

CITY OF STOCKHOLM MONITORS AIR QUALITY AT CRUISE PORT



Cruise ships produce large quantities of air pollutants. But how great is the danger for people who live or work near harbors and ports? To answer this question, the city of Stockholm relies on a tried-and-tested method: measuring devices from Palas®. Because with precise measurement data, invisible threats in the air can be made visible. And also they can be used to make reliable statements about the air quality on site and – if necessary – to take appropriate countermeasures. The first FIDAS® SMART 100 has been installed at the port of Stockholm, more to follow.

THE CHALLENGE

Every year there are approximately 300 ship arrivals in Stockholm with more than 500,000 passengers. There are a total of four cruise port terminals in Stockholm. The berth Stadsgården is located about 1 km south of Gamla Stan and for large cruise ships.

At the beginning of 2022, the Stockholm port authority decided to investigate the emissions from cruise ships at Stadsgården. The ships are not connected to the power grid during

their stay of at least 24 hours and have to generate their own electricity via the diesel generators on board. The city of Stockholm was therefore asked to carry out measurements during the period from mid-May to at least the end of September, with the possibility of an extension.

THE SOLUTION

The City of Stockholm already has seven FIDAS® 200 in use, an EN 16450-certified fine dust monitor for simultaneous measurement of PM_{2.5} and PM₁₀. So it was obvious, that they would again rely on the equipment and technology from Palas® in this case. However, installation on a building roof was difficult, so in addition to precise measurement equipment, small dimensions and low weight were important factors in choosing the device. A perfect match for the FIDAS® SMART 100.



FIDAS® SMART 100 the currently most advanced compact measuring device for the determination of ambient air quality. It analyzes airborne fine dust particles in the size range 0.175 - 20 µm and is released and approved by TÜV for PM_{2.5} for official measurements. **FIDAS® SMART 100** thus provides comprehensive and accurate information on fine dust particles, which is only possible with a counting single particle measurement method.

The challenge now is to accurately record the tracks of the cruise ships, because factors such as the weather and wind direction and the quantity or location of the ships naturally also play an important role here. The City of Stockholm has detailed schedules for all ships coming in and can accurately monitor and analyze the pollution in the air with the measurement data provided by the **FIDAS® SMART 100**.

BENEFITS

The city of Stockholm and the port authority hope to get clear results from this measurement data to see how serious the air pollution is, that are made from the cruise ships. This is the only way to make valid statements about possible effects on people and the environment. The results are not yet available at the present time.



<https://www.palas.de/product/fidassmart>