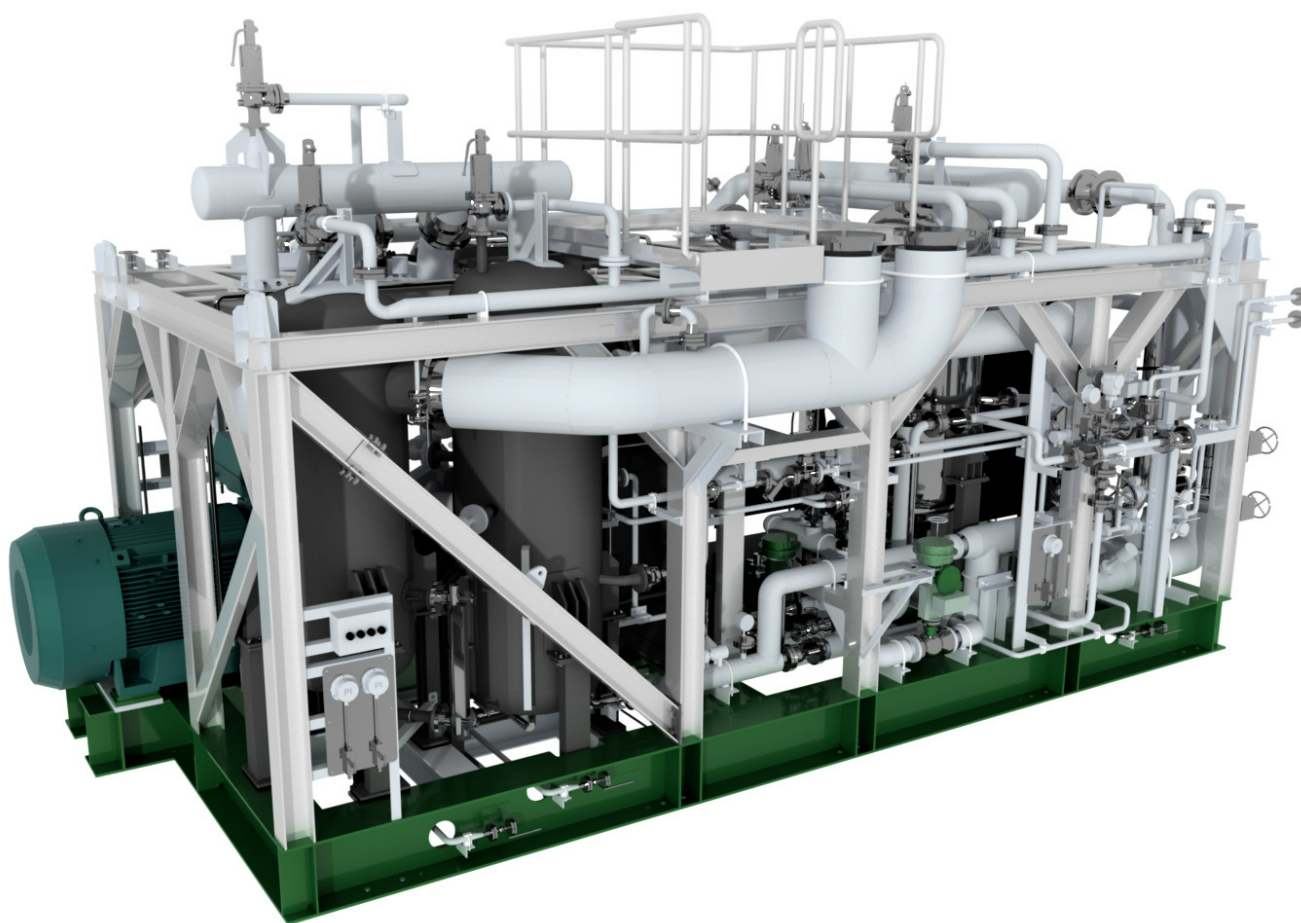




ecoVGC®

Extended reliquefaction capability. Lower cost. Greater flexibility.

Babcock LGE is a world-leading provider of cargo handling and fuel gas supply systems for the liquefied gas markets. Our environmentally focused technologies improve efficiency and enhance performance, delivering value to customers throughout the vessel's lifetime.

ecoVGC® is Babcock LGE's patented enhancement to conventional compression-based reliquefaction systems for LPG and ammonia. By extending the operating envelope of the cargo plant, it enables more challenging cargo compositions to be handled without venting, while improving refrigeration capacity and efficiency.

Dual-mode operation:

Operates either to increase refrigeration capacity and efficiency or to manage volatile and incondensable components in more challenging cargoes.

Higher refrigeration capacity:

Increases available refrigeration capacity during loading, cooldown and pressure maintenance.

Greater cargo flexibility:

Supports a wider range of cargo compositions and grade-changing operations as trading requirements change.

Extended cargo capability:

Enables ethane-rich and other challenging compositions to remain fully refrigerated when a conventional plant reaches its limit.

Reduced running hours:

More effective use of the reliquefaction plant reduces operating hours by up to 15%.

