

Description

The GEA Diessel water deaerator type **DIOX-M™** is based on a system of membrane modules and permits an optimum water deaeration at low operating expenses. Depending on the number of utilized modules, the vacuum applied, and the quantity of stripped gas (N₂ or CO₂), an O₂ value of ≤ 0.01 mg O₂/l in water can be obtained.

The modules are mainly consisting of a large number of microporous polypropylene fibres which are surrounded by the product to be deaerated.

The pores in the hollow fibres are only permeable for gas which is sucked off by means of a vacuum pump. The oxygen output can be improved by feeding the fibres with carbon dioxide or nitrogen. On each step, the oxygen can be reduced to less than 1/10 of its initial value.

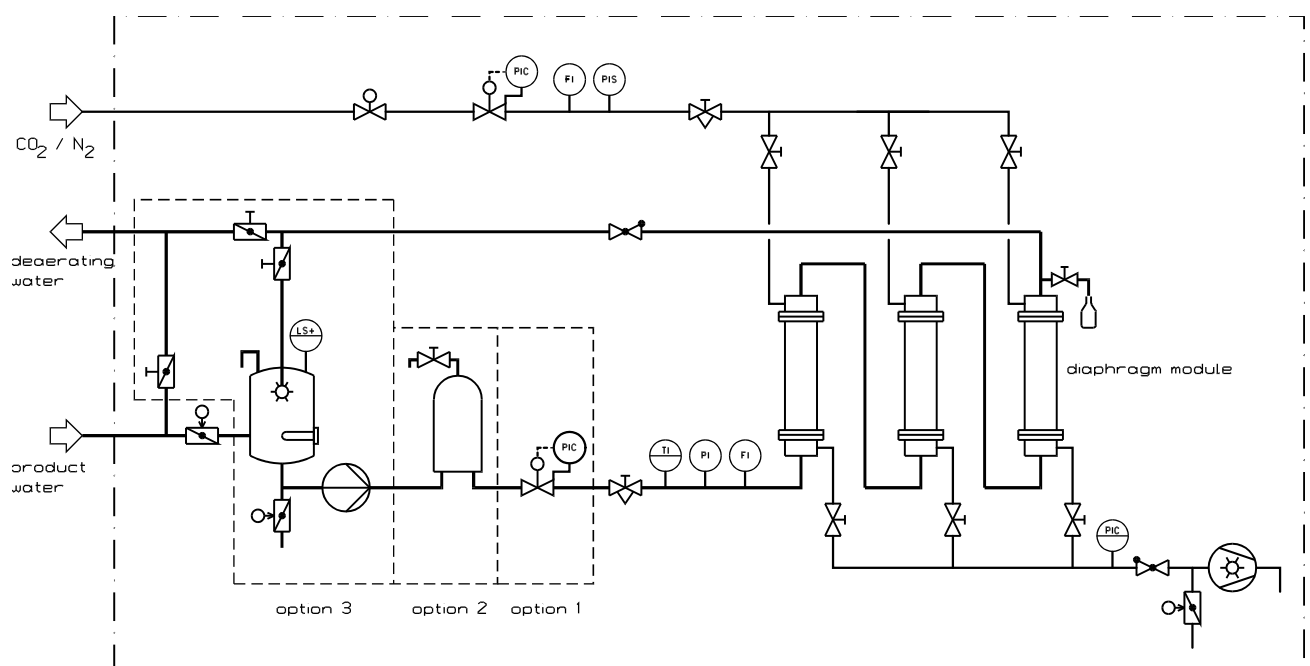
The modules are enclosed in stainless steel housings. The utilized material allows the modules to be cleaned with hot water or caustic solution (without any additives).

Advantages of the DIOX-M™ systems:

- low residual oxygen content
- simple construction
- low operating expenses
- suitable for CIP
- low pressure drop

The system components are completely installed and interconnected on a stainless steel base frame. The control panel is also arranged on the base frame and cabled

Scheme



Options

- 1) Pressure control valve, mechanically operated, to be used for water in case of fluctuating or too high admission pressures.
- 2) Filter, 10 µm, should be used if there is the risk that some particles (lime, sand, activated carbon, ...) could be included in the water.
- 3) Presettling vessel with heating cartridge for independent cleaning by means of hot water or chemicals.

Technical Data

Housing material	1.4404 (AISI 316 L)
Material of the hollow fibres	Polypropylene
Material of seals and gaskets	EPDM
Water connections	DN 40 - DN 80 (dependent on the flow rate)
Gas connections	DN 25
Flow rate	50, 100, 150, 250 or 400 hl/h (different flow rates on request)
Product pressure	
during production ($\leq 40^{\circ}\text{C}$)	≤ 7 bar
during cleaning	≤ 2.3 bar
Product temperature	
during production	40°C max.
during cleaning	80°C max.
Pressure drop per module	0.1 – 0.4 bar (dependent on the flow rate)
Mains supply	230/400 V, 50 Hz

Attainable values of residual oxygen:

