



AIR SEPARATION PLANT LIQUID OXYGEN/NITROGEN MODEL GC-1E, 1.0 TON/DAY

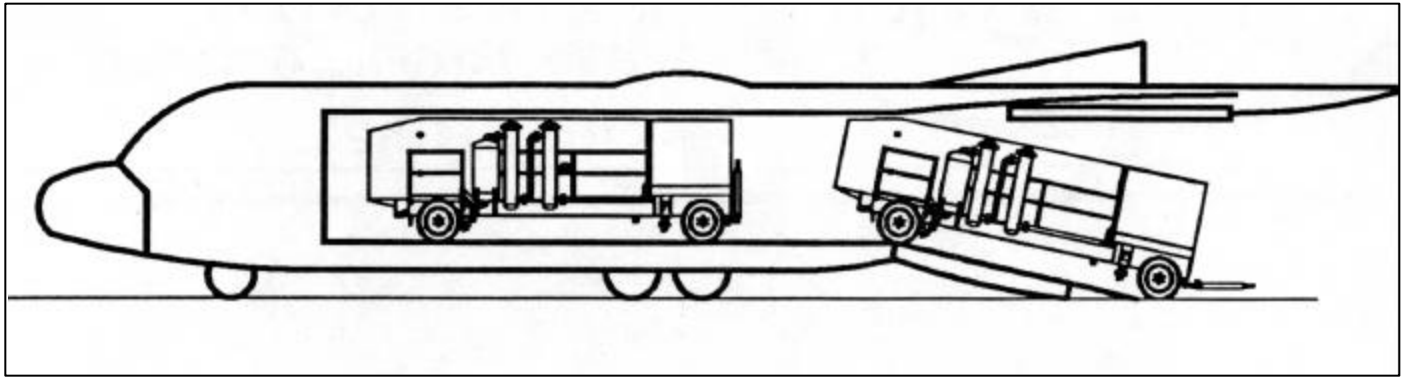
COSMODYNE PART NO. 3206101-5



- ◆ Air Transportable in C-130; Meets MIL-A-8421
- ◆ Rapid Deployment and Start Up
- ◆ 1.0 Tons/day LO₂/LN₂
- ◆ LO₂/LN₂ High Pressure Pumps, Vaporizers and Manifolds for Charging Gaseous Products
- ◆ Electric Motor Driven/Air Cooled
- ◆ Long Life Industrial Turboexpander
- ◆ Easy to Operate
- ◆ Fully Mobile; Meets Military Ground Mobility MIL-M-8090

GC-1E OPERATIONAL FEATURES

- ◆ The GC-1E is a self-contained plant, which, except for electric power, requires no outside utilities for liquid production. All cooling is achieved by ambient air.
- ◆ The GC-1E is integrally mounted on a four-wheel trailer, and is rapidly deployable to meet any tactical situation.
- ◆ The GC-1E is designed for ease of operation and service. All components are accessible and replaceable without removal of other components.
- ◆ The turbo expander in the Cold Box Module is removable without breaching the Cold Box insulated space.



C-130 LOADING DIAGRAM

GC-1E OPERATIONAL FEATURES

- ◆ The GC-1 has been tested to stringent environmental conditions. The unit has operated at + 125°F and -40°F; at 100% relative humidity; has been loaded on a railroad car and hump-tested at seven miles per hour; and to prove its durability, has been towed over cross-country trails, un-paved roads, and primary highways at 15, 25 and 55 miles per hour respectively.
- ◆ The GC-1E is capable of operating continuously at capacity and purity with inlet air containing CO₂ concentrations of up to 1,000 parts per million by volume.
- ◆ Both liquid oxygen and nitrogen distillation columns are contained within a single structural element.
- ◆ This configuration reduces the number of piping joints required and eliminates the need for a cryogenic transfer pump.
- ◆ The liquid oxygen/nitrogen product purities are continuously monitored and displayed.
- ◆ The GC-1E is capable of operating in bacteria and chemical environments by following approved U.S. Air Force operating procedures.
- ◆ Once “on site”, the GC-1E is quickly leveled and erected to it’s operational position. The Cold Box is manually pivoted 90° to its vertical position. Cool down normally requires two to five hours. The plant operation is very stable and requires little hands-on attention.

PERFORMANCE AND UTILITY SCHEDULE – GC-1E

Liquid Production Rate 1.0 Ton/day O₂/N₂ @ 99.5% Purity

Gaseous Production Rate 1,006 SCFH O₂ @ 2,500 psig
1,150 SCFH N₂ @ 3,500 psig

Average Power Draw 90KW

Shipping Data	L	W	H	WT.
GC-1E	24 ft.	8 ft.	8.5 ft.	18,000 lbs.

COMPANY SERVICES

Cosmodyne LLC, is a leader in the air separation field, offers unequalled product and service capabilities.

- ◆ Total Project Capability
- ◆ Custom Engineered Systems
- ◆ Start-up Assistance
- ◆ Equipment Training (on-site or off-site)
- ◆ Leasing/Lease-Option Programs
- ◆ International Parts and Service Network

Cosmodyne LLC · 2920 Columbia Street, Torrance CA 90503-3881, U.S.A.

Tel: +1 (310) 320-5650 · Fax: +1 (310) 320-5688

www.cosmodyne.com · info@cosmodyne.com