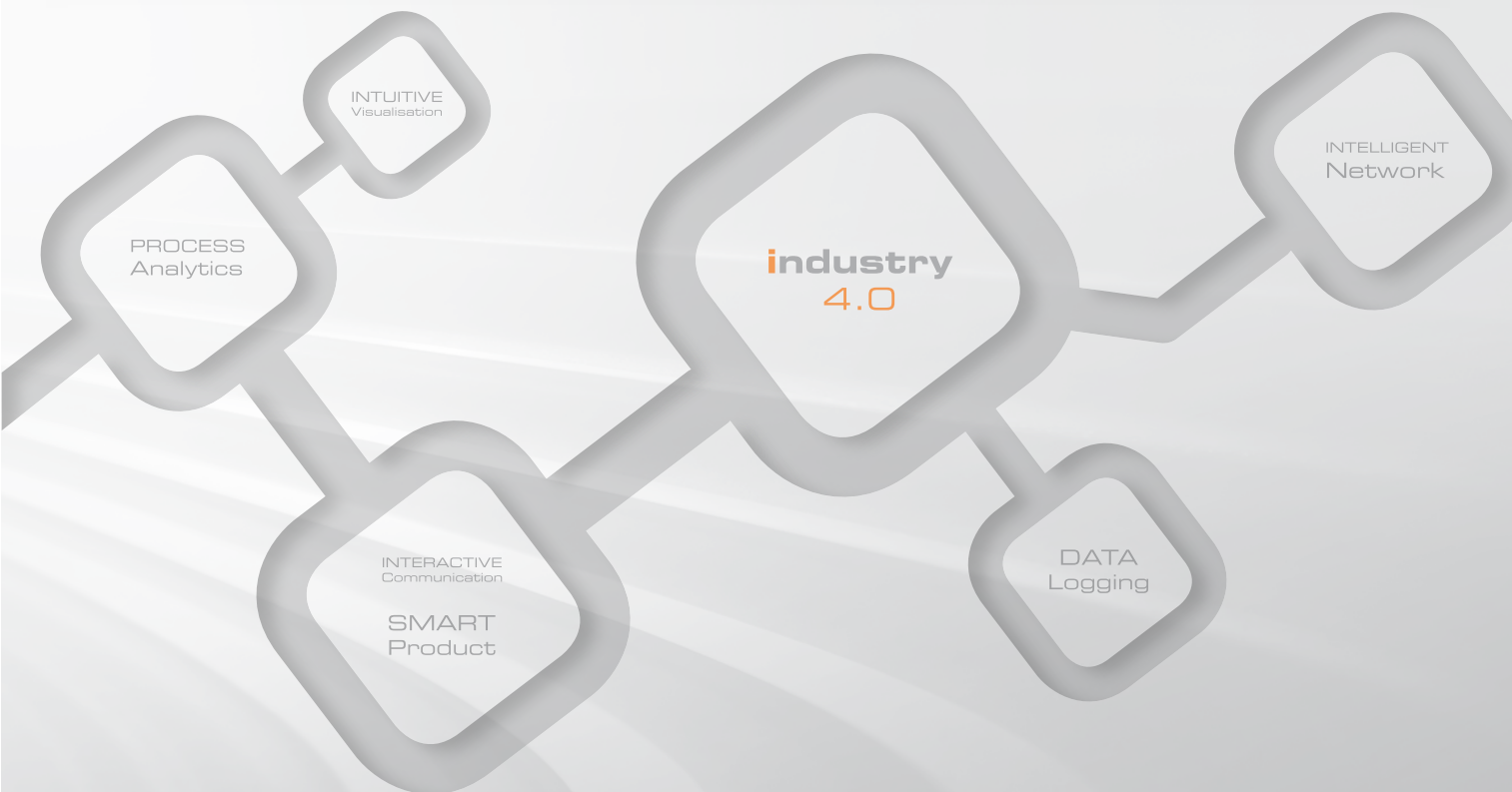


High efficiency surface dust removal system

# Xstream FUSION

6 kV **AUTO<sup>DC</sup>** Technology



## Surface dust removal system

### System description

The Xstream and Xstream ULTRA non-contact web and sheet cleaners adopt a revolutionary approach to improving quality, reducing downtime and boosting profitability. They combine the latest aerodynamic nozzle technology with a defined high speed vacuum airflow and an intelligent micro-processor controlled static neutralising system prior to cleaning within one turnkey solution.

The operational principle behind the system comes from proven research and development carried out within the aviation and aerospace industries. By utilising special edge shapes and profiles, the air is forced into certain directions at extremely high velocity. Hildebrand Technology uses this technology and has developed its Xstream surface cleaner based on that knowledge.

