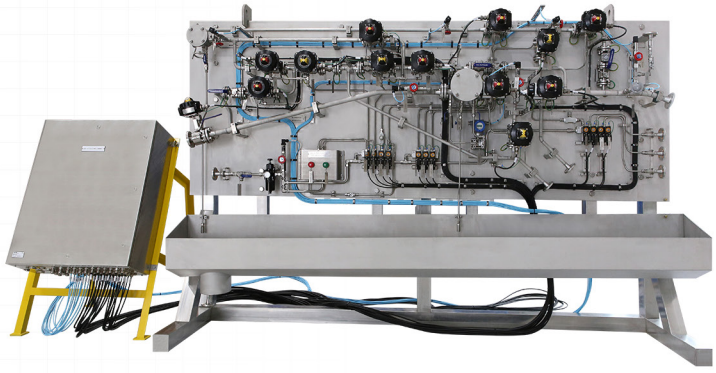
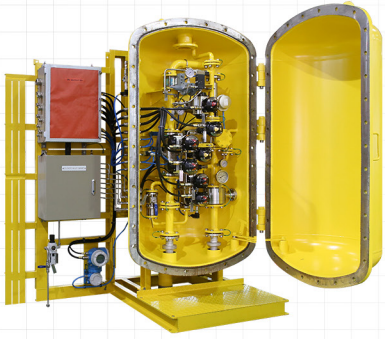
BMT

Eco-Fuel Conversion and Supply Units

- Fuel Valve Unit
- Fuel Valve Train
- Gas Valve Unit
- Gas Regulating Unit
- Hydrogen Gas Regulating Unit











SUPERLOK®

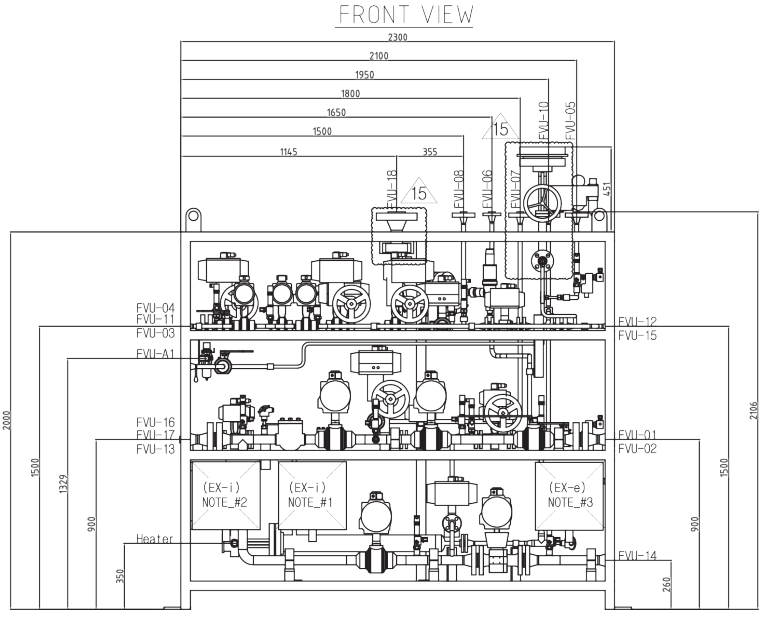
Fuel Valve Unit (FVU)

WinGD | Ammonia Fuel : X-52DF-A, X-62DF-A, X-72DF-DF-A

Features

- The world's first Fuel Valve Unit (FVU) for ammonia engines is responsible for isolating the engine from the ammonia supply system, controlling the return of ammonia to the ammonia-nitrogen separator, and connecting the nitrogen supply system.
- FVU includes a main PLC control panel so that tests can be carried out on their own for the required modes.
- In consideration of the colorless and odorless toxic gas characteristics of ammonia, valves installed in the main line through which ammonia flows were installed as welding types to minimize the risk.
- FVU includes a manual shut down valve, a purging line, a cooling water line, a pressure control valve, a safety valve, a main control panel and control cabinets for solenoid valves and sensors.





