



summits
Enabling Innovation. Enhancing Lives.

CO₂ CAPTURING SYSTEM

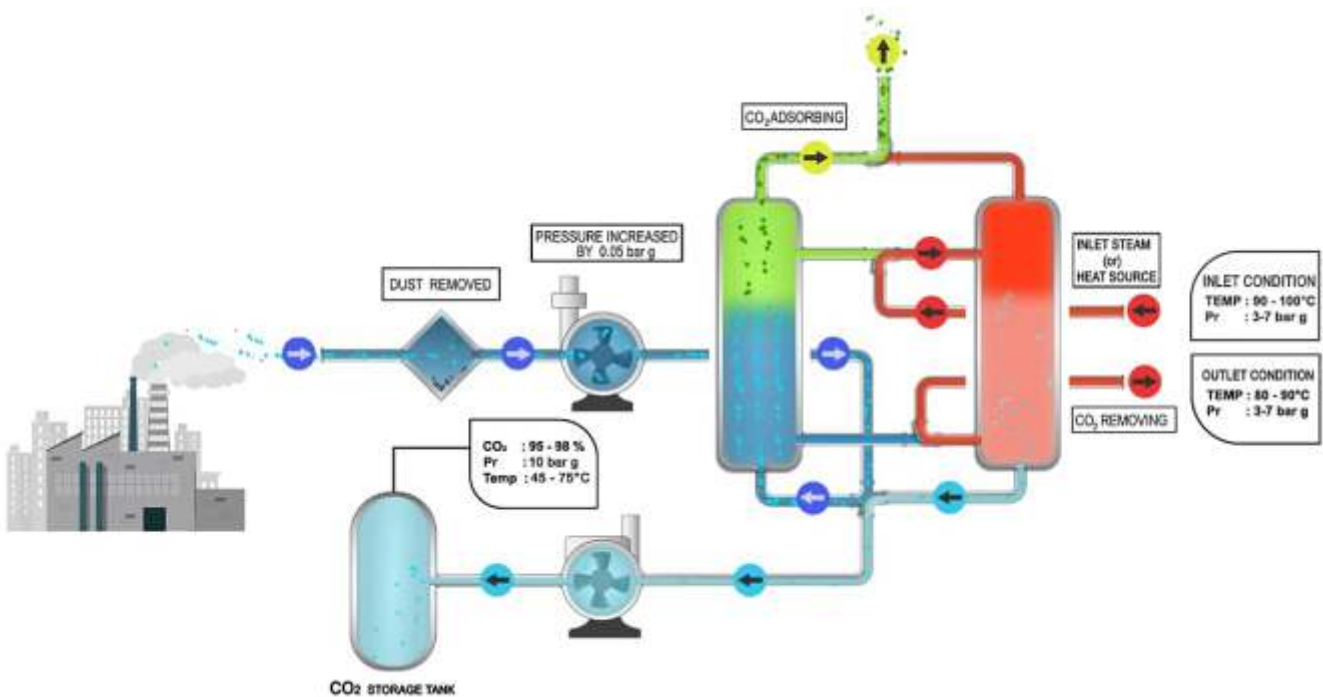
27⁺
YEARS
of
excellence
in **PSA**
Technology

Summits for a sustainable planet

Our proprietary technology

- A truly unique and innovative approach to remove CO₂ emissions in an energy efficient way using our low- cost swing adsorption technology
- Our proprietary carbon capture process uses a series of adsorption and desorption vessels / chambers to capture the CO₂
- This process can be applied on emissions from various sources, from gas, coal, cement, refineries, steel plants, waste- to-energy, process industries, biogas upgradation and even direct air capture
- Flue gas emissions from the point source can be directly fed into our system at the same pressure and temperature, and the CO₂ gas will be captured and stored in a safe manner
- A truly plug and play modular design that translates to next to no human interaction

Process flow diagram



Our Strength

- 5+ years of screening and testing different adsorbents and optimizing the reactors for cyclic capture and release of CO₂
- 27+ years of experience in pressure swing adsorption (PSA) technology and gas generation plants
- 1000+ cycles completed with CO₂:N₂ mixtures as feed
- 200+ cycles completed with biogas obtained from biogas generator and flue gas obtained from burning coal
- Optimized energy cost for economic capture of CO₂ in scale up to 20,000 tons/year
- Working on stability of adsorbents, recycle and reuse of exhausted adsorbents, improving operating range and various mixtures of feed flue gas



Solid Adsorbent based technology

Key benefits

Our process is not affected by the moisture content of the flue gas

Our process has a wide working range. For example, it can work in high temperatures and low pressures

Gaseous phase process, and hence no process water is needed

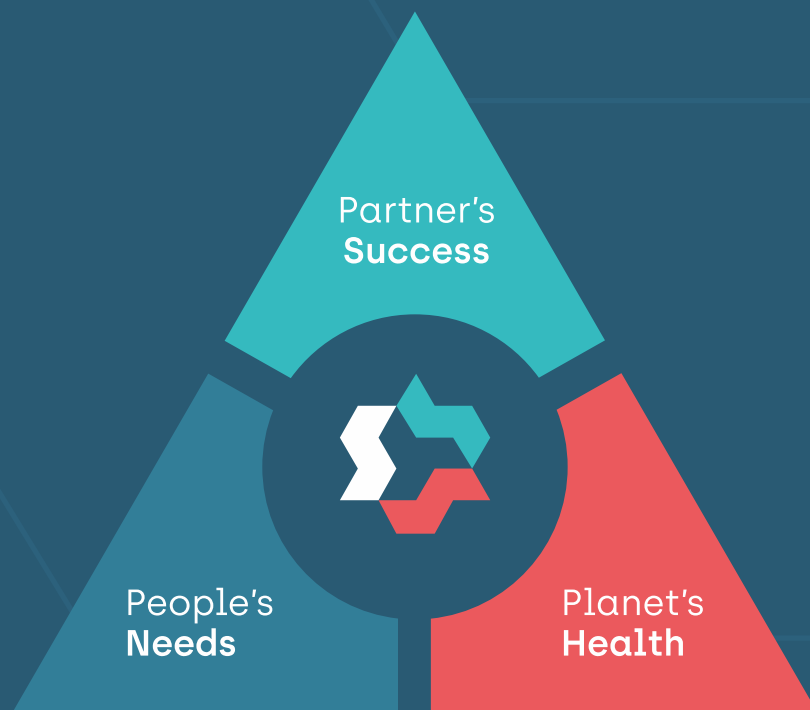
No replenishment of corrosive solvents

Single heating step of $\Delta T = 10$ to 15 deg C compared to heat-cool-heat steps for amine process

Lower CAPEX compared to commercially available processes

Optimised OPEX compared to commercially available processes

Harvesting the elements of air through innovation for



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