



GAS PLANT IN A BOTTLE™

Ortloff Engineers has been developing NGL / LPG recovery technology for nearly 40 years. Ortloff's portfolio of proprietary process designs are the industry standard, offering ultra-high ethane and propane recovery, improved CO₂ freeze tolerance, and dual mode capability. Their optimal heat integration and improved reflux streams result in lower capital expenditures and operating costs, and the highest efficiency in terms of recovery versus installed compression power.

Ortloff's Gas Plant in a Bottle™ incorporates these same design features into a unique compact vertical processing assembly, while providing further improvements in recovery and/or operating efficiency over a traditional plant configuration.

APPLICATIONS

Gas Plant in a Bottle™ (GPB™) can be designed to utilize any of Ortloff's proven liquids recovery processes. The primary feature is the integration of the heat exchange and mass transfer into a single heat and mass transfer (HMT) module within the Demethanizer or Deethanizer. This HMT module replaces the trays or packing in the traditional stripping section, while also eliminating external side / bottom reboilers and their associated piping.

Another feature of the GPB™ is the ability to locate the residue gas heat exchangers within the assembly, thereby eliminating residue gas piping and reducing residue gas pressure drop.



GPB™ has a much smaller footprint than a traditional cryogenic unit, making the technology ideally suited for:

- New plant applications with inlet capacities up to 400 MMSCFD (depending on shipping limitations).
- Offshore applications such as FLNG.
- Retrofits of existing facilities to improve recovery, plant throughput, or both.

BENEFITS

GPB™ offers the following benefits when compared to traditional cryogenic plant designs:

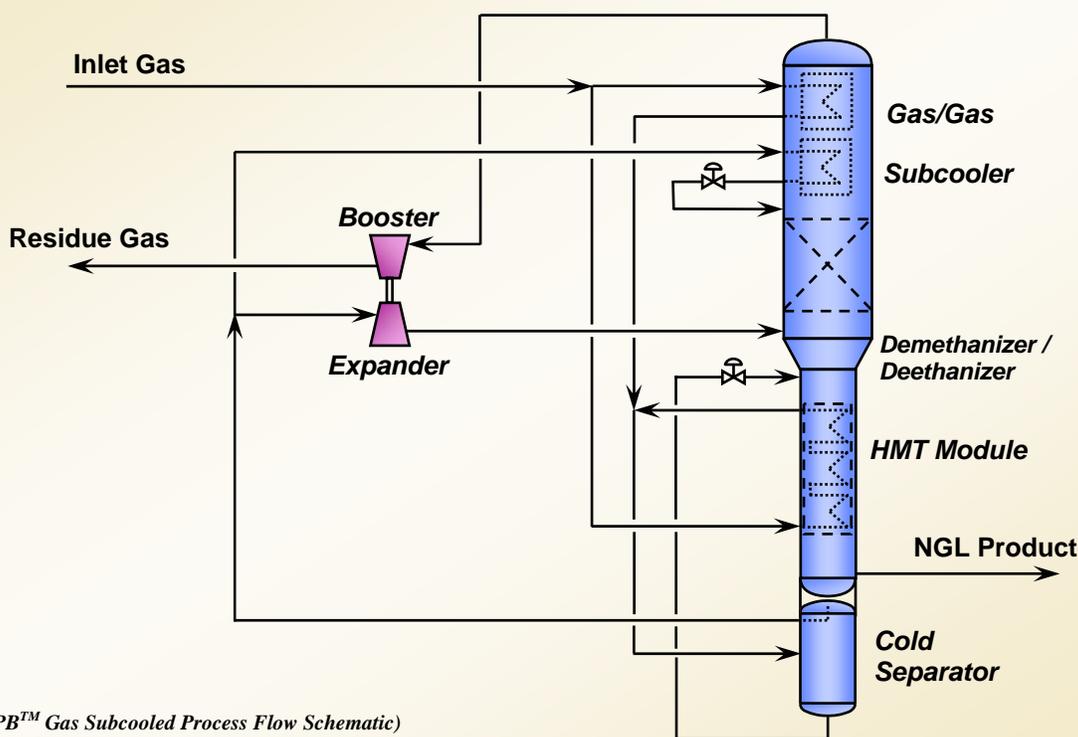
- Reduced power consumption and / or increased product recovery.
- Much smaller plot space.
- Elimination of thermosiphon reboilers, and the common pitfalls seen in the industry, such as erratic flow and thermal cycling.
- Elimination of piping and flanges (resulting in fewer potential emissions sources).
- Reduction in on-site field labor and construction.

- Better quality control as most of the fabrication is off-site, with shipment as a single assembly.
- Significant improvement in engineering and equipment delivery schedules.
- Easy customization for specific applications.

EXPERIENCE

Ortloff's Gas Plant in a Bottle™ is the newest innovation, incorporating Ortloff's portfolio of proven NGL / LPG recovery technologies to provide high recovery and flexibility in a compact assembly. One unit is currently in production, with startup expected late 2011.

Ortloff's Gas Plant in a Bottle™ Process



(Typical GPB™ Gas Subcooled Process Flow Schematic)

FOR MORE INFORMATION

For more information about this or any other Ortloff process, contact Ortloff Engineers, Ltd. at:

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