

## ➤ Process description of aeration/deaeration plant L361, max. throughput 720 m<sup>3</sup>/h



*The figure shown here may contain special accessories*

Aeration and deaeration of drinking water reservoirs with filtered air is achieved by means of a three-stage ventilation system 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 all other air openings to the water chamber must be reliably closed.

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

The air sucked in is ambient air. The plant must be installed in the operator building and be easily accessible. Measures must be taken for discharge of condensate and protection of the structure in case of operational troubles.

The individual components of the aeration/deaeration plant L361:

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 insect screen serves as first filter stage and prevents the ingress of small animals, insects and organic coarse material, such as tree leaves. The louvre or supply air chimney and following air line are **flexibly connected** for easier installation.

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 can run off.

The air filter unit is installed into the air line. The pre-filter installed in the air line is filter class ISO ePM10 75% in compliance with EN ISO 16890 and serves as second filter stage. The pre-filter is required to increase the lifetime of the subsequent **suspended material filter** as third filter stage. This filter is filter class H13 with a separation class H13 of at least 99.99% in compliance with DIN EN 1822. Both filters consist of a germ-killing material that ensures the drinking water hygiene even under high loads and air moisture.

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 so that connection to a telecontrol plant or alarm system is optionally possible.

The condensate from the air line and air filter unit is discharged by two condensation water drains with ball valve.

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

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.

## HUBER SE

Industriepark Erasbach A1 · D-92334 Berching  
Phone: + 49 - 84 62 - 201 - 0 · Fax: + 49 - 84 62 - 201 - 810  
info@huber.de · Internet: www.huber.de

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