Dual-fuel conversions: Everllence B&W ME-LGIM

An Everllence B&W ME-LGIM retrofit dramatically reduces your vessel's greenhouse gas emissions, helping you to meet current and future environmental regulations.

With emissions regulations tightening and performance optimization solutions driving competitiveness, a dual-fuel retrofit is an opportunity for shipowners and operators to implement future-proof technologies on board their vessels.

Everllence provides retrofit options to convert your existing Everllence ME-C engines to the ME-LGIM dual-fuel configuration. This enables your existing vessels to operate on methanol for the same price as a dual-fuel new-build. This helps you to ensure full compliance with emissions regulations, including EEXI, and extends the lifetime value of your assets.

Dual-fuel functionality allows you to switch between methanol and fuel oils, giving you the flexibility to optimize fuel selection. Importantly, as methanol produces exceptionally low sulphur, nitrogen oxide, and particulate matter emissions, and green methanol is 100% carbon neutral, it is an extremely practical option for meeting environmental targets, such as 2050 net-zero.

Following an Everllence B&W ME-LGIM retrofit, your specific fuel oil consumption (SFOC) will be similar and your engine rating will remain unchanged, so you will not require a MARPOL Annex VI Tier upgrade. If needed, derating and/or power limitations can be included.

Everllence handles everything involved, including design, engineering, recertification strategy, procurement, and production of retrofit components, as well as project management and consultation during installation and commissioning. We issue full installation documentation during the process, which only requires a short drydock period and minimal operational downtime.

Based on the established ME-series platform, the Everllence B&W ME-LGIM engine has accumulated over 600,000 running hours on methanol alone, demonstrating its reliability in commercial applications.

Methanol fuel

Methanol is a colorless liquid with the chemical formula CH_3OH. Green methanol can be produced in CO_2-neutral ways, such as from biomass. Green methanol synthesis uses renewable sources, like solar or wind, and biogrades CO_2 to store electricity in its chemical bonds, which can be converted into a liquid fuel.

ME-LGIM retrofit

Significantly reduce GHG emissions for easier compliance

Key benefits

- Methanol is liquid in ambient air conditions and therefore easier and cheaper to store on the vessel
- Carbon-neutral on green methanol
- SO_x reduction of 90-97%
- NO_x reduction of 30-50%
- Particular matter reduction of 90%
- Positive impact on EEXI
- Fuel flexibility with two different modes:
  - Dual-fuel operation with minimum pilot oil amount
  - Compliant fuel oil-only mode

Scope of supply

Everllence will provide design, engineering, recertification strategy, procurement, and production of retrofit components, as well as project management and consultation during installation and commissioning.

Applicable to

ME-LGIM dual-fuel configurations are compatible with the following Everllence B&W ME-C engines. If your engine is not listed, contact us for more information.

- G95ME-C9.5 & 10.5
- G80ME-C9.5 & 10.5
- S90ME-C mk. 9 & 10
- G/S60ME-C10.5
- G/S50ME-C9.5 & 9.6

Main modifications

- Cylinder covers with exhaust valves, fuel and MeOH injectors
- Methanol control blocks and adaptor blocks
- Methanol chain pipes (double-wall pipes)
- Sealing oil system
- New Everllence B&W ME_LGIM control system based on the Triton hardware (60–95 bore)
- Fuel booster and exhaust valve actuators
- Fuel valve train (FVT)

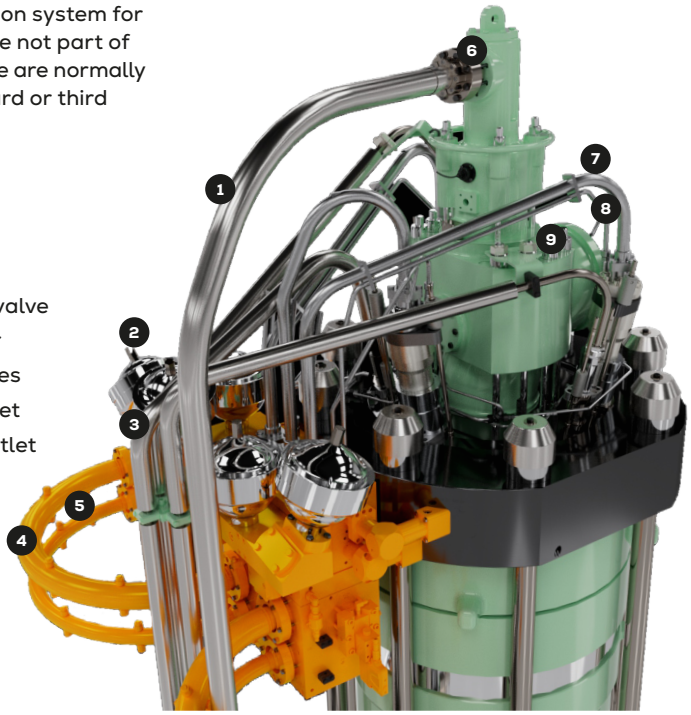
Auxiliary equipment such as methanol tank, methanol supply system, nitrogen system, and ventilation system for the double wall piping are not part of our scope of supply. These are normally handled by the owner, yard or third party EPC.

More information

If you would like to know more about how a Everllence B&W ME-LGIM upgrade can improve your operational efficiency and ROI, talk to our experts. Contact your local Everllence PrimeServ office today.

Everllence PrimeServ

Teglholmsgade 41
2450 Copenhagen SV, Denmark
P + 45 3385 1100
RetrofitDK@everllence.com
www.everllence.com/primeserv



1 Fuel booster injection valve
2 Hydraulic accumulator
3 High-pressure fuel pipes
4 Double-walled pipe inlet
5 Double-walled pipe outlet
6 Exhaust valve
7 Hydraulic oil
8 Sealing oil
9 Hydraulic nut

Installation process