

CASE STUDY

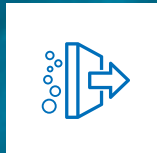
BURGERS' ZOO



Sustainable
solution



Optimal
air quality



Protection
against fine
dust

No fewer than 1.1 million visitors dive into 8 million liters of water every year, go on an adventure in the indoor jungle, and admire vultures in the desert. There is plenty to experience in the 45-hectare zoo at Royal Burgers' Zoo! The park distinguishes itself from other zoos by its eco-displays, where large-scale natural habitats are recreated, and visitors become part of nature and the animals.

Burgers' Zoo has been a believer in sustainable entrepreneurship for over 100 years and holds the Green Key Golden Award, which demonstrates that they use energy and water responsibly and operate in an environmentally friendly manner.

“ The Golden Award from Green Key proves that we use energy and water responsibly. ”



The Challenge

Diversity of eco-displays, reliability, and energy savings

Frank Simon has been the Technical Manager at Burgers' Zoo for almost 10 years. "Animal welfare is a top priority, but the welfare of our visitors and staff is also very important. We use the best equipment suitable for the different conditions and specific requirements within each enclosure," says Simon. "A tropical rainforest, a Mexican-American rocky desert, a savanna, or an indoor mangrove—each eco-display requires different air treatment. And of course, the various catering areas. The challenge in our technical installations is not just the diversity of eco-displays. Reliability, energy savings, and ultimately the TCO calculation are important factors." This is a challenge that Burgers' Zoo is tackling together with Maessen Technical Installations (MTI) and IFB Filtertechnik.

“ Each eco-display requires different air treatment. ”

The Collaboration

Burgers' Zoo, MTI, and IFB Filtertechnik

Burgers' Zoo and MTI (formerly Maessen and Hendriks) have been working together for 40 years. Employees who previously worked for Maessen and Hendriks are now employed by MTI. Since MTI works exclusively for Burgers' Zoo, they have extensive knowledge and experience with the zoo's installations and infrastructure. MTI, in turn, involved IFB Filtertechnik to help address the challenges related to the technical installations at Burgers' Zoo. In 2018, IFB Filtertechnik, following an extensive survey of the air handling installations, advised to apply a different type of filter. Thanks to the advice from MTI and IFB Filtertechnik, filters that were previously replaced twice a year lasted an entire year. "Despite a higher price per filter, we save on annual filter and labor costs. We are very satisfied with this advice," says Simon.


Johan van den Born has been with MTI for 14 years and is very pleased with the collaboration with IFB Filtertechnik. "In addition to good prices and fast delivery, agreements are honored, and communication lines are short," he says. "I always contact my dedicated account manager. After many years of collaboration, he knows exactly what I need and immediately gets to work. I always get a quick solution for any problem."


The Solution


Savings on total maintenance costs


The advice from MTI and IFB Filtertechniek was to apply an ePM1-70% filter instead of an ePM2.5-70% filter in the air handling installations at Burgers' Zoo. This type of filter, the GK85 ePM1-70%, contributes to reliability, energy consumption, and total maintenance costs for the zoo's installations. After the installation of the GK85 filters by MTI, IFB Filtertechniek conducted fine dust measurements to verify whether the air quality met the Eurovent 4/23 standard. Special attention was given to the air handling system

of the Ocean, for which a different type of filter was recommended. "We applied self-supporting bag filters with a plastic frame due to the high humidity. It's a pleasure to work with MTI, as they are always flexible in applying new products. This ensures they remain ahead in terms of filtration," says Randy Deden, account manager at IFB Filtertechniek. The savings realized for Burgers' Zoo and the fine dust measurement results are outlined below.

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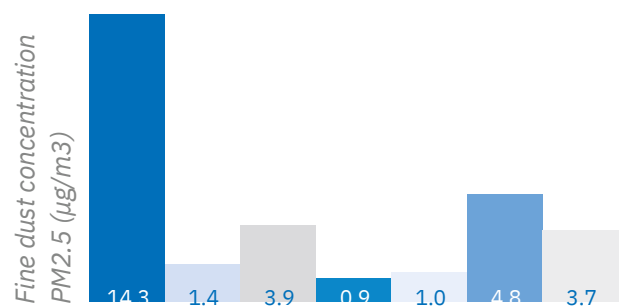
Reliability, more than 3 times the dust-holding capacity
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Energy consumption of filters is 2x lower
- 








