



*Proven CO<sub>2</sub> Capture Technology*



# A GLOBAL LEADER IN HPC CARBON CAPTURE

Concerns over climate change have caused a global shift in attention to carbon dioxide (CO<sub>2</sub>) emissions. Consequently, many companies are committing to a neutral carbon footprint target. This often requires capturing CO<sub>2</sub> from waste gases before they are vented to the atmosphere.

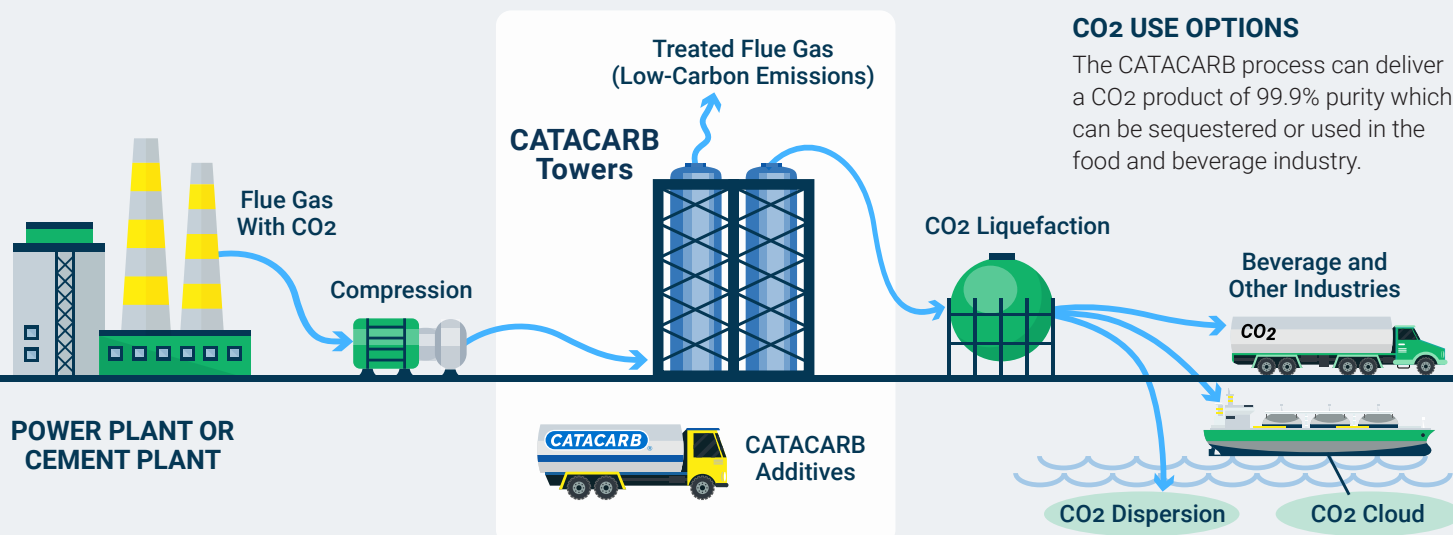
Our CATACARB process offers an efficient, reliable, and environmentally responsible method for capturing CO<sub>2</sub> without modification to upstream technologies.

CATACARB was first implemented in 1961. We now have over 60 years of design and support experience solely focused on hot potassium carbonate (HPC) CO<sub>2</sub> capture technology. It is because of our proven expertise in HPC that our clients depend on us for their CO<sub>2</sub> removal needs.

Stockholm Exergi (above), one of the world's largest carbon capture projects, is a CATACARB-licensed plant.

**CATACARB® has done  
one thing exclusively  
since 1961:  
HPC CO<sub>2</sub> capture.**

# OUR PROPRIETARY HPC PROCESS



## CO2 USE OPTIONS

The CATA CARB process can deliver a CO<sub>2</sub> product of 99.9% purity which can be sequestered or used in the food and beverage industry.

The CATA CARB process is a hot potassium carbonate (HPC) CO<sub>2</sub> removal process in which CO<sub>2</sub> 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 CO<sub>2</sub> with steam, and the cycle continues. The CATA CARB process optimizes the HPC process in several ways:



**CATA CARB 922™, our signature inorganic catalyst, increases CO<sub>2</sub> 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 CATA CARB 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 CO<sub>2</sub> (99.9% by volume) can be obtained with minimal additional equipment.**

This has allowed several CATA CARB users to make CO<sub>2</sub> a valuable process byproduct by selling the CO<sub>2</sub> for use in the food and beverage industry.

**The CATA CARB® process can be configured such that 80% of CO<sub>2</sub> 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 CO<sub>2</sub> 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, catalyzed by CATACARB 922, is non-volatile and does not contain any harmful amine additives.

**CATACARB® units capture 18,000,000 tons of CO<sub>2</sub> every year.**

	CATACARB®	Amine Processes
Low solution makeup (Typically, <10% per year)	✓	✗
Non-degradable solution	✓	✗
No solvent contamination of atmosphere	✓	✗
No solvent contamination of CO <sub>2</sub> product stream	✓	✗





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

## **OVER 60 YEARS OF EXPERT DESIGN AND SUPPORT FOR 150+ CLIENTS IN 33 COUNTRIES**

We work with CATACARB-licensed plants across the globe to achieve efficient and reliable CO<sub>2</sub> removal. Our clients benefit from over 60 years of experience in process design, troubleshooting/optimization, and supplying our chemicals globally to 33 countries.

**Our proprietary simulation program is based on real-world operating data and gives us the confidence to design cost-effective CO<sub>2</sub> removal systems with guaranteed results.**

## **LEARN MORE**

For more information on the CATACARB process and services, please visit [www.catacarb.com](http://www.catacarb.com).



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