Specifications

Subject	Description
Dimension (WxDxH) / Weight (Approx.)	2520 x 1000 x 2110 mm / 1,060 kg
Media for Engine	Ammonia (NH3)
Media for Purge	Nitrogen (N2)
Design Pressure	110 bar (g)
Design Temperature	40±5 ℃
Engine Maker	WinGD

SUPPLIER APPROVAL

This is to certify that

BMT Co. Ltd.

17 Sinsojaesandan 2-ro, Jangan-eup
Gijang-gun, Busan
Republic of Korea

is approved to supply

Fuel Valve Unit Ammonia (FVU)

In accordance with the designs and operational requirements of WinGD design group 9731

With this certificate WinGD confirms that the supplier's product has passed WinGD supplier's certification process. Nothing in this certification shall be interpreted as changing the full and exclusive responsibility of the manufacturer for his products and services and related warranties.
The approval is valid for deliveries to WinGD Ltd., WinGD engine builders and WinGD authorised service partners.

This certificate is valid for 3 years from the date of approval.

After 3 years a new certificate will be issued if no quality problems have been reported. This approval may be withdrawn by WinGD without further notice if quality issues justify it.

Winterthur, July 1st, 2025

Dr. Monika Damani
Head Supply Chain Management
WinGD Ltd.

Dr. Ourania Margari
Manager Supplier Development
WinGD Ltd.

WIN GD

WinGD Ltd.
WinGD AG
WinGD S.A.

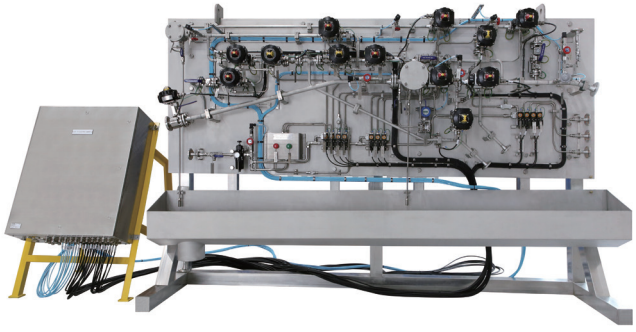
Fuel Valve Train (FVT)

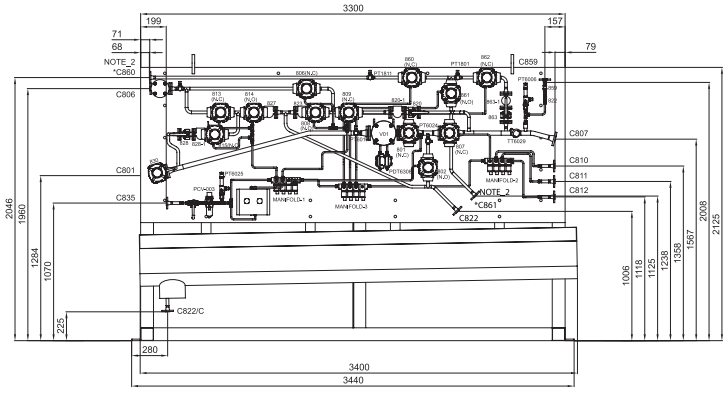
EVERLLENCE | Methanol Fuel : ME-LGIM

Features

- Fuel Valve Train (FVT) designed to stably supply the fuel that has passed the fuel supply system to the engine.
- FVT securely isolate the engine from fuel during shut down and discharge remaining fuel during abnormal operation and maintenance.
- FVT provides nitrogen purging functionalities to ensure engine safety during shut off.
- FVT includes a manual shut down valve, a fuel filter, a purging line and control cabinet for solenoid valves and sensors and there is a water line installed as an option.

