

# Chart CiCi<sup>®</sup> Carbon Capture

## CiCi<sup>®</sup> (Elm) Technology

### Application: Fuel Cell

CO<sub>2</sub> capture makes fuel cell decarbonization practical, turning exhaust into recoverable energy and real emissions reductions. Chart Industries stands out as the partner with the technology depth and field experience to make it happen at scale.

### Benefits for Fuel Cell Companies

- Help fuel cell offer decarbonized energy by capturing remaining carbon from the exhaust stream
- Recover waste hydrogen to boost energy production
- Improve carbon intensity score of energy produced and potentially increasing value of energy
- Create a potential revenue stream for CO<sub>2</sub>
- Potential hydrogen and green energy tax credits (US)
- Offer carbon capture 45Q tax credit benefits (US)

### Performance Snapshot

Use Case	Utilization	Sequestration
Carbon Recovery	93-99%	94-99%
Load	15%	10%
Typical Product	ISBT LCO <sub>2</sub>	HP Vapor
Footprint	Compact, Modular	Optimized for Scale

Typical performance, subject to final project specifications

### Technical Features

- Separate CO<sub>2</sub> from H<sub>2</sub>, CO rich streams
- Energy efficiency via heat recovery
- Capture from very low pressure exhaust
- Compact footprint, retrofit ready
- Standard designs for 1MW to 500MW+



Have a project in mind? Reach out and let's chat about how our modular CO<sub>2</sub> systems can fit your needs.

[www.chartindustries.com/earthlylabs](http://www.chartindustries.com/earthlylabs)

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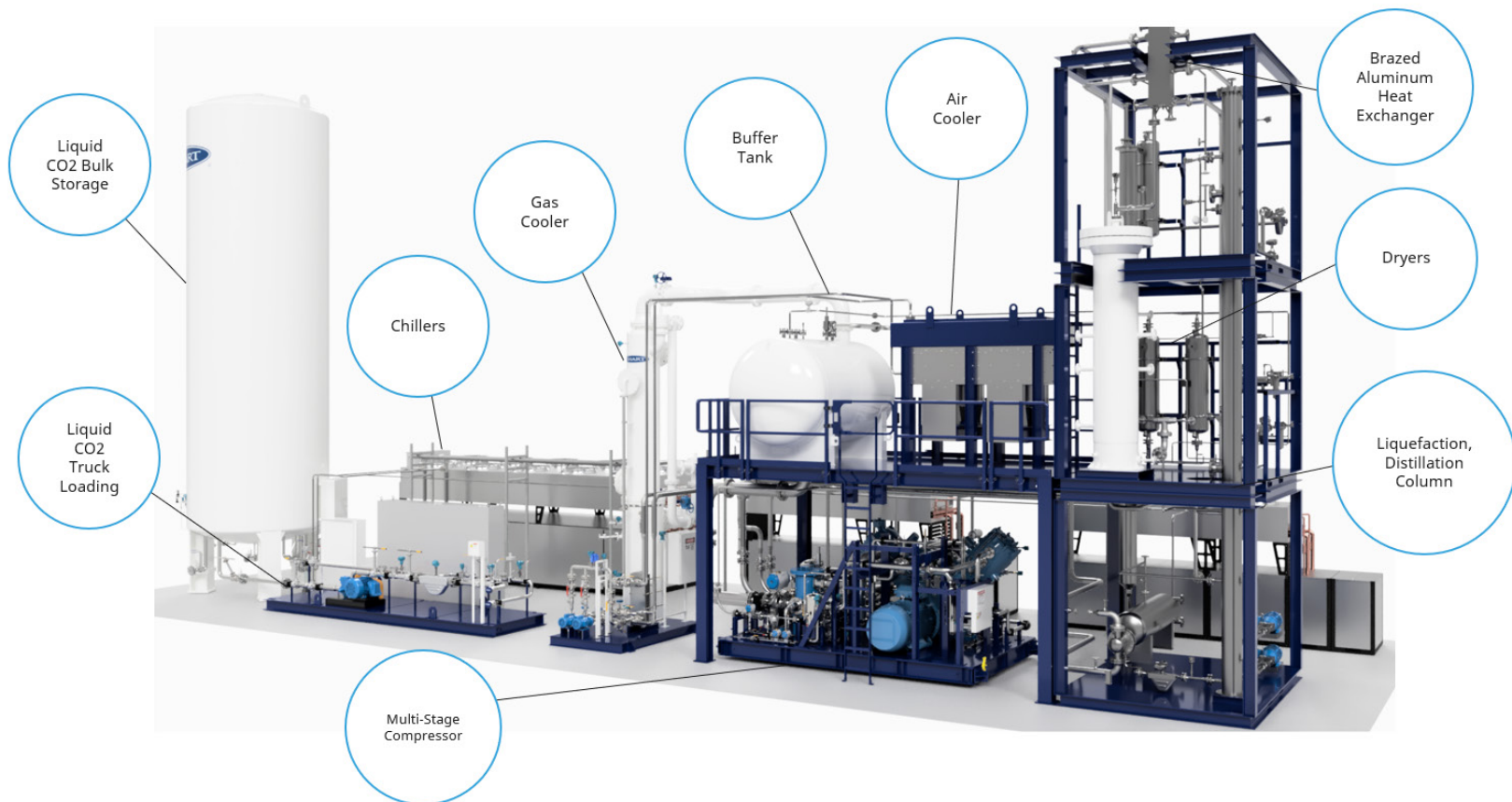
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Captures and purifies fuel cell exhaust to produce sequestration ready, pipeline grade, and ISBT beverage grade liquid CO<sub>2</sub>.

### Key Process Steps

- **Cooling** - Hot anode gas is rapidly cooled to condense and remove bulk water
- **Compression** - Multi-stage compression with intercooling for efficient pressure management
- **Drying and Filtration** - Removes remaining moisture and trace contaminants to ensure purity
- **Liquefaction and Distillation** - Chart's integrated brazed aluminum heat exchanger and distillation system deliver efficient liquefaction and consistent beverage grade CO<sub>2</sub>



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