37% savings on operating costs
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Optimal protection against fine dust with ePM1-70% filters

Fine dust measurement after application of GK85 ePM1-70%

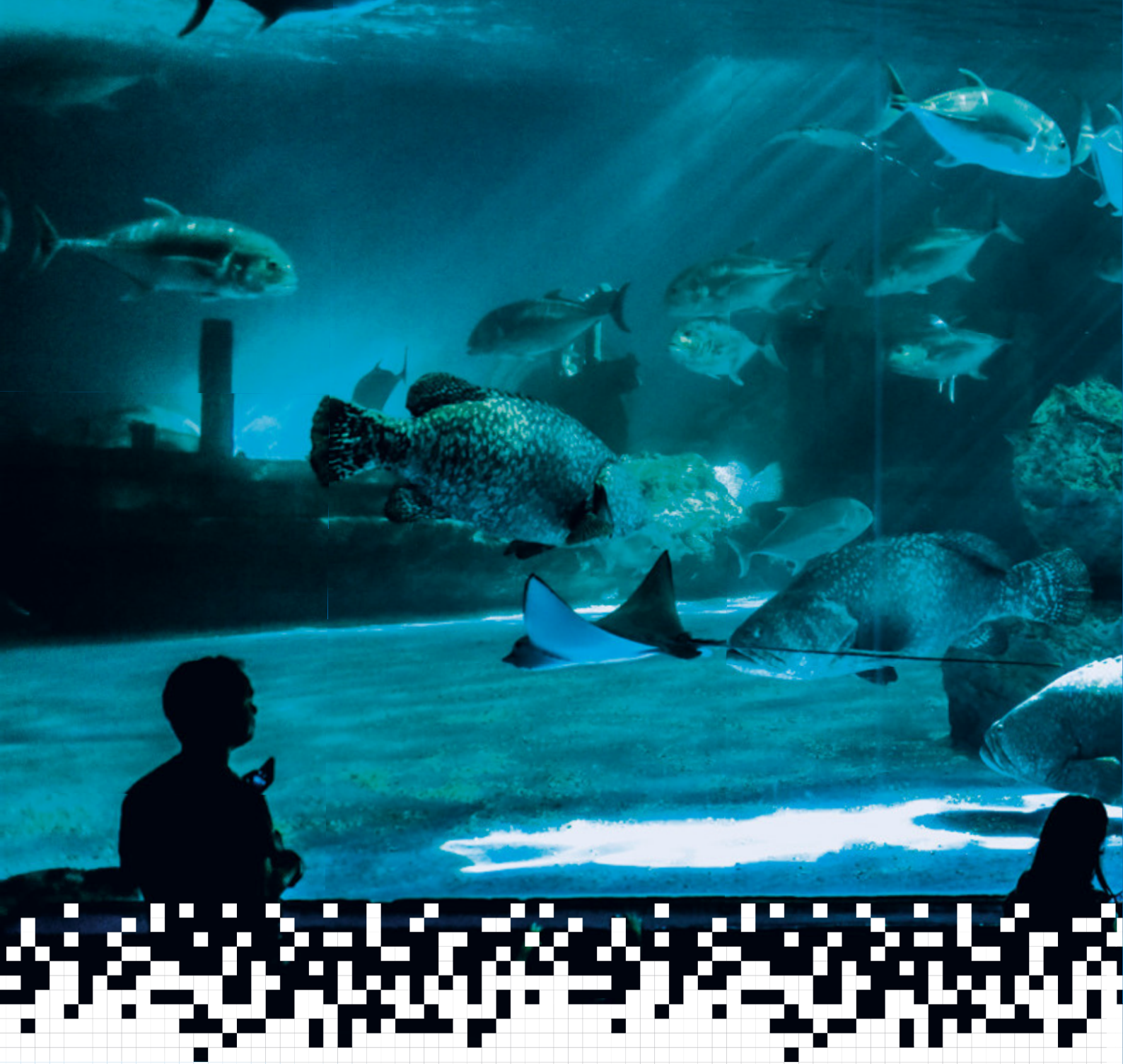


x-axis measured values

-  Reference outside air
-  LBK Bush Restaurant
-  Bush Restaurant
-  LBK Auditorium
-  Auditorium
-  Parkwinkel
-  P&O Office



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