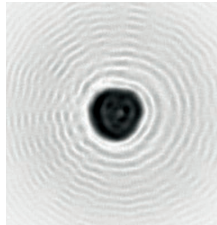
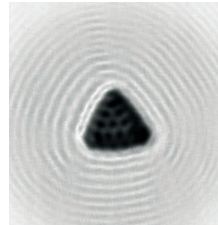


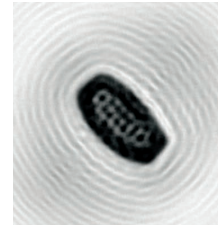
**Swisens Poleno** is based on groundbreaking technology for the precise and reliable identification of airborne particles and aerosols. It is specially optimized for the identification of pollen-taxa in real-time and its long-term monitoring. Swisens Poleno marks the beginning of a new era in the measurement of bioaerosols.



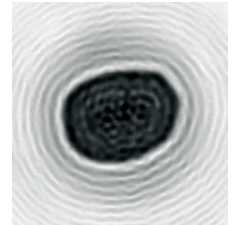
Ambrosia



Corylus avellana



Quercus robur



Fagus sylvatica



### Swisens Poleno Air Flow Cytometer

The structure of Swisens Poleno is based on the analysis of:

- Holographic images
- Light scattering
- Polarization
- UV-induced fluorescence intensity and lifetime

The Swisens Poleno air flow cytometer provides the most independent characteristic values per particle available on the market. It renders a mosaic of information about the particles going through the system including high-resolution images of every single particle. Based on this rich dataset and in combination with state-of-the-art classification algorithms, outstanding quality of the classification results is achieved.

With these measurement methods, many independent features can be determined, allowing for the excellent quality of particle identification.



## Monitoring Station Components

1. Sigma-2 inlet
2. Mobile router (up to 4G)
3. Swisens Poleno
4. Insulated weather protection housing with lightning protection
5. Integrated service station with 22" display and hinged keyboard
6. Air conditioning and mobile antenna; additional external weather station on request
7. Customizable easy to mount sub construction

The installation on the roof is possible by passenger lift and stairs. Total weight of weather protection housing with standard sub construction and device: 134 kg

Hardware	Basic	Standard
Integrated industrial PC (IPC)	x	x
High efficiency aerosol concentrator	x	x
Cleaning mechanism	x	x
Insertable sample collector	x	x
Straylight measurement setup	x	x
Holographic measurement setup	x	x
Fluorescence measurement setup		x
Polarization measurement setup		x
Software	Basic	Standard
Swisens Data Base	x	x
Swisens Data Explorer	x	x
Swisens Data Analyzer	x	x
Classification of pollen	x	x
Classification of smaller particles (spores, PM, allergens, ...)		x

### Swisens Poleno Product Line

The Standard version of Swisens Poleno includes all available up-to-date measurement hardware including the measurement setups for holography, UV-induced fluorescence and polarization. It provides superior identification of countless pollen species but also smaller particles down to 1 µm like spores or particulate matter.

The Basic version of Swisens Poleno is a cost-effective entry point and specifically addresses the application of pollen monitoring. It provides stable, long-term measurement of the most important pollen species relevant to allergic people. The Basic version can be upgraded to the Standard version.

Both versions come with an IPC running a server with the Swisens Data Base, providing a flexible REST-API for easy access. Remote visualization and analysis are enabled by Swisens Data Explorer and Swisens Data Analyzer. The participation in the Swisens Ecosystem provides access to the Open Training Data Base and latest classification software.

### Weather Protection

The customizable, lightweight weather protection housing comes with air conditioning, a mobile antenna and lightning protection as well as a Sigma-2 inlet. The system is easily maintainable due to an integrated service station with display and keyboard and telecommunications means for remote access and control. The construction allows for quick transportation and installation on location (e.g. on a roof) i.e. by passenger lift and stairs. There is no need for a complex installation by crane or external transport lift.

### Features Of Complete Monitoring Station

- Long-term monitoring
- Remote access and control
- Device status monitoring and notification
- Maintenance friendly
- Adaptable to customer needs

### Optional Accessory

- Swisens Atomizer
- External weather station