE NATURAL GAS PROJECTS



The Need for RNG

As industries and communities seek cleaner, more sustainable energy sources, renewable natural gas (RNG) is emerging as a key solution. Capturing methane from landfills, agricultural waste, and wastewater treatment not only reduces greenhouse gas emissions but also creates a renewable, high-value energy product.

By integrating RNG into your energy mix, you can:

- ▲ Reduce carbon footprint and support sustainability goals
- ▲ Convert waste to energy, generating value from feedstock that would otherwise be flared
- ▲ Support a cleaner energy future for communities and industries

Common RNG Applications



Residential heating (homes)



Industrial manufacturing



Commercial businesses



Electricity generation



Transportation fuel (CNG/RNG)



Methane Reduction Impact

Methane captured and converted into RNG would otherwise be released directly into the atmosphere. When utilized as fuel, RNG results in greenhouse gas emissions that are approximately **21 times** less potent than unprocessed methane.



Engineered Skid Solutions

Stark Tech provides engineered skid-mounted solutions that support every stage of the RNG production process—from raw feedstock gas handling and pretreatment, through compression, separation, and final pipeline injection.

Our custom skid solutions are designed to support every stage of RNG production, ensuring:

- ▲ **High Performance & Reliability** – Robust, serviceable designs for continuous operation
- ▲ **Energy Efficiency** – Optimized systems for lower energy consumption
- ▲ **Uptime Optimization** – Minimized unplanned downtime
- ▲ **Safety & Compliance** – Components selected for operation in flammable and hazardous environments