Fuel Valve Train - 1 Inch Me-OH



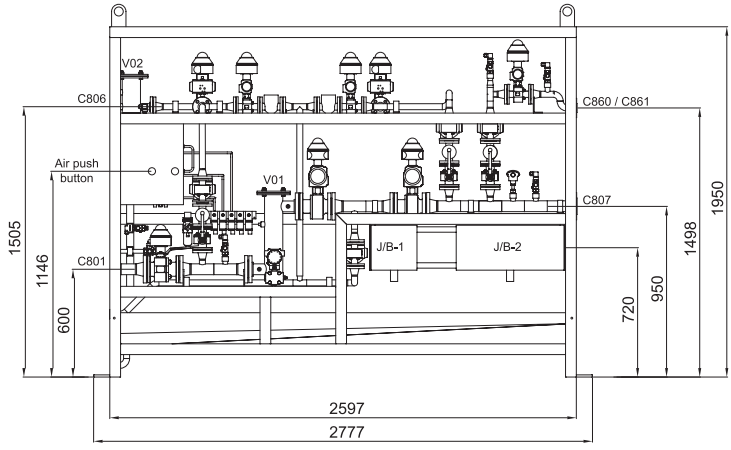


Specifications

Subject	Description
Dimension (WxDxH) / Weight (Approx.)	3440 x 2130 x 800 mm / 1,350 kg
Media for Engine	Methanol (CH3OH)
Media for Purge	Nitrogen (N2)
Design Pressure	16 bar (g)
Design Temperature	-25 ~ 60 ℃ (-13 to 140 ℉)
Line Size	1" Fuel & 1/2" N2 Line
Me-OH Flow Rate	3,500 kg/h
Engine Maker	EVERLLENCE

Fuel Valve Train - 1.5 & 2 Inch Me-OH





Specifications

Subject	Description
Dimension (WxDxH) / Weight (Approx.)	2780 x 910 x 2100 mm / 665 kg
Media for Engine	Methanol (CH3OH)
Media for Purge	Nitrogen (N2)
Design Pressure	16 bar (g)
Design Temperature	-25 ~ 60 ℃ (-13 to 140 ℉)
Line Size	1.5 & 2″ Fuel & 1″ N2 Line
Me-OH Flow Rate	19,000 kg/h
Engine Maker	EVERLLENCE

MAN Energy Solutions
Future in the making

Provisional Certificate of Approval

This document certifies that:

BMT Co.,Ltd

35, Sanmakgongdannam 11-gil, 50568, Yangsan-si, Gyeongsangnam-do, Korea

Has been granted a **Provisional Certificate of Approval** by MAN Energy Solutions for design, manufacture and supply of:

Fuel Valve Train

MeOH Fuel Valve Train for all ME-LGI engines

For MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A

Issue date: 11/04/2025

Expiration date: 11/04/2030

Certificate No.: 0917. 1

Ole Fogh

Petros Vasileiou

Fuel Valve Train (FVT)

EVERLLENCE | LPG Fuel : LGIP

Features

- It is composed of two separate units: the Supply Valve Train (SVT), which contains the supply line, and the Return Valve Train (RVT), which contains the return line.
- Two PRVs are installed to relieve pressure at the engine design pressure and to discharge entrapped fluid at the filter.
- A safety filter is installed to protect the SVT and the engine from damage in case the LFSS cleaning filter is defective.
- A control valve is installed to maintain LPG pressure at the engine during recirculation and purging.
- FVT includes a manual shut down valve, a safety filter, DBB valves, a purging line and control cabinets for solenoid valve and sensors.

LGIP SVT



LGIP RVT



Specifications

Subject	Description
Dimension (WxDxH) / Weight (Approx.)	SVT : 2700 x 780 x 2000 mm / 550 kg
	RVT : 2700 x 550 x 2000 mm / 470 kg
Media for Engine	LPG (Liquefied Petroleum Gas)
Media for Purge	Nitrogen (N2)
Design Pressure	65 bar (g)
Design Temperature	-55~60 ℃ (-67 to140 °F)
Engine Maker	EVERLLENCE

Gas Valve Unit (GVU)

WinGD | LNG Fuel : X72DF

Features

- The enclosure of Gas Valve Unit(GVU) acts as part of the double wall piping and at the same time acts as part of the ventilation system, which can supply gas to the GVU when the enclosure is ventilated.
- The pneumatic gas pressure regulating valve controls the feed pressure to the engine and the gas pressure is controlled by the Engine Control System based on the charge air pressure.
- GVU includes a manual shut down valve, a purging line, a pressure control valve, a main control panel and control cabinets for solenoid valves and sensors.
- GVU includes a main PLC control panel so that tests can be carried out on their own for the required modes.



Specifications

Subject	Description
Dimension (WxDxH) / Weight (Approx.)	2240 x 1365 x 2800 mm / 2,600 kg
Media for Engine	LNG
Media for Purge	Nitrogen (N2)
Design Pressure	16 bar (g)
Design Temperature	0 ~ 60 ℃ (32 to 140 ℉)
Engine Maker	WinGD

SUPPLIER APPROVAL

This is to certify that

BMT Co. Ltd

17 Sinsojaesandan 2-ro, Jangan-eup
Gijang-gun, Busan
Republic of Korea

is approved to supply

Gas Valve Unit
(GVU)

In accordance with designs and operational requirements of
WinGD design group 9727

With this certificate WinGD confirms that the supplier's product has passed WinGD supplier's certification process. Nothing in this certification shall be interpreted as changing the full and exclusive responsibility of the manufacturer for his products and services and related warranties.
The approval is valid for deliveries to WinGD Ltd., WinGD engine builders and WinGD authorised service partners.

This certificate is valid for 3 years from the date of approval.

After 3 years a new certificate will be issued if no quality problems have been reported. This approval may be withdrawn by WinGD without further notice if quality issues justify it.

Winterthur, May 1st, 2025

Dr. Monika Damani
Head Supply Chain Management
WinGD Ltd.

Dr. Ourania Margari
Manager Supplier Development
WinGD Ltd.

WinGD

WinGD Ltd.
WinGD AG
WinGD S.A.

Gas Valve Unit (GVU)

EVERLLENCE | LNG Fuel : ME-GA

Features

- Gas Valve Unit(GVU) is supply system valve which supplies and shut off fuel gas from the gas storage to main engine.
- GVU enables safe maintenance and leakage testing on the main engine before the engine starts operating on gas.
- In case of emergency, GVU automatically purged by nitrogen through the Engine Control System.
- GVU includes a manual shut down valve, a flowmeter, a fuel filter, DBB Valve, a purging line and control cabinets for solenoid valves and sensors.



Specifications

Subject	Description
Dimension (WxDxH) / Weight (Approx.)	3900 x 640 x 1200 mm / 670 kg
Media for Engine	LNG
Media for Purge	Nitrogen (N2)
Design Pressure	16 bar (g)
Design Temperature	-25 ~ 50 ℃ (-13 to 122 ℉)
Engine Maker	EVERLLENCE

Gas Regulating Unit (GRU)

HIMSEN | LNG Fuel : H22CDF, H27DF, H35DF

Features

- The Gas Regulating Unit(GRU) is a unit for supplying stable fuel gas to regulate and control the flow and pressure of gas.
- GRU ensures that the gas pressure is adjusted to the desired level to prevent over-pressurization.
- GRU includes filtration components to remove impurities and contaminants from the gas before distribution.
- GRU includes a manual shut down valve, a fuel filter, a flowmeter, a regulator, DBB Valve, a purging line and control cabinets for solenoid valves and sensors.



Specifications

Subject	Description
Dimension (WxDxH) / Weight (Approx.)	1530 x 1120 x 2320 mm / 1,380 kg
Media for Engine	LNG
Media for Purge	Nitrogen (N2)
Design Pressure	10 bar (g)
Design Temperature	0 ~ 50 ℃ (32 to 122 ℉)
Engine Maker	HIMSEN

Hydrogen Gas Regulating Unit (Hydrogen GRU)

HIMSEN | Hydrogen Fuel

Features

- The Hydrogen GRU is a valve system that supplies or shuts off fuel to a hydrogen engine. It is the first fuel supply system developed for testing hydrogen engines.
- The GRU includes not only a fuel supply system but also a nitrogen purge system, enabling nitrogen purging all the way to the engine through the GRU.
- The GRU is configured with separate lines to supply hydrogen to the engine's main and pre-chambers. Each line is equipped with a control valve to ensure fuel is supplied at a constant pressure.
- In addition, the GRU is equipped with a fuel filter, a nitrogen filter, solenoid valves for valve control, a control cabinet, and various sensors.



Specifications

Subject	Description
Dimension (WxDxH) / Weight (Approx.)	1650 x 570 x 2300 mm / 580 kg
Media for Engine	Hydrogen (H2)
Media for Purge	Nitrogen (N2)
Design Pressure	80 bar (g)
Design Temperature	-50 ~ 100 ℃ (-58 to 212 ℉)
Engine Maker	HIMSEN

Memo



Eco-Fuel Conversion and Supply Units