



LPG-PLUS™

Maximum LPG Recovery and Innovative Solutions

LPG-PLUS™ is a patent pending technology well-suited for a wide range of LPG recovery applications. Conventional natural gas or off-gas, high feed pressures or low, rich gases or lean — LPG-PLUS™ can efficiently deliver propane recoveries approaching 100 percent. Compared to conventional technologies, associated compression horsepower using LPG-PLUS™ can be reduced by up to 25 percent — significantly reducing your plant's capital cost and operating expenses.

Achieve maximum LPG recovery through Black & Veatch's cost effective, innovative technology LPG-PLUS™.

Maximum LPG recovery. Positive economic results. Only with LPG-PLUS™

Offering the in-depth, independent outlook of a seasoned energy planning and EPC leader, Black & Veatch turns opportunities missed into opportunities gained, adding value to our clients' businesses. Backed by years of providing process design, engineering, procurement, and construction services for projects worldwide, Black & Veatch has the expertise to handle all aspects of your cryogenic gas processing project to create meaningful value for you.

Application

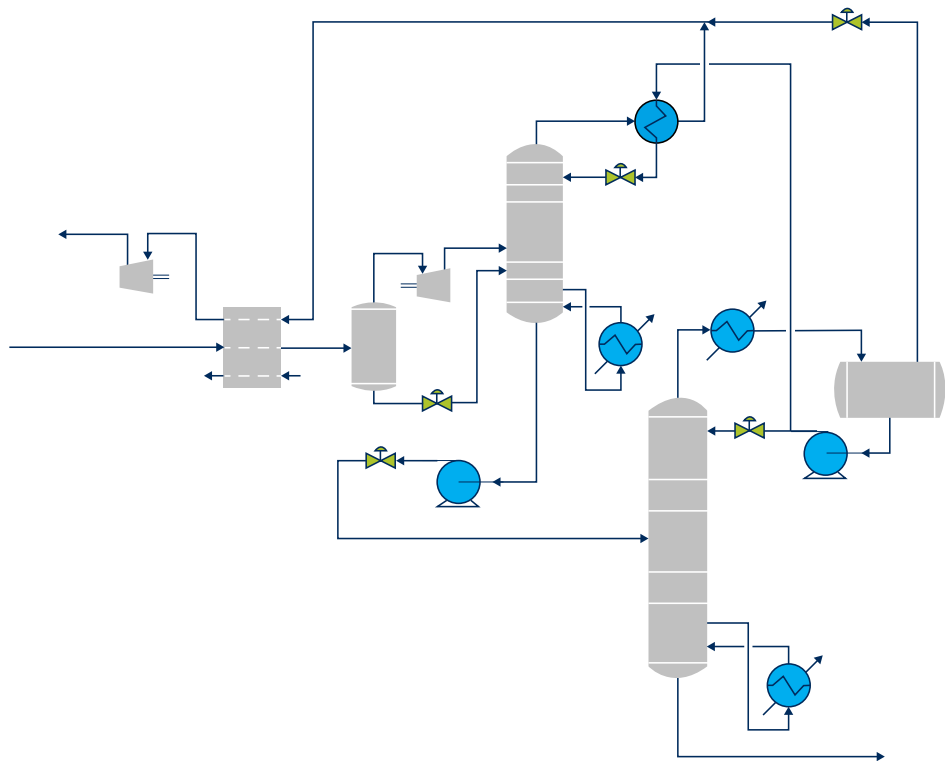
LPG-PLUS™ allows recovery of propane and heavier components from a wide range of natural gas or offgas streams. Propane recovery levels approaching 100 percent are typical.



BLACK & VEATCH

Description

Low-pressure hydrocarbon gas is compressed and dried before being chilled by cross-exchange and propane refrigerant. The chilled feed stream is then expanded into the propane absorber where it is contacted with a recycled liquid ethane stream. The absorber bottoms stream is pumped to the deethanizer, which operates at higher pressure than the absorber. The tower overhead stream is condensed with propane refrigerant to form a reflux stream composed primarily of ethane. A slip stream of the reflux is withdrawn and recycled back to the propane absorber. The deethanizer bottoms stream contains the valuable propane and heavier components, which may be further processed by conventional fractionation, as required.



Providing Innovative Solutions

- Technology evaluation and selection
- Process optimization
- Process licensing
- Revamp specialization
- Front-end engineering and design (FEED)
- Turnkey engineering, procurement, construction

Creating New Opportunities

- Gas processing and NGL fractionation
- Sulfur recovery
- Liquefied natural gas
- Syngas processing: ammonia, methanol and GTL
- Refining
- Power generation
- Water treatment