



## SOLVOX® cone. Pressure dissolver for fresh and sea water.

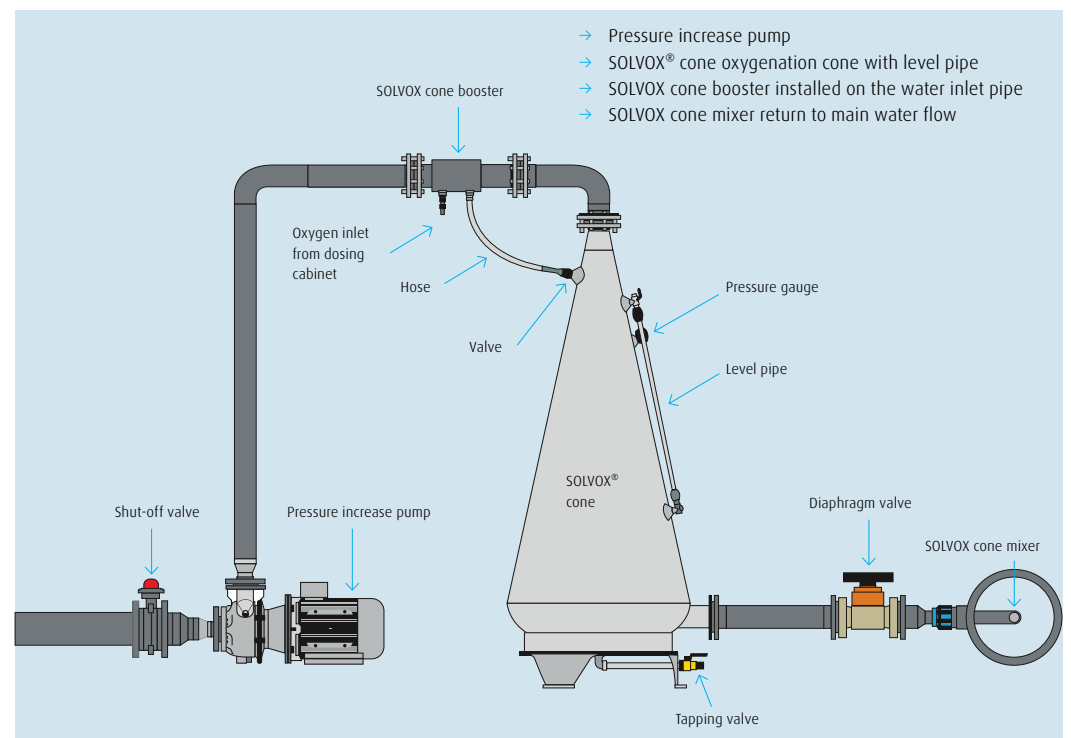


**Introduction** Global demand for fish is rising rapidly and – with it – the need for fish farming. Inland aquaculture offers a number of environmental benefits, helping to conserve dwindling natural fish stocks and protect marine ecosystems through the reconditioning of contaminated water. High stocking densities in intensive fish farms present a number of challenges, including the need to increase the oxygen supply into the water.

As a trusted, long-standing partner of many aquaculture companies, we have developed a number of innovative oxygenation solutions such as our SOLVOX® cone pressure dissolver to significantly increase the oxygen concentration in a bypass water stream.

**Description** SOLVOX cone is a pressure dissolver cone designed to increase the concentration of oxygen in water. Ideal in particular for freshwater fish farms, it is made from corrosion-resistant glass-fiber-reinforced plastic (GRP) with high-quality stainless steel fittings. Classified as a pressure vessel according to the European Pressure Equipment Directive (PED), this cone is CE marked. Various SOLVOX cone design innovations achieve transfer efficiency rates close to 100%.

A complete SOLVOX cone installation consists of:



## Installation & operation

In general, only part of the total water flow into the fish tanks needs to be saturated with oxygen using SOLVOX® cone. When oxygen is injected, the gas volume inside the SOLVOX cone expands. The water level inside the cone is clearly visible on the level indicator so the operator can quickly and easily adjust settings in line with current needs. Oxygen dissolving capacity mainly depends on water flow, temperature and working pressure. The highly oxygenated water leaving the SOLVOX cone is then fed back to the main water stream to ensure a suitable supply of oxygen to the fish tanks. Standard SOLVOX cone installation includes a SOLVOX cone booster as shown in the above graphics: Oxygen is re-injected from the head-space of the cone into the water inlet. This increases oxygenation capacity significantly. In addition, the use of SOLVOX cone booster allows a higher water flow of up to 125% of nominal flow through the cone, thus increasing oxygenation capacity accordingly.

## Optional equipment

When highly oxygenated bypass water from the cone is mixed with the main water flow at low pressure, a SOLVOX cone mixer device improves mixing performance and prevents degassing of oxygen after decompression. SOLVOX streamline can also be installed in round tanks in order to ensure an even distribution of oxygenated water throughout the entire tank. SOLVOX dosing cabinet oxygen control cabinets are available for optimal operation and oxygenation. These cabinets can be easily connected to existing automatic oxygen control systems.

## Benefits

- High oxygen dissolving efficiency
- High oxygen concentrations attainable
- High energy efficiency

## Technical data

	SOLVOX® cone 60	SOLVOX® cone 110
Water flow rate (nominal)	60 m <sup>3</sup> /h	110 m <sup>3</sup> /h
Overall height	2440 mm	2710 mm
Gross volume	610 liters	1167 liters
Footprint diameter	1140 mm	1350 mm
Weight (empty)	170 kg	210 kg
Weight (filled with water)	approx. 750 kg	approx. 1350 kg
Water inlet connection	DN 100	DN 150
Water outlet connection	DN 100	DN 150
Maximum operating pressure	3.8 bar (g)	3.0 bar (g)

## Capacity\*

### SOLVOX cone 60 and cone booster 60 at max. working pressure 3.8 bar (g)

Temperature °C					
5	10	15	20	25	30
10.8	10.0	9.3	8.7	8.2	7.7

### SOLVOX cone 110 and SOLVOX cone booster 110 at max. working pressure 3.0 bar (g)

Temperature °C					
5	10	15	20	25	30
15.8	14.7	13.6	12.8	12.0	11.3

\* Oxygen dissolving capacity in kg/h in fresh water at nominal flow rate using pure oxygen (> 99.5% purity)

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