PRODUCT DATASHEET

Lab and Pilot Carbon Capture Rig

Absorber–stripper rigs from 1 to 100 kg CO_2 per day

Product page





Close-up: absorber and stripper columns

OVERVIEW

The Tech Inc. Lab and Pilot Carbon Capture Rig captures CO_2 from a gas stream in a packed absorber and regenerates the solvent in a stripper with a reboiler. Universities, research centres and industrial R&D teams use it to compare solvents, test packings and measure energy use before a larger plant.

TYPICAL DESIGN DATA

Materials	316L; duplex for corrosive solvents
Columns	Glass or stainless, with structured or random packing
Solvents	Amines and other solvents to the research plan
Codes and standards	ASME VIII Div. 1 for vessels; ASME B31.3 for piping
Pressure	Atmospheric absorber; stripper to about 3 barg
Measurements	CO_2 in and out, solvent loading sampling points, reboiler duty
Control	PLC with data logging and remote access

MODELS AND CAPACITIES

- **TI-CCP-1** – about 1 kg CO_2 per day
- **TI-CCP-5** – about 5 kg per day
- **TI-CCP-20** – about 20 kg per day
- **TI-CCP-50** – about 50 kg per day
- **TI-CCP-100** – about 100 kg per day, containerised

Indicative CO_2 capture capacity.

ORDERING CODE

Example **TI-CCP-20-S-F**: **20** capacity, kg CO_2 per day; **S** columns: S stainless, G glass; **F** gas: F real flue gas, B blended synthetic gas, C containerised.

SCOPE OF SUPPLY

Included: factory acceptance test with a written report; drawings for approval, material certificates and manual. **Options:** flue-gas conditioning and blower; containerised version; gas analysers; amine filtration package; glass columns for teaching.

KEY ADVANTAGES

- **Complete rig** – columns, reboiler, pumps, gas panel and analysers
- **Scalable** – from bench to containerised pilot
- **Research-grade data** – logged balances and energy use
- **Flexible** – swap packings and solvents

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