



Edwards Engineering

60 Years of Excellence In Heat Transfer Products

- Geothermal Heat Pumps
- Packaged & HVAC Chillers
- Vapor Recovery Systems

Guidelines for Liquid Nitrogen Installation for Edwards Engineering Vapor Recovery Systems

N₂ Use

1. Primary: Liquid refrigerant expanded into the tubes of a fin-tubed heat exchanger to condense organic vapors.
2. Secondary: Gas to operate control valves
3. Alternate uses or use of N₂ after it's been used in the Vapor Recovery Unit must be accommodated for by an alternate design than specified below

Praxair Installation

- "TI" or "TM" Series tanks acceptable
- Tank Insulation Vacuum < 50 microns
- Site tanks as close to Vent Recovery Unit as possible to minimize interconnecting piping
- No Liquid Nitrogen pressure regulator
- No vaporizer
- Tank Pressure: 30 psig
- Tank location: same grade or higher than Vapor Recovery Unit
- LN₂ Piping: minimum tube diameter for the flow, maximum insulation

Edwards Vapor Recovery Unit

- Coil Height: 20 feet maximum above grade
- Condensation Temperature: -100°F to -200°F (-73.3C to -128.9C)
- LN₂ Inlet Pressure: 30 psig
- Vaporized/spent N₂ outlet to atmosphere

LN₂ Piping Interconnecting with Vapor Recovery Unit

1. Preferred: Praxair provides turn-key installation of interconnecting piping.
2. Alternate: Praxair designs or guides design of interconnecting piping. To supply gaseous N₂ for control valves, draw liquid just before the LN₂ solenoid/control valve, and vaporize in a 1/4" copper tubing coil vaporizer.

CONSULT PRAXAIR'S LOCAL OFFICE OR EDWARDS ENGINEERING FOR ASSISTANCE

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