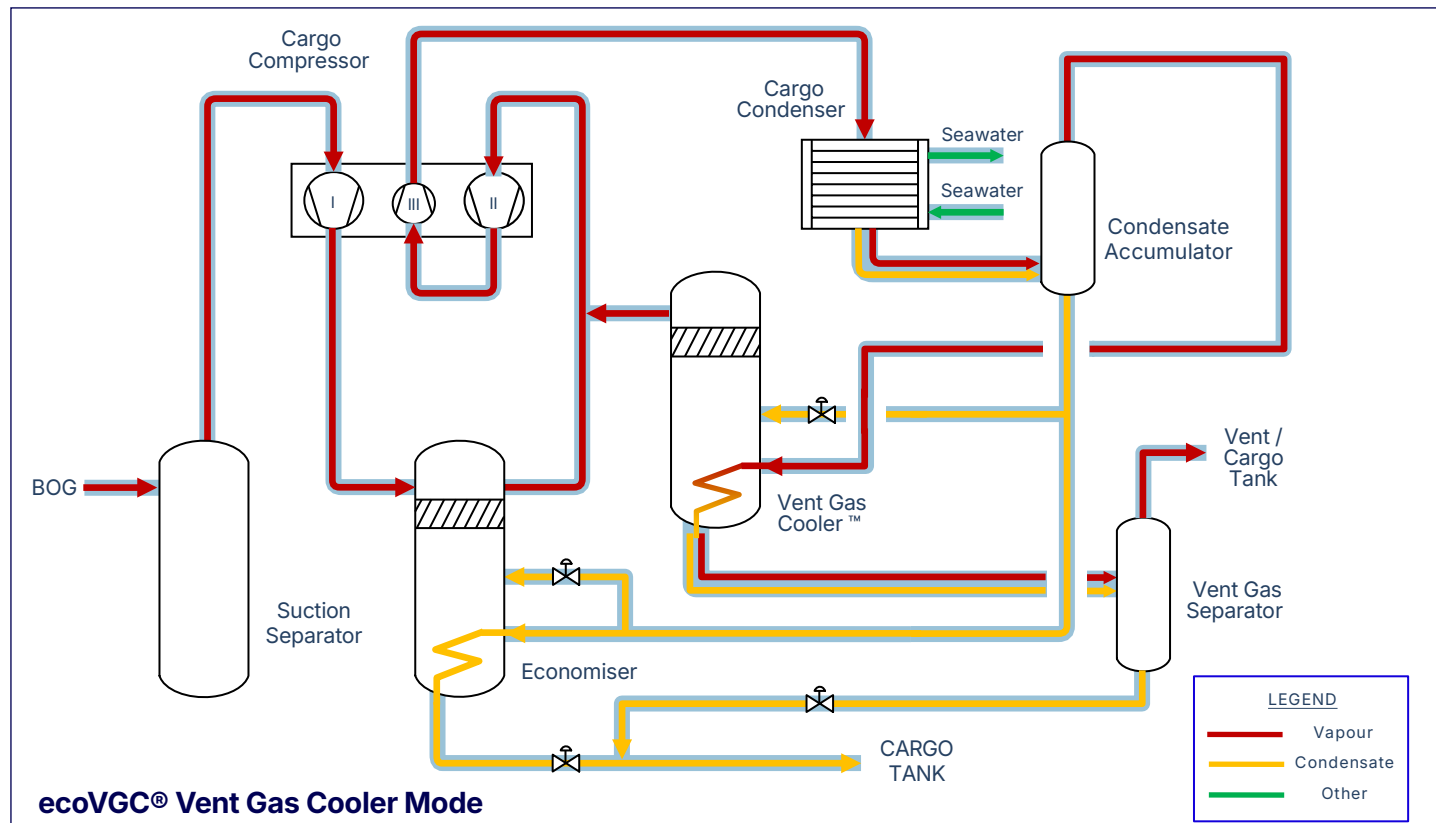
Faster cargo operations:

Additional capacity can shorten loading time by up to 20%.

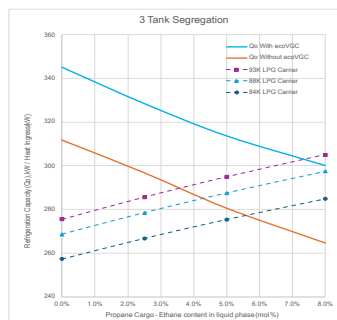
How it works

ecoVGC® adds a vent gas cooler to the conventional reliquefaction plant. Volatile and incondensable components that a standard plant cannot fully condense are cooled and returned to the cargo tank, extending the operating range of the reliquefaction system. The system operates in two modes. In Capacity mode, ecoVGC® acts as a second economiser to increase the refrigeration capacity and efficiency during loading, cooldown and pressure maintenance. In Vent Gas Cooler mode, it maintains performance with high ethane cargoes and other challenging compositions that conventional plants cannot fully handle.

Extend the operating envelope. Condense more challenging cargoes.



ecoVGC® extends usable refrigeration capacity



As ethane content increases, the refrigeration capacity of a conventional plant falls, while the heat-ingress requirements remain. ecoVGC® maintains additional capacity, helping the plant meet the duty required for fully refrigerated operation across a wider cargo range.

At 8mol% ethane in liquid phase, the demand (based on vessel size) is 285kW - 305kW. Equivalent reliquefaction capacity: conventional system vs system with ecoVGC®:

- 265kW without ecoVGC®
- 300kW with ecoVGC®

Delivering value

ecoVGC® allows the vessel to maximise reliquefaction capability across a wider range of commercial cargoes. Additional capacity can shorten loading, reduce reliquefaction running hours and expand the range of cargo compositions the vessel can carry fully refrigerated.

Condense across the range, not just the easy part.

Contact us:

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