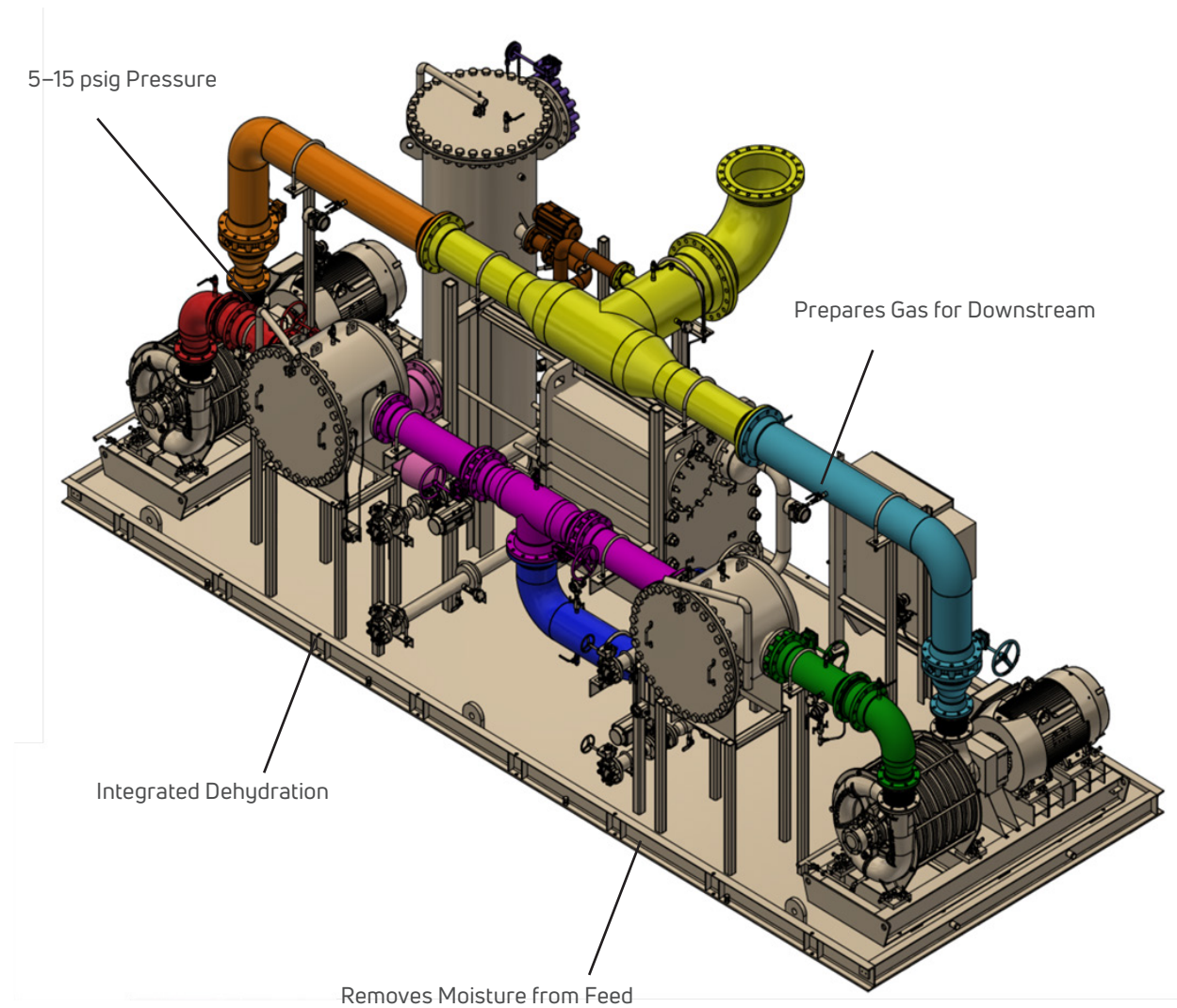
Core Skid Offerings

Our core skid offerings are engineered to support each critical stage of the RNG process, including Feed Blower/Dehydration Skids, Feed Gas Compressor Skids, Vacuum Blower Skids, and Sales Gas Compressor Skids. Each system is designed with application-specific compression, separation, and conditioning capabilities to meet defined pressure, flow, and gas quality requirements. When integrated, these skids form a complete, process-optimized solution for efficient and reliable RNG production from inlet conditioning through final pipeline injection.



