

## AS-STRIP Aeration Tower



**Aeration towers are inexpensive, structurally simple and functional pieces of equipment that can be advantageously used for pre-treatment of raw water in processing it to drinking water, all this without any chemicals used.**

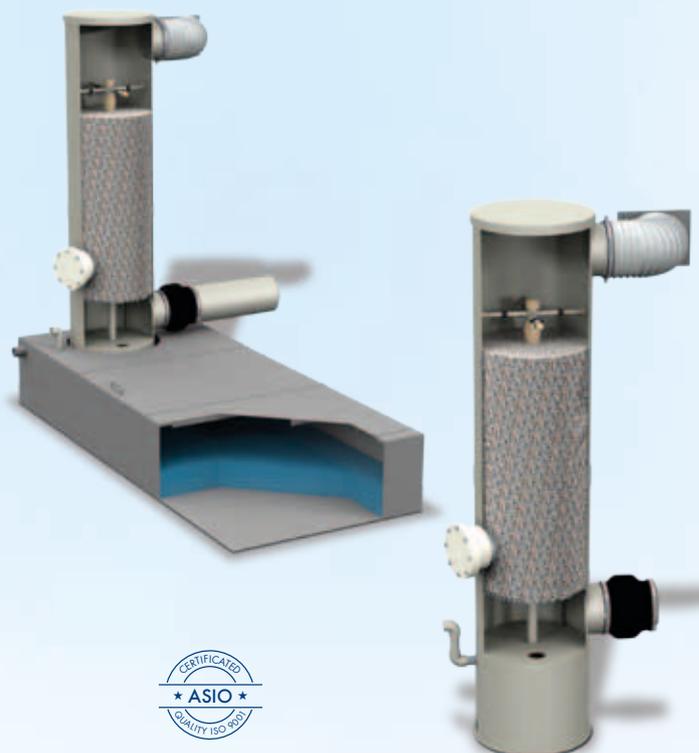
In particular, the equipment will find its use in pre-treatment of underground water sources usually requiring only minimum oxygen concentrations. In the connection to the rock environment, this influences the presence of dissolved forms of iron ( $Fe^{2+}$ ) and manganese ( $Mn^{2+}$ ) that cannot be effectively removed from water in this oxidation state.

The aeration tower works as a trickle bed (stripping) column in a form of a high cylindrical vessel, where the column packing is represented by specially shaped plastic rings. Raw water is pumped to the tower top, from where it is trickled by the use of spraying nozzles over the packing of rings. By gravity, the water continues to the aeration tower bottom. On the packing surface, the water stream is dispersed; the water wets the surface and the water-air phase interface is maximized in this way.

The air stream is supplied into the aeration tower space by a powerful fan, which results in the maximum saturation of water with oxygen. The present iron is thus oxidized to its insoluble form ( $Fe^{3+}$ ) that can be separated from the treated water (e.g. on sand filters). In addition, undesirable gases (such as radon gas) can be displaced as well. Their concentrations in underground water, often increased, are limited with the current legislation.

AS-STRIP			
Type size	Name	Water optimal flow rate [litres/s]	External dimensions $\varnothing$ L/H [mm]
315	AS-STRIP 315	up to 1	$\varnothing$ 315/1500
450	AS-STRIP 450	up to 2.5	$\varnothing$ 450/2210
700	AS-STRIP 700	up to 4.5	$\varnothing$ 700/3310

AS-STRIP – Accumulation Tank			
Type size	Name	Accumulation volume [m <sup>3</sup> ]	External dimensions LxWxH [mm]
315	AS-STRIP accumulation 1	1.0	2000/1200/600
450	AS-STRIP accumulation 2	2.0	3200/1400/600
700	AS-STRIP accumulation 3	3.0	3400/2000/600



- ASIO Ltd.** Kšírova 552/45, 619 00 Brno, Czech Republic  
 Phone: +420 548 428 111  
 E-mail: asio@asio.cz, www.asio.cz