



# vertECO® by alchemia-nova

vertical constructed ecosystem for  
greywater treatment

## ABOUT vertECO®

vertECO® technology treats waste/greywater within a vertically constructed wetland. With the employment of specific plant species in a special sequence the cleansing of polluted water is encouraged through microbiological activity occurring in the root-zone. This cost-effective wastewater treatment solution provides high contaminant removal rates with low energy consumption.

Best suited for buildings with high water usage and green areas, such as hotels, golf courses, apartment blocks etc. Improved microclimate lowers indoor climate conditioning needs, saving energy, while the attractive design demonstrates a commitment to sustainability. vertECO® technology allows the choice of indoor or outdoor installations, providing a water treatment combined with green aesthetics.



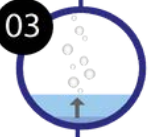
## HOW IT WORKS



01 Greywater is pumped to the uppermost of the rows of the vertical green wall system



Water flows underground and horizontally through each level. The microbial conversion processes at the plant roots assist in the removal of contaminants by converting them into available nutrients taken up by the plant. Hence the water is purified.

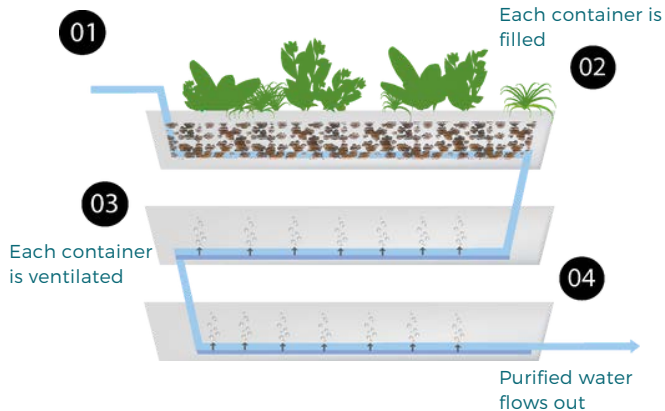


03 Due to the special ventilation, vertECO® also works odourless indoors, but can also be used outdoors.



04 The purified water flows into hidden tanks and is stored for further use, e.g. for irrigation, flushing or washing laundry.

Wastewater flows in at the top



## CONTACT US

Please contact us to find out how vertECO® could be the perfect solution for wastewater management in your operation:

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## ABOUT alchemia-nova

alchemia-nova is an independent research company based in Vienna, Austria and Thessaloniki, Greece, that focuses on sustainable development and innovative solutions in the fields of systemic thinking, bioeconomy, water and Nature based Solutions. We conduct research and develop projects aimed at creating a regenerative, circular economy that minimizes waste and maximizes resource efficiency. We offer consulting services, workshops, and educational programs on the above topics, to help spread knowledge and promote sustainable practices.