Feed Blower / Dehydration Skid

Initial Gas Conditioning & Moisture Removal



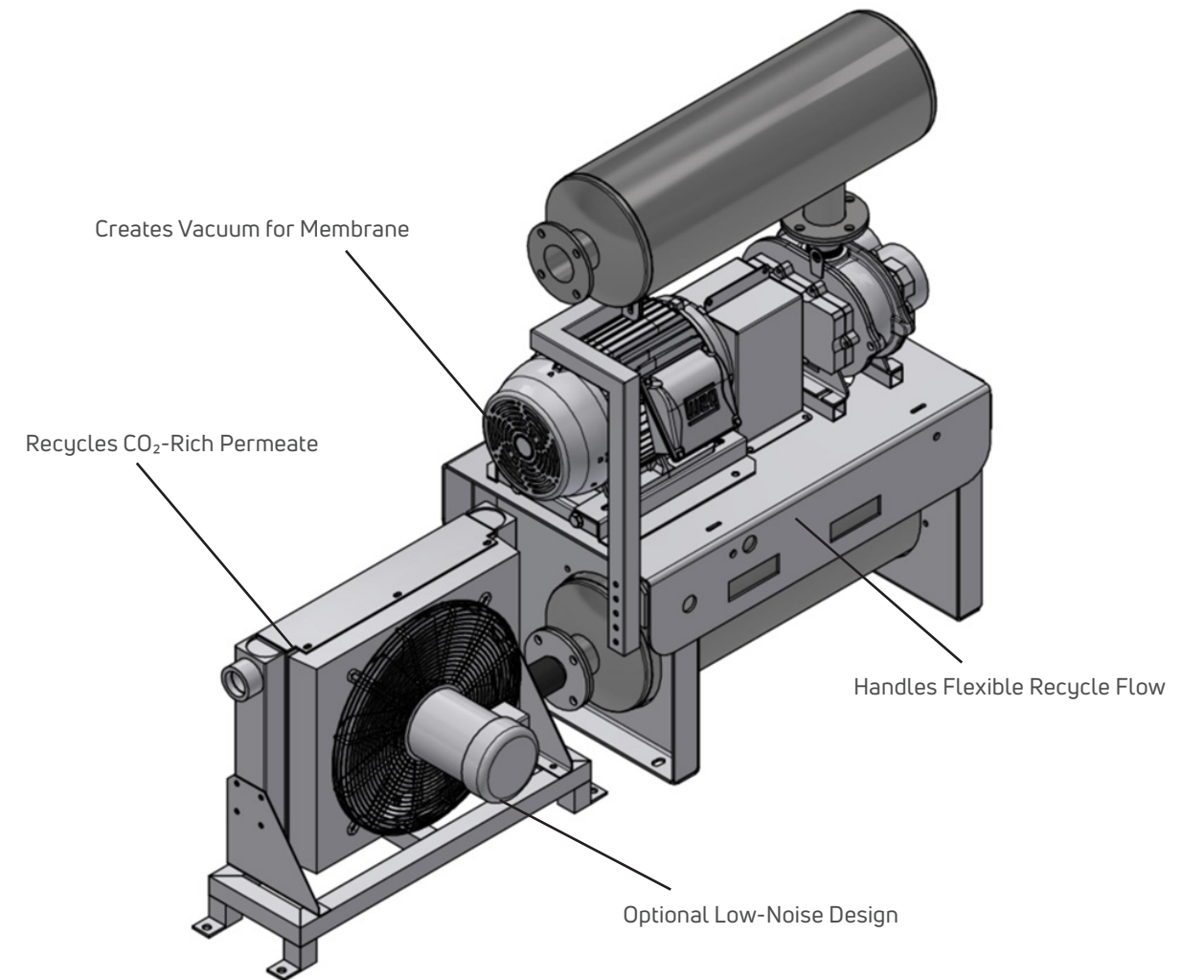
Features

Pressurizes and dehydrates raw biogas at the start of the RNG process.
Protects downstream systems and ensures reliable processing.

- ▲ Centrifugal or positive displacement blowers
- ▲ Moisture separation and reheating
- ▲ Glycol-cooled heat exchanger
- ▲ Optional integrated skid configuration

