



Lotte Chemical in Daesan, South Korea, a CATACARB-licensed plant.

OVER 65 YEARS OF EXPERT DESIGN AND ONGOING SUPPORT FOR 200+ UNITS IN OVER 35 COUNTRIES

We work with CATACARB-licensed plants across the globe to achieve efficient and reliable CO₂ removal. Our clients benefit from over 65 years of experience in process design, optimization, training, and supplying our chemicals globally to over 35 countries.

Our proprietary simulation program is based on decades of real-world operating data and gives us the expertise to design cost-effective CO₂ removal systems with guaranteed results.

LEARN MORE

For more information on the CATACARB process and services, please visit www.catacarb.com.



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Cover: Rendering courtesy of Stockholm Exergi



A GLOBAL LEADER IN HPC CARBON CAPTURE

Concerns over climate change have caused a global shift in attention to carbon dioxide (CO₂) emissions. Consequently, many companies are committing to a neutral carbon footprint target. This often requires capturing CO₂ from waste gases before they are vented to the atmosphere.

Our CATACARB process offers an efficient, reliable, and environmentally responsible method for capturing CO₂ without modification to upstream technologies.

CATACARB has over 65 years of design and support experience solely focused on hot potassium carbonate (HPC) CO₂ capture technology. It is because of our proven expertise in HPC that our clients depend on us for their CO₂ removal needs.

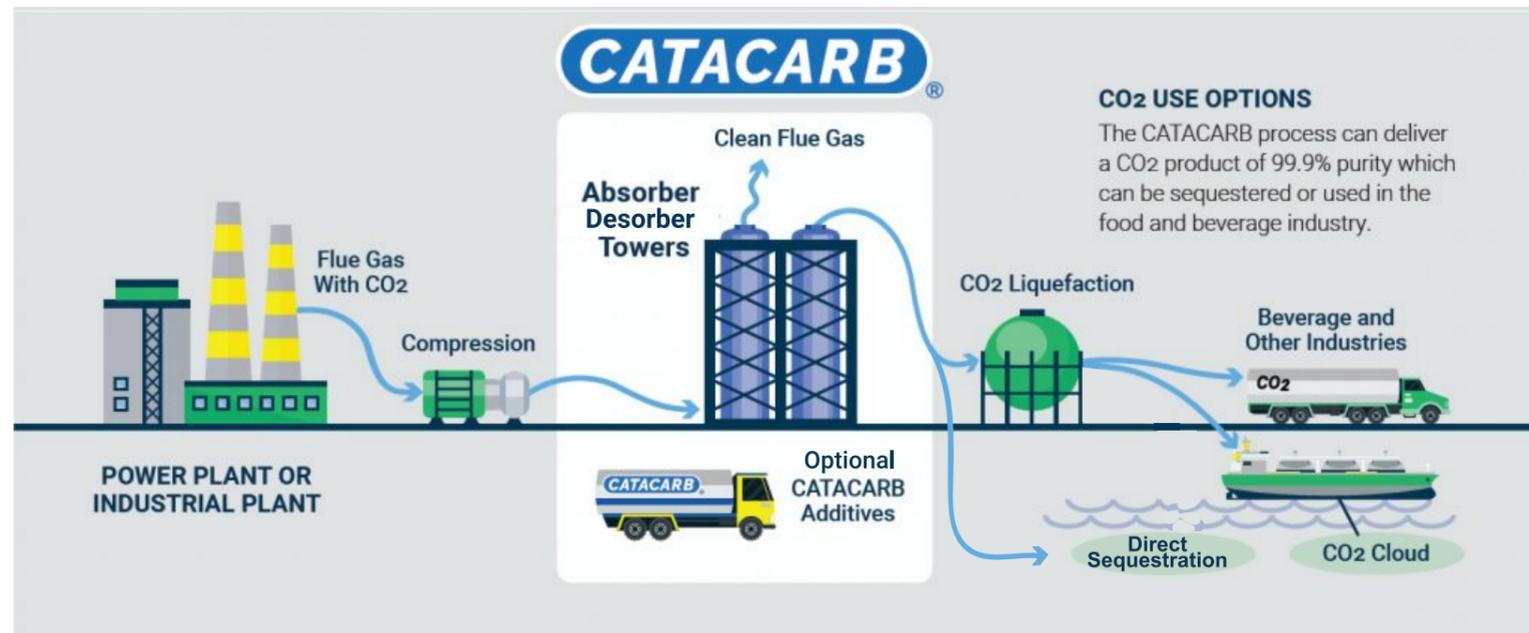
Stockholm Exergi (rendering above), one of the world's largest carbon capture projects, is a CATACARB-licensed plant with 800 KTA CO₂ capture capacity.

With FID complete, the project is expected to come online in 2028.

The HPC Process Design Package was engineered by CATACARB, with ongoing support provided to Stockholm Exergi and the EPC during the construction phase.

CATACARB® has done one thing exclusively for 65+ years: HPC CO₂ capture.

OUR PROPRIETARY HPC PROCESS



CO2 USE OPTIONS

The CATAcarb process can deliver a CO₂ product of 99.9% purity which can be sequestered or used in the food and beverage industry.

The CATAcarb process is a hot potassium carbonate (HPC) CO₂ removal process in which CO₂ is chemically absorbed under pressure in an absorption tower by a solution of potassium carbonate dissolved in water. The solution is subsequently sent to a separate tower where it is stripped of absorbed CO₂ with steam, and the cycle continues. The CATAcarb process optimizes the HPC process in several ways:



CATAcarb Base HPC, a potassium carbonate solution with no additives required.

Utilize solution make-up to cost effectively remove contaminants.



CATAcarb 922,™ our signature inorganic catalyst, increases CO₂ stripping and absorption efficiencies by more than 40% while also providing corrosion protection.

This lowers the energy demand and allows for the use of smaller equipment of mostly carbon steel construction, reducing capital costs. The catalyst is non-volatile, fully compatible with oxygen-bearing gas, and is neither consumed nor degraded. Therefore, the catalyst requires minimal makeup.



Multiple configurations of the CATAcarb process exist to fit client needs.

In instances where the value of steam is high, mechanical vapor recompression configurations are available to replace up to 80% of heat input requirements with electrical demand.



High-purity CO₂ (99.9% by volume) can be obtained with minimal additional equipment.

This has allowed several CATAcarb users to make CO₂ a valuable process byproduct by selling the CO₂ for use in the food and beverage industry.

The CATAcarb process can be configured such that 80% of CO₂ stripping energy requirements are filled by electrically-driven compressors.

PRIORITIZING HEALTH & ENVIRONMENT

Both CATAcarb and amine separation processes offer the benefit of treating gas with low CO₂ content. However, the working solvents in amine separation units are volatile and tend to be harmful to the environment, as well as to the health and safety of plant personnel.

The HPC solution is non-volatile and does not contain any harmful amine additives.

CATAcarb units capture up to 45,000,000 Tons of CO₂ yearly

	CATAcarb®	Amine Processes
Low solution makeup (Typically, <20% per year)	✓	✗
Non-degradable solution	✓	✗
No solvent contamination of atmosphere	✓	✗
No solvent contamination of CO ₂ product stream	✓	✗

