PRODUCT DATASHEET

Battery Acid Dilution and Cooling Skid

Sulphuric acid dilution to battery gravity with cooling and density control

Product page





Close-up: acid cooler and density cell

OVERVIEW

The Tech Inc. Battery Acid Dilution and Cooling Skid dilutes concentrated sulphuric acid with demineralised water to the specific gravity a lead-acid battery plant needs, removes the heat released on mixing, and stores the acid ready for filling and formation. An in-line densitometer trims the water flow so every batch is on gravity.

TYPICAL DESIGN DATA

Product	Battery acid typically 1.24 to 1.40 specific gravity, set by the plant
Feed	Concentrated sulphuric acid and demineralised water
Wetted materials	PTFE or PVDF-lined steel, PVDF, Alloy 20 or C-276, chosen by concentration and temperature
Cooling	Acid cooler on cooling water or chilled water
Control	Density trim by water flow, temperature and level interlocks
Design code	ASME B31.3 for piping

MODELS AND CAPACITIES

- **TI-BAD-1** – about 1 m^3/h
- **TI-BAD-3** – about 3 m^3/h
- **TI-BAD-6** – about 6 m^3/h
- **TI-BAD-12** – about 12 m^3/h

Indicative diluted-acid production.

ORDERING CODE

Example **TI-BAD-3-I-L**: **3** diluted acid, m^3/h; **I** mode: I in-line, B batch, C cooling only; **L** construction: L lined steel, P PVDF, A alloy.

SCOPE OF SUPPLY

Included: factory acceptance test with a written report; drawings for approval, material certificates and manual.
Options: batch tanks with agitation; chiller for warm climates; vent scrubber; formation circulation skid; remote monitoring.

KEY ADVANTAGES

- **On gravity** – in-line density trim
- **Acid-proof** – lined or alloy construction
- **Heat removed** – cooler sized for the heat of dilution
- **Safe** – closed system with vent scrubbing

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