Vacuum Blower Skid

Permeate Recovery for Membrane Efficiency



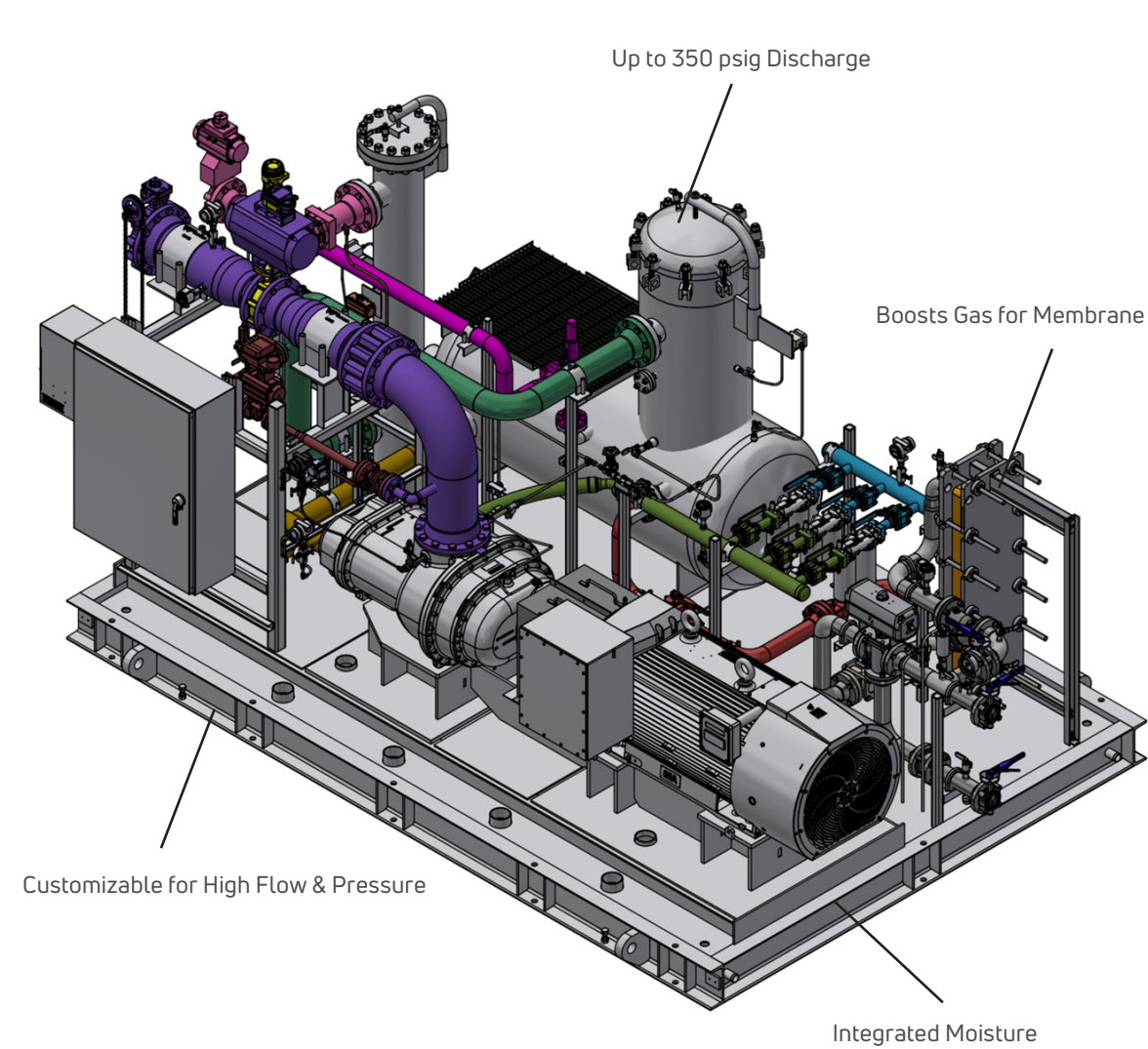
Features

Creates suction on the membrane system to recover and recycle permeate gas.
Improves separation efficiency and overall system performance.

- ▲ Positive displacement blower design
- ▲ Supports CO₂ removal via membrane process
- ▲ Integrated with feed gas systems
- ▲ Compact skid or combined system option

