

## ➤ Process description of aeration/deaeration plant L251, max. throughput 250 m<sup>3</sup>/h



*The figure shown here may contain special accessories*

Aeration and deaeration of drinking water reservoirs is necessary for pressure equalisation as the water level in the water chamber varies. The air streaming into the reservoir must be filtered sufficiently to ensure it is free of dust, pollen and other pollutants.

This is achieved by means of an air filter unit charged on both sides with natural air exchange. A prerequisite is air exchange exclusively via the provided aeration and deaeration plant. This means the water chamber must be separated from the operation building and also all other air openings to the water chamber must be reliably closed.

The air sucked in is ambient air that is routed through a pipeline into the operation building where it is cleaned by the air filter unit prior to being discharged directly into the water chamber.

The plant must be easily accessible for filter replacement. Measures must be taken for discharge of condensate and protection of the structure in case of operational troubles.

The plant design must be in accordance with DVGW Worksheet W 300-1.

The individual components of the aeration/deaeration plant L251:

The ambient air is sucked in, or the displaced air blown out respectively, via an **attack-proof louvre** or a **supply air chimney**. The sturdy design provides a protection against wilful damage and vandalism. The louvre anchors are accessible from the building inside only.

The **air line** is airtight, buckling resistant and distortion-free and laid with a slight slope towards the air filter unit so that the produced condensate runs off via the condensate outlet. All connections are **flexible connections** for easier installation.

If required, a **safety valve** can be used to protect the structure in case of operational troubles, for example a pipe break.

The **air filter unit** is installed into the air line. The air filter unit houses the filter for suspended matter; it is filter class H13 and achieves a separation degree of up to 99.99% in accordance with DIN EN 1822 for optimal supply air purification. The filter consists of a germ-killing material that ensures the drinking water hygiene even under high loads and air moisture. The condensate is reliably discharged via a condensate drain with ball valve installed in the air filter unit.

A pressure transducer controls filter pollution. The pressure differential is measured upstream and downstream of the filter and shown as a four-digit display value. The permissible working pressure is reported by a potential-free changeover contact. Connection to a telecontrol plant or alarm system is optionally possible.

All parts (except the filter material) are made of austenitic **1.4307 stainless steel**. All welding work is executed in the supplier's factory under an inert gas atmosphere with subsequent pickling and passivation in an acid bath.

The design of the entire construction is such that only easy to mount screw connections have to be used on site. Filter replacement and potential cleaning work can easily be carried out.

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