The Xstream accommodates splices automatically and is available for use on web widths from 50 mm up to 10

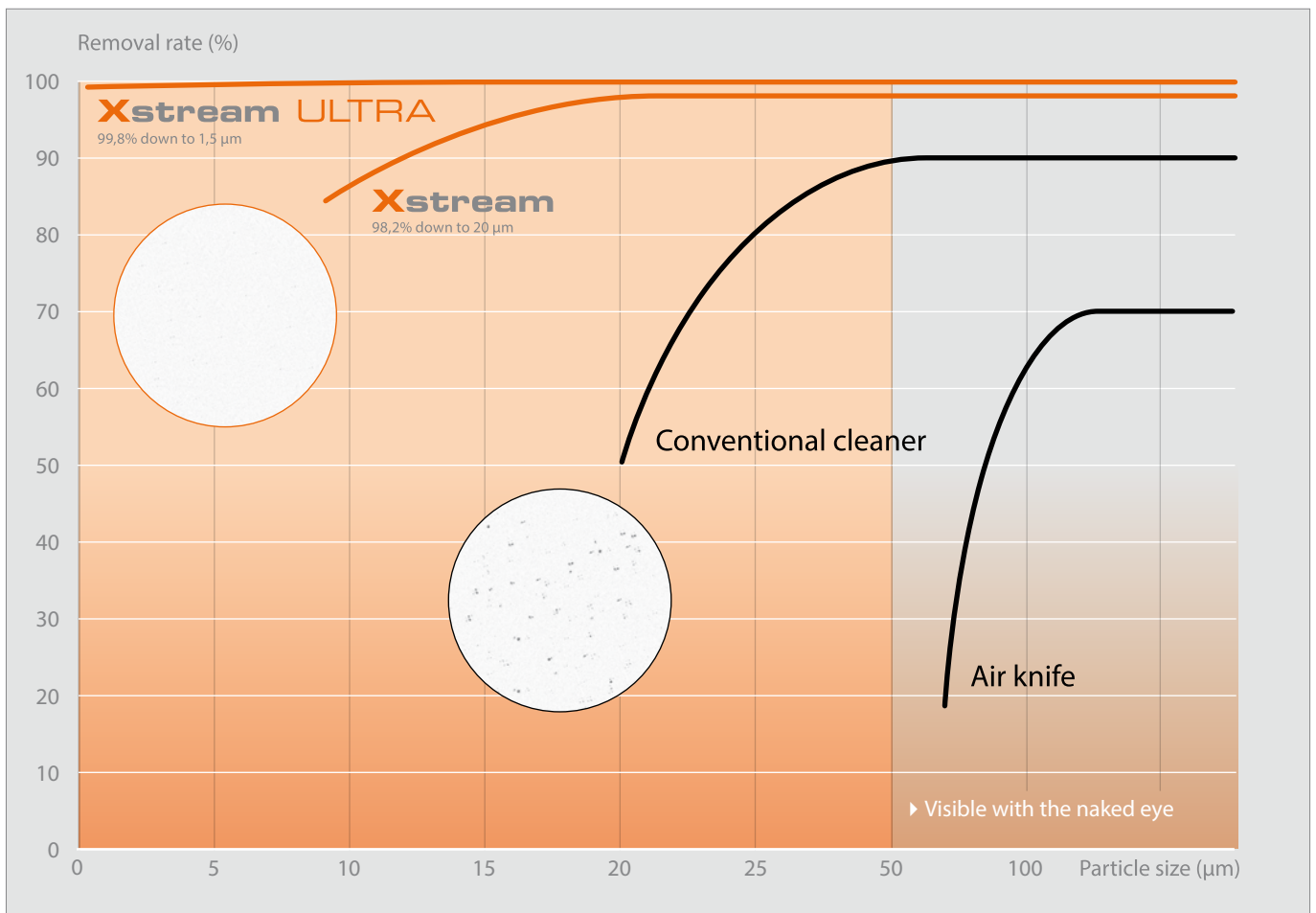
metres in either a single or a dual side surface cleaning configuration. The compact design minimizes the space requirements for installation.



