



Subject to modifications.

# Carbon Capture for a better tomorrow

High-efficiency carbon removal for your climate strategy via  
GEA Carbon Capture and utilization solutions.

At GEA, we are committed to creating cutting-edge Carbon Capture technologies that enable our customers' industries like cement, steel, glass, bioenergy, and chemical to accelerate their transition to a low-carbon economy and mitigate climate change.

GEA's Carbon Capture portfolio comes to extend our already well-established gas cleaning and heat recovery offer by technologies for CO<sub>2</sub> capturing as well as options for CO<sub>2</sub> transport and utilization.

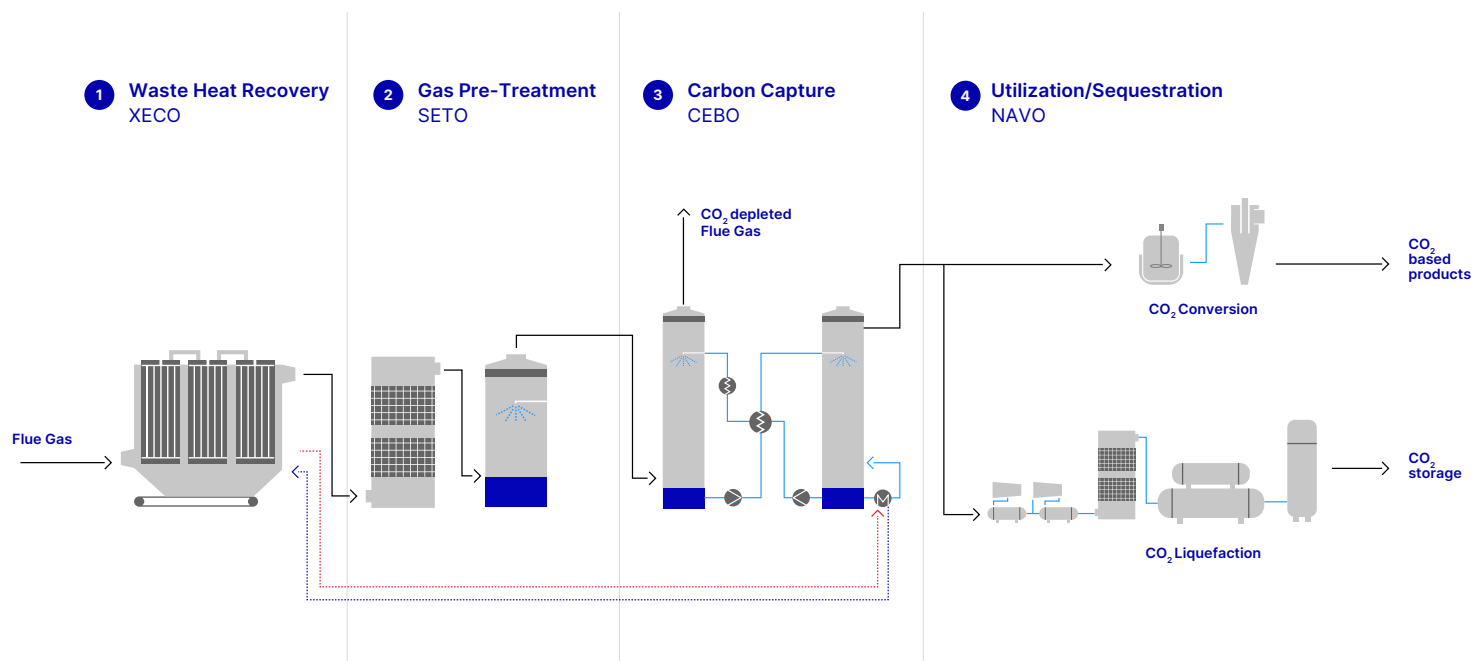
CO<sub>2</sub> can be separated from gas streams by various methods — either by pre- or post-combustion separation or by oxyfuel processes. GEA favors tail-end CO<sub>2</sub> separation as effects on upstream processes are reduced to a minimum.

Modern CO<sub>2</sub> separation concepts employ aqueous amine solutions as solvents. Hence, GEA's Carbon Capturing Solution portfolio is based on state-of-the-art amine solvent systems and combines them with GEA's unique scrubbing technologies in a highly standardized design concept, enabling a fast delivery of an economic CO<sub>2</sub> capturing solution.

We aim to make Carbon Capture a viable and practical solution that can be widely adopted and integrated into existing infrastructures. By collaborating with our customers and leveraging our technical expertise we strive for unlocking the decarbonization potential in our targeted industries.

# GEA Carbon Capture Solutions

## Concept



## GEA technology portfolio

Use of excess heat from industrial processes and flue gases is the first step towards Carbon Capture & Utilization. The excess heat can be collected and transferred to the Carbon Capturing unit by means of our **GEA XECO Waste-Heat-Recovery Systems**.



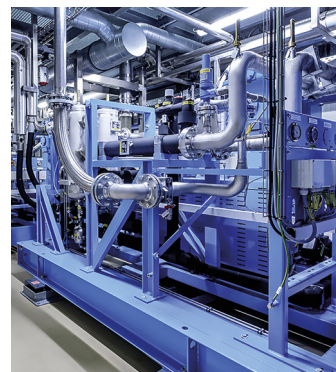
An important pre-requisite for Carbon Capturing is **Flue Gas Pre-treatment** to ensure the long-term stability of the Carbon Capturing system. **GEA SETO** technology line offers various solutions to remove solids, aerosols, sulfuric and nitric oxides and more.



The current state-of-the-art process for large scale **Carbon Capturing** is by chemical absorption with amines. GEA offers amine-based CO<sub>2</sub> capture plants of various sizes under the **GEA CEBO** line, allowing for CO<sub>2</sub> capturing from very diverse exhaust gas compositions.



The captured CO<sub>2</sub> must substitute fossil carbon to avoid anthropogenic GHG emissions. This can be achieved through the **Utilization of CO<sub>2</sub>** for producing CO<sub>2</sub> based products or by liquefying and **Sequestering CO<sub>2</sub>** in long-term storages.



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