

Containerized Water treatment system

Denitrification unit

ClearFox[®] DENI



General Data:

1. Design pressure: 50 mbar (gravity)
2. Design temperature: 45°C
3. Operating pressure: 20 mbar (gravity)
4. Operating temperature: 30°C
5. Flow rate: 25 m³/h
6. Maximum capacity: 30 m³/h

Connections in general:

This data sheet is of a general nature. All data for flanges and/or nozzles are to be taken from the respective specific drawings and are individually coordinated as required.

In individual cases, the sizes of the connections may deviate from the standard values shown. These values are indicated in the drawing(s) to be prepared and can be adjusted individually as required for each plant.

If, depending on the connection, no specific design is required, general specifications or designs apply.

Description of the denitrification module:

Clearfox® denitrification modules are fully equipped liquid storage tanks in a high-quality PE form. The shape of the tank and most of the equipment is produced by rotational molding from a single piece of highly resistant polyethylene.

All equipment, such as level sensors, optional aeration membranes, are pre-installed in a cubic tank to provide a high-performance denitrification for wastewater treatment.

The typical application is the storage of inflowing and screened wastewater as well as sludge storage. For a trouble-free operation of the denitrification, only mechanically cleaned wastewater ($\leq 3\text{mm}$, on-site) may be fed into the buffer.

If the denitrification is equipped with an optional aeration system, the microorganisms can already start to grow in the denitrification and here slightly reduce the carbon concentration of pre-treated wastewater of any kind, industrial or municipal.

The modules are designed for installation in HC sea containers (e.g., Clearfox® container modules).

The connections to the customer's wastewater are designed for quick and easy plug & play connection on site.

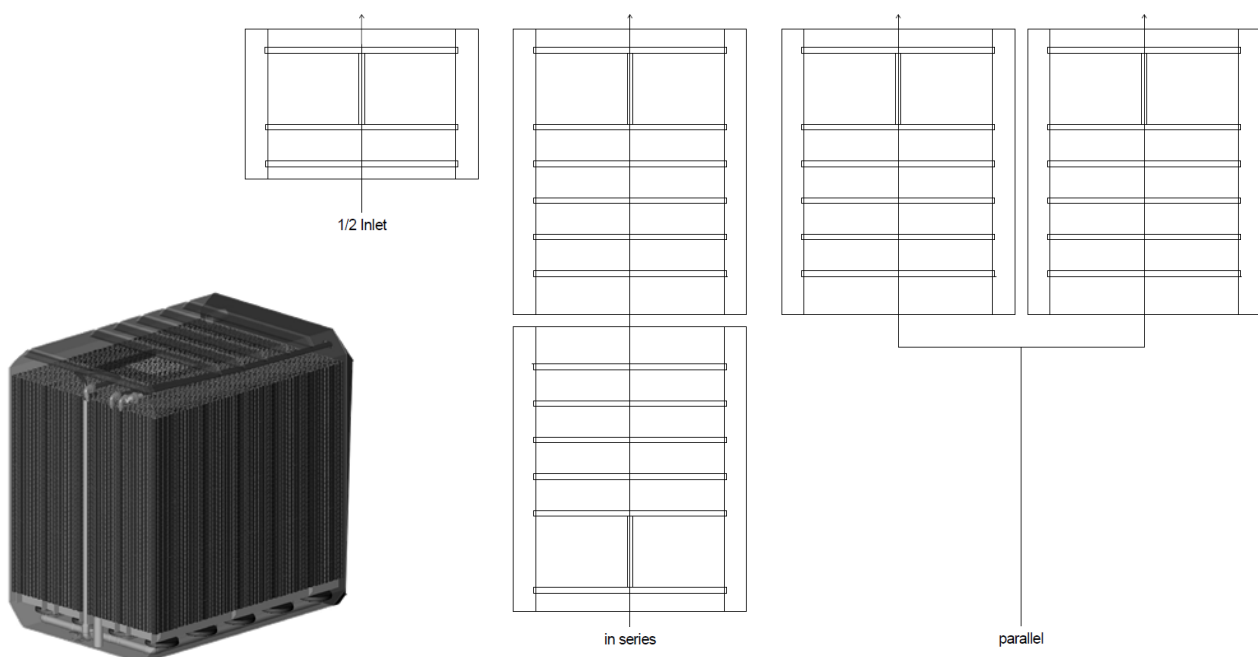
Up to two modules can be connected in series. If several modules are connected in parallel, the wastewater level is hydraulically balanced so that the same water level is available in all buffer modules. The scope of delivery of the aerated denitrification includes a blower (incl. for aerated buffer), which is adapted to the number of modules and the type of connection.

If required and after consultation with PPU Umwelttechnik GmbH, the non-aerated denitrification can also be used as a secondary sludge storage tank.

The modules are adapted according to customer requirements (inlet concentration, wastewater demand).

The design is carried out according to the guidelines of the DWA.

Test reports and certificates for statics, origin, DWA guidelines are available on request.



Specification:

Module:	AP 13000	2x AP 13000
Tank:	13000 l Tank	26000 l Tank
Denitrification module:	50% of HC Container	100% of HC Container
Measures: (l, w, h) in cm	2.74 x 2.10 x 2.57	2x (2.74 x 2.10 x 2.57)
Required space:	5.75 m ³	2x 5.75 m ³
Transport weight:	650 kg	2x 650 kg
Max. operation weight:	13600 kg (filled with water)	27200 kg (filled with water)
Inlet connection by gravity or feed pump pressure line (with possible height):	DN 100 (at 2.40 m)	DN 100 (at 2.40 m)
Possible Outlet connection (with possible height):	DN 100 (at 2.40 m)	DN 100 (at 2.40 m)
Roof Opening:	60 cm x 60 cm	60 cm x 60 cm

Application:



denitrification installation into a sea container

PPU version: 20 feet High Cube sea container

PPU Umwelttechnik GmbH installs 2x denitrification modules in one reinforced sea container. The two denitrification modules are connected in series. The container has ready mounted flanges IN: DN100-PN10, OUT: DN100-PN10, height = 2,45m, The sea container is equipped with max. 3 access openings 600x600 mm with lids and a foam outlet pipe and completes this version to a real plug & play system.

Benefits for Clearfox denitrification modules

Fast startup, cost saving installation, small footprint
Modular system, adaptable at every application
High performance with high quality, Made in Germany
Flexible against underload and overload
Industrial as well as municipal wastewater
Stable and very robust process technology