Nozzle principle Xstream



Nozzle principle Xstream ULTRA



System cleaning efficiency comparison

**Technology**

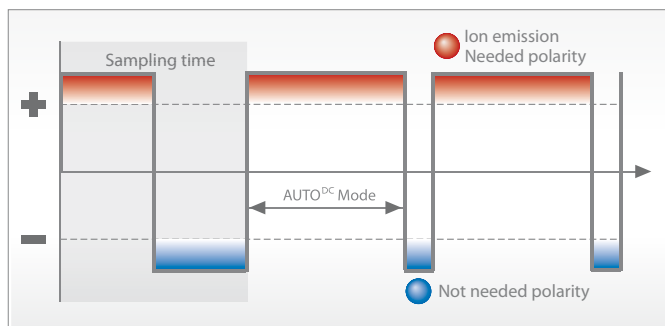
The special aerodynamic nozzle of the Xstream and Xstream-AM ULTRA which is positioned close to the surface of the substrate generates, through the combination of vacuum in the cleaning module and web speed, an extremely high velocity airflow (>60 m/s). The high velocity air flows along the substrate surface to the nozzle edge and into the cleaning module. The high velocity airflow breaks the boundary layer on the substrate and forces the particles that were trapped in this layer into the cleaning module. From the cleaning module the particles are transported to a filter unit.



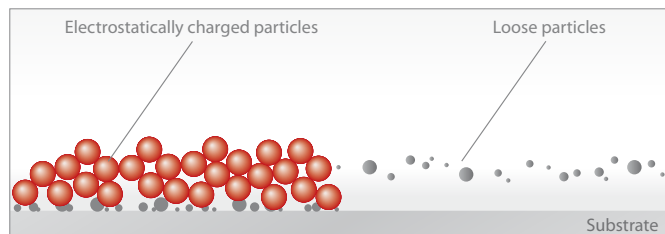
guarantee a neutralised substrate surface and therefore facilitate easier removal of all particles by the Xstream. Our experienced application engineers can evaluate your machine and propose a solution for the implementation of Xstream or Xstream ULTRA into your production process.

**AUTO<sup>DC</sup>® ionisation**

In most cases electrostatic charge present on the substrate surface is a major factor in increasing contamination and makes particle removal more difficult. It is well known that insulating materials such as film generate static charges by friction. This electrostatic charge also increases the bond between the particles and the substrate surface. The electrostatic charge can attract additional particles which are in close proximity to the substrate surface. The smaller the distance between particle and substrate surface, the greater is the force of the electrostatic field holding the particle down. This is why our static control system is always installed prior to the cleaning process to



AUTO<sup>DC</sup> method



Particle behaviour without and with ionisation

**Xstream System advantages**

**Application:**

- Removes > 99,8 % of loose particles > 1,5 µm with Xstream ULTRA
- Vacuum air speed > 60 m/s
- AUTO<sup>DC</sup>® static neutralising system
- Network compatible, internal CANopen bus to communicate with touch panel or „Anybus“ Gate-Way
- Can be retrofitted to all machine types
- Wear-free, minimised maintenance
- Including filter technology
- Easy and flexible installation

**Economical:**

- Increased profitability
- Reduced waste and down time

**Safe ionisation:**

- Shock proof according EN 60335
- Ex with ATEX certification II 2G IIB T6



**Ecological:**

- No consumables, no washing liquids
- 30% lower energy consumption compared to other systems in its class



## Applicable in many areas

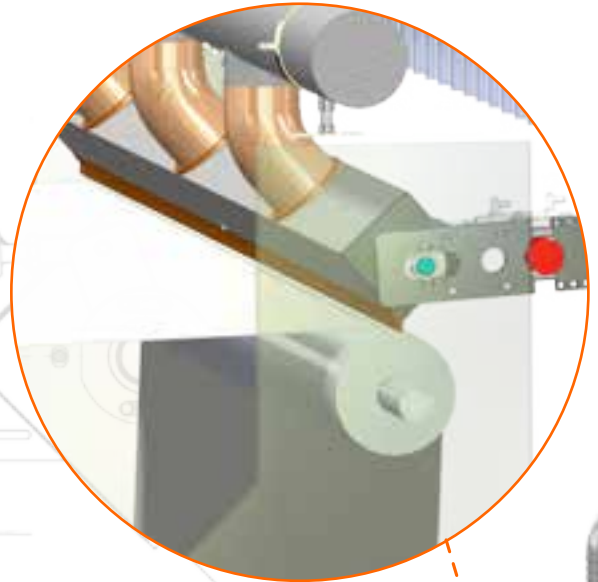
The **Xstream** and **Xstream ULTRA** surface dust removal systems can be used in many different applications. Their modular design and the flexible high velocity vacuum nozzle technology allows the installation of these cleaning systems starting at paper and cardboard applications all the way up to high-end clean room systems, where individual high-tech substrates need to be **100%** cleaned.



**Xstream**  
Printing/converting paper, cardboard & corrugated production/processing textile, tissue & non-woven

