

DeGasso[®] CO₂

In-line CO₂ aerator with countercurrent fan



DeGasso CO₂ aerators aerate the whole water stream and reduce the CO₂ content to the desired level. Water volumes from 500–13 300 litres/min.

Process information – water regeneration solutions

Many onshore facilities have become aware of the advantages of water regeneration. Effective CO₂ removal lies at the heart of such solutions. Under normal feeding conditions, the water supply to the tank can be reduced by 60% using CO₂ aeration. Our statistics are good and show CO₂ levels approaching 3 mg/litre water after aeration. This makes it possible to design the system so that it meets regulatory requirements.

Effectiveness

DeGasso CO₂ aerator removes CO₂ to levels approaching 3 mg/l (after aeration). DeGasso CO₂ takes water from the centre of the tank where the water is most heavily impacted and the carbon content is highest. For effective carbon removal, the aerator is combined with VarioStreamer, which ensures correct flow pattern inside the tank.

Frost and cold issues

Effective CO₂ aeration requires adequate contact between air and water, which makes the water colder during the winter season. In our planning of CO₂ aeration systems, we take account of energy consumption. We are aware of the

challenge associated with ice formation in aerators due to the cooling effect of the water on very cold days. DeGasso CO₂ aerators are adapted for preheating the air that passes through, which means that we can plan a solution according to the conditions.

Scale and bacterial growth

DeGasso CO₂ is a cascade aerator, and does not have the same problems with scale and bacterial growth as aerators with biofilm carriers.

Nitrogen saturation and tank hydraulics

DeGasso CO₂ is designed so that the aerated water supplied to the tank does not contain air. That is why the VarioStreamer[®] nozzle is used to create the best possible flow conditions inside the tank, with the water being pushed vertically to all levels.

Documentation

DeGasso CO₂ was tested in an industrial R&D project in collaboration with Mainstream Norway, and the tests were documented by the Norwegian Institute for Water Research (NIVA) and the University of Nordland (UiN).

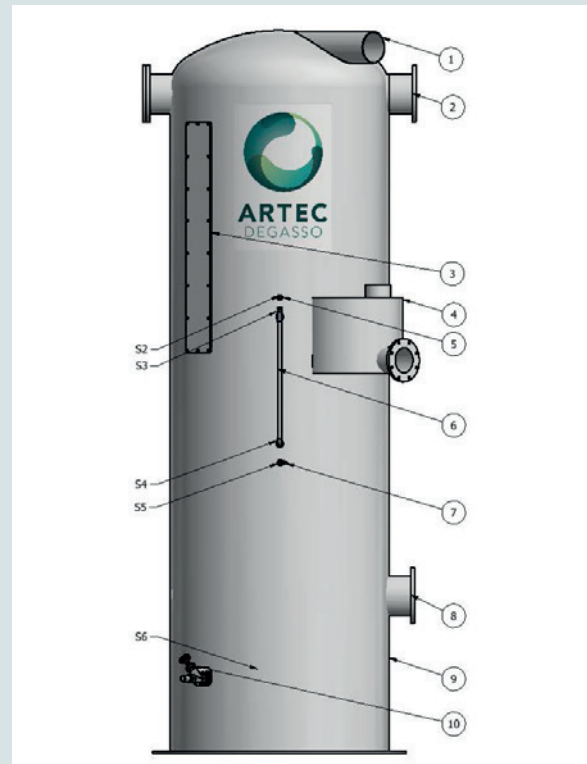


ARTEC
AQUA

DeGasso[®] CO₂ aerator

COMPONENTS

1. Air discharge.
2. Water inlet, through the width of the tank with a blind flange at one end for inspection and cleaning.
3. Removable cover.
4. Air intake – Overflow.
5. Plug.
6. Level gauge.
7. Pressure transmitter.
8. Outlet for aerated water.
9. DeGasso[®] CO₂ glassfibre tank.
10. Drainage.



A water volumeter is recommended and can be delivered together with DeGasso[®] CO₂ for regulation of the water volume. Should be installed in front of the inlet valve.

A standard delivery of DEGASSO[®] CO₂ AERATOR NORMALLY INCLUDES:

- Bottom drain valve
- Volumeter
- Fan
- Frequency converter for fan
- Pressure transmitter for level gauging
- Level glass

The aerator is operated by a fan that ensures aeration based on the countercurrent principle. The fan works by suction to create a partial vacuum and reduce nitrogen oversaturation in the tank. It can be controlled, if necessary, by use of a controller, PLC or frequency converter.

- Operating temperature: 0–30° C
- Maximum pressure: 0.05 barg
- Maximum vacuum: –0.05 barg

Connection pipes and threaded connections									
Pos.	Description	DeGasso [®] CO ₂ 600	DeGasso [®] CO ₂ 800	DeGasso [®] CO ₂ 1000	DeGasso [®] CO ₂ 1250	DeGasso [®] CO ₂ 1700	DeGasso [®] CO ₂ 2000	DeGasso [®] CO ₂ 2500	DeGasso [®] CO ₂ 3000
S-2	Pipe connector for pressure gauge/ transmitter	1"	1"	1"	1"	1"	1"	1"	1"
S-3	Pipe connector for level gauge	1"	1"	1"	1"	1"	1"	1"	1"
S-4	Pipe connector for level gauge	1"	1"	1"	1"	1"	1"	1"	1"
S-5	Pipe connector for pressure gauge/ transmitter	1"	1"	1"	1"	1"	1"	1"	1"
S-6	Pipe connector for drainage	1"	1"	1"	1"	2"	2"	2"	2"
In	Inlet DN	125	150	200	250	300	400	500	2x400
Out	Outlet DN (closed tank)	125	150	200	250	300	400	500	600
Capacity l/min.		500	900	1,450	2,300	4,250	5,950	9,400	13,350
Material		Glassfibre	Glassfibre	Glassfibre	Glassfibre	Glassfibre	Glassfibre	Glassfibre	Glassfibre
Diameter		600	800	1,000	1,250	1,700	2,000	2,500	3,000
Total height in mm		3,320	3,630	4,150	4,545	5,185	5,700	6,800	7,400