Feed Gas Compressor Skid

Compresses feed gas to desired processing pressure



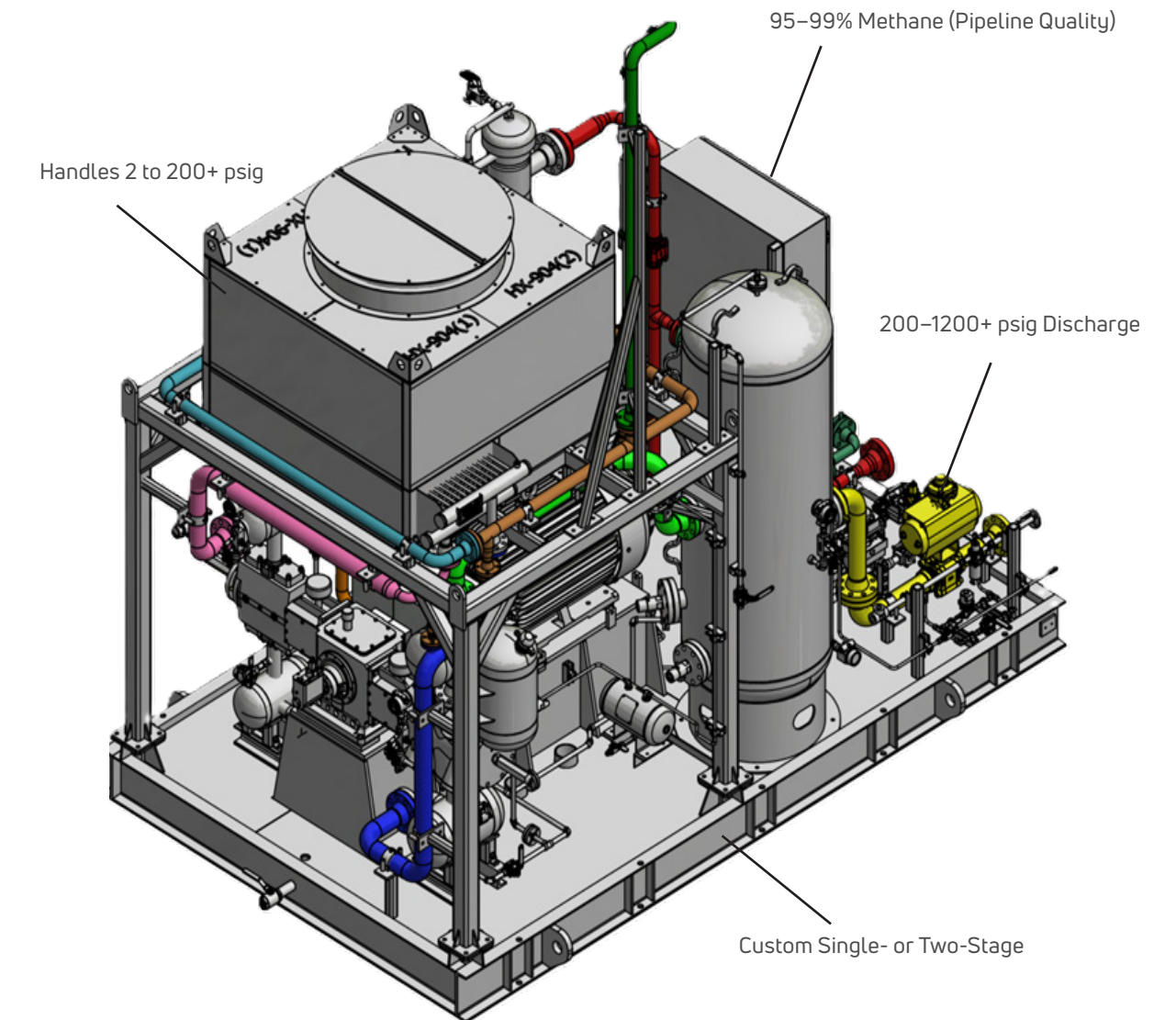
Features

Increases feed gas pressure ahead of membrane separation systems.
Designed to protect equipment and optimize downstream performance.

- ▲ Vane or screw compression
- ▲ Scalable for higher pressures and flows
- ▲ Inlet knockout / moisture separator
- ▲ Optional gas polishing integration

Sales Gas Compressor Skid

Final compression to pipeline or storage pressure



Features

Compresses purified RNG for pipeline injection or CNG use.
Custom-engineered systems ensure reliable, high-pressure delivery.

- ▲ Reciprocating or screw compressors
- ▲ Aftercooler / intercooler integration
- ▲ Skid-mounted cooling system
- ▲ Built for pipeline requirements

About Us

- ▲ Custom Fabrication – Skids designed to meet unique customer needs
- ▲ Safety First – Built with components suitable for hazardous environments
- ▲ Expert Support – Certified technicians provide on-site and depot repair services
- ▲ Customer Commitment – We deliver solutions for all your fluid and air flow needs

WHY CHOOSE US

Innovation. Reliability. Results.

- ▲ Engineered-to-order solutions tailored to your application
- ▲ Single-source accountability from engineering through start-up
- ▲ Scalable manufacturing and long-term operational support
- ▲ Designed for performance, safety, and reliability

Learn More

Discover how customized skid solutions can help your facility achieve sustainable RNG production. Contact our technical support team to discuss your application, challenges, or specific project requirements.



Built to **Perform**. Engineered to **Last**.



State-of-the Art Manufacturing Facility

Our facility is purpose-built for flexibility, efficiency, and rigorous quality control, enabling us to deliver projects of any scale with uncompromising standards.

Facility Snapshot

Location: Tonawanda, NY

Size: 125,000 sq. ft. U.S. -based Manufacturing facility

Capabilities

- ▲ (3) 20-Ton Overhead Cranes
- ▲ (3) 10-Ton Overhead Cranes
- ▲ Multiple High Bays for large-scale skid assembly
- ▲ Drive-through Loading for efficient logistics
- ▲ In-house Paint & Blast Booth

Schedule a Tour at
www.StarkTech.com



Landfill Gas to RNG Plant Case Study

Industry: Energy – Landfill Gas Recovery

A leading landfill operator required a complete solution to convert landfill gas into renewable natural gas (RNG) that met strict utility pipeline specifications. The challenge involved removing multiple contaminants — including H₂S, VOCs, nitrogen, carbon dioxide, oxygen, and moisture — while maintaining reliable operation at high flow rates.

Our team engineered and supplied a turnkey landfill gas processing plant capable of processing **6,000 SCFM** of raw landfill gas and upgrading it to pipeline-quality RNG for utility injection and energy sales.

The comprehensive processing system included:

- ▲ Blower skids
- ▲ Desulfurization system
- ▲ Compressor skids
- ▲ Moisture removal system
- ▲ VOC removal system
- ▲ CO₂ membrane skid
- ▲ Nitrogen Rejection Unit (NRU) skid
- ▲ Sales compressor package

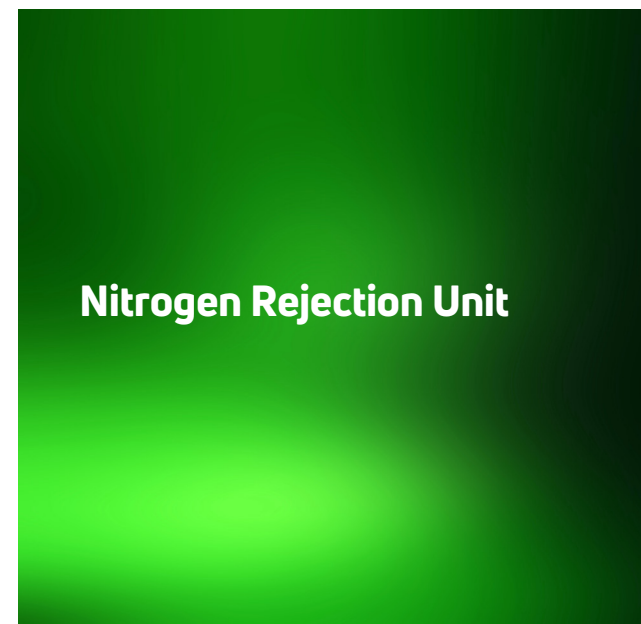
This fully integrated plant was designed to maximize methane recovery while ensuring the processed gas consistently meets utility pipeline standards. Once operational, the RNG produced from the facility will be sold to a utility company as a renewable energy source.

Environmental Impact

Prior to this project, the landfill methane would have been sent to a flare and combusted. Once fully operational, the facility is expected to prevent approximately **13 million pounds** of methane per year from being burned and released into the atmosphere, supporting long-term greenhouse gas reduction goals and renewable energy production.



Blower & Aftercooler Skid



NRU Rinse Compressor





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