

---

## Dosing cabinet.

For optimal dosing of oxygen.

---



### Purpose and method of operation

Fish grow best at a constant oxygen level in the tank. The consumption varies according to fish size, feeding and level of activeness. To maintain a constant oxygen level as possible, different amounts of oxygen have to be dosed at different times. The AGA dosing cabinet is designed to do just that. It has been designed with simplicity, safety and flexibility in mind. The dosing cabinet is designed to work with our dissolvers.

The dosing cabinet controls and distributes the oxygen from the distribution network to the tank using the system's own PLS. It has one distributor for the main dissolver and one for emergency purpose.

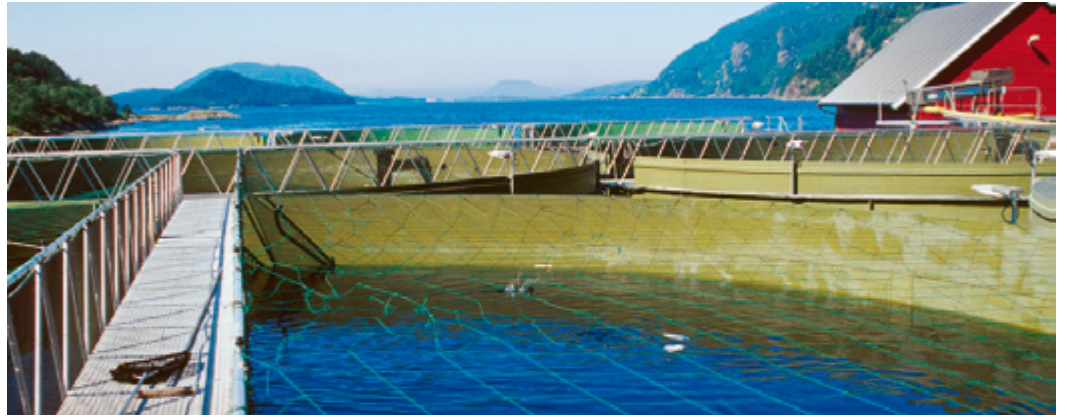
The oxygen routed to the dissolver is dosed in two rotameters. One of the rotameters doses for normal consumption, remaining constant round the clock. The other rotameter is connected in series with a solenoid valve. This valve is controlled by the output saturation of the tank. The valve opens/closes the additional oxygen supply in order to maintain the desired level of saturation in the tank. This way the oxygen level for the fish can be kept constant round the clock, while keeping oxygen consumption as low as possible.

When using solenoid valves it is important to programme the regular and additional oxygen supplies correctly. Since the oxygen need varies it is important to fine-tune the regular oxygen supply in order to keep the oxygen dosing as stable as possible. The cabinet can also be fitted with proportional valves.

When the oxygen level of the water is particularly low, the emergency solenoid valve will open. The valve distributes oxygen to the water using perforated hoses, ceramic stones or similar. The amount is preset by means of a needle valve. The solenoid valves can also be controlled by the power supply alone and open automatically in the event of a power cut. This cabinet is normally connected to the customer's PLS, which again controls the solenoid valves.

The illustration above shows a cabinet for three tanks, with distribution for regular oxygen and emergency oxygen. This cabinet has a separate pressure regulator for emergency oxygen (optional extra).

The dosing cabinet consists of a waterproof cabinet in plastic, IP56, with an acrylic glass door. It has shut-off valves for incoming oxygen, a regulator for oxygen to the dissolver, rotameters with needle valves, a solenoid valve for additional oxygen (closed when no power supply), return stop valves, a solenoid valve (open when no power supply) and a needle valve for emergency oxygen.



Special needs? We offer tailor-made solutions.

All the solenoid valves are of industrial quality, IP65, for 24/230V and have been degreased for oxygen use. The cabinet can be supplied with a separate pressure regulator for emergency oxygen if required. It is connected to the distribution network with a 12 mm copper pipe for capillary soldering. Soldering must be carried out using root protecting gas to prevent soot particles from polluting the pipes. Oxygen for use by the dissolver and emergency supply is connected using 10 mm oxygen hoses. All penetrations to the cabinet are fitted with watertight rubber nipples. We recommend using a fixed copper or acid-resistant distribution network. For marine installations we recommend using acid-resistant pipes for the standard distribution network. We also recommend regularly checking the dosing cabinet for leaks. Contact us to obtain a service agreement offer!

The standard cabinet is supplied with dosing equipment for one, two or three tanks. We can also supply special cabinets upon request.

### Safety first

AGA always focuses on safety and quality when constructing and choosing components for its dosing cabinets. Fires in dosing cabinets can happen. We advise all customers to attend our safety courses in order to focus on safety and the use of oxygen gas. Please contact us for more information!