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<th>Part No.</th>
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<td>GAS FUEL SYSTEM</td>
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**GINI ENGINEERING LTD**

**CODE**: 31.04.2018

**DESIGN**: 25.01.2018

**CONSTRUCTION**: 26.01.2018

**DRAWING**: DAAD096373

**MANUFACTURING**: H

**PRODUCT**

W6-12X92DF

**GAS FUEL SYSTEM**

Gas Brennstoffsystem
SPECIFICATION which must be met:

OUTLET - Gas monitoring,istant underside
- Must not be connected to other venting pipes.
- Gas release to safe area outside of engine room.
- At the end of the vent pipe, safety devices e.g. flame arrestors must be installed according to respective class specification and requirement.

INLET - Inert gas filling fluemeter
Pipe connection. To be used / connected for maintenance of the fluemeter. A valve must be kept closed / blinded off during normal operation.

INLET - Gas supply
INERT GAS PIPE
Gas pressure. Design pressure based on G13 requirement for the selected rating and selected minimum LHV plus system pressure drop (Operating) variation via engine control system possible.
Permissible gas pressure fluctuation ± 0.5 bar (across all frequencies).
Gas flow. According to GTO.
Gas temperature. 0 - 60°C.
Note: Regarding gas temperature vs. ventilation air temperature and methods to avoid / handle condensation in the annular space, refer to the specification for connection B1 and remarks on page 2.
Pipe connection. Inner pipe connected to the gas supply line from gas storage / handling system via flange connection (please refer to the "Pipe Connection Plan").

Inert gas supply. An inert gas supply must be connected upstream to the GPR right after the master gas supply valve to enable purging of the whole system-engine piping.
Inert gas pressure. Can be selected between 3 and 7 bar (g). Once set pressure is selected, deviation of ± 10% is allowed, though not below 3 bar.
Inert gas volume engine side. Provided in table 1 on page 2.

OUTER PIPE (annular space) ventilation air outlet
Ventilation air quantity and quality. Refer to the connection B1 of "INLET - Ventilation air annular space".
Pipe connection. Outer pipe is connected to the annular space of the supply pipe via flange connection (please refer to the "Pipe Connection Plan").

Gas detection. A gas detector must be installed in the ventilation line, at a maximum distance of 2 m from the engine inlet, and has to be placed right next to the outer pipe annular space connection on the side closest to 1 furthest from the engine inlet.
Interception of gas supply. The main gas supply line to each consumer or set of consumer must be equipped with a manually operated stop valve and an automatically operated "inert gas valve" situated in series or executed as a combined manually and automatically operated valve. The valves shall be situated in the part of the piping that is outside the machinery space containing gas.

OUTLET - Gas / inert gas release, engine driving end
- Can be connected to gas / inert gas release, engine free end (connection B1), but must not be connected to other venting pipes.
- No additional valves allowed in the venting pipeline.
- Gas release to safe area outside of engine room.
- At the end of the vent pipe, safety devices e.g. flame arrestors must be installed according to respective class specification and requirement.

OUTLET - Gas / inert gas release, engine free end
- Can be connected to gas / inert gas release, engine driving end (connection B9), but must not be connected to other venting pipes.
- No additional valves allowed in the venting pipeline.
- Gas release to safe area outside of engine room.
- At the end of the vent pipe, safety devices e.g. flame arrestors must be installed according to respective class specification and requirement.

INLET - Ventilation air annular space
- Location and execution according to "7.5 Dual Fuel Safety Concept", as linked in MIM.
- Ventilation air dew point must be lower than the gas temperature at the ambient air is not sufficiently dry, and air must be supplied. Please refer to the remarks / proposals on page 2.
- Sufficient ventilation air (min. 30 air exchanges per hour) must be sucked by the extraction fan from a safe area into the annular space of ME internal and external piping.
- Volume for ventilation air on engine side refer to table 5 on page 2.
# MIDS - WinGD-X92DF - GAS-FUEL-SYSTEM (DG9727)

## TRACK CHANGES

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