

## **SMOG FREE TOWER AS A CLEAN AIR TECHNOLOGY FOR POLLUTED CITIES**

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One of the main problems of the world’s largest cities is smog. It not only has a negative impact on health but also causes cardiovascular and respiratory diseases. To solve this problem, Daan Roosegaarde from Rotterdam created the Smog Free Tower. The Smog Free Tower is the first structure in the world designed as a large-scale and transformative air purification system to reduce harmful particulate matter in the atmosphere.

The device is solar-powered and functions similarly to a vacuum cleaner, drawing in dust and pollutants and releasing clean, purified air in return. This process allows people to breathe air free of toxins through the mechanism of air ionization. Using ionization technology, the project is able to purify up to 30,000 cubic meters of air per hour, minimizing electricity consumption, which is equivalent to the energy consumption of an electric kettle or coffee maker. As a result, the air around the tower becomes up to 75% cleaner than in other parts of the city.

Air purification is not the only feature of this innovative structure – it creates jewelry from smog without releasing any emissions at the end. It uses the smog particles that have been filtered, compressing them into cubes. Each cube contains smog collected from 1,000 cubic meters of air. According to the creator of the tower,

the purpose of this project was to make smog “tangible for humans.” (Roosegaard, n.d.). After all, it depends on humans how clean the air they breathe today is, and how clean it will be for future generations.

**Reference:**

Roosegaard, D. (n.d.). Smog Free Tower. Studio Roosegaard. Retrieved from <https://www.studioroosegaard.net/project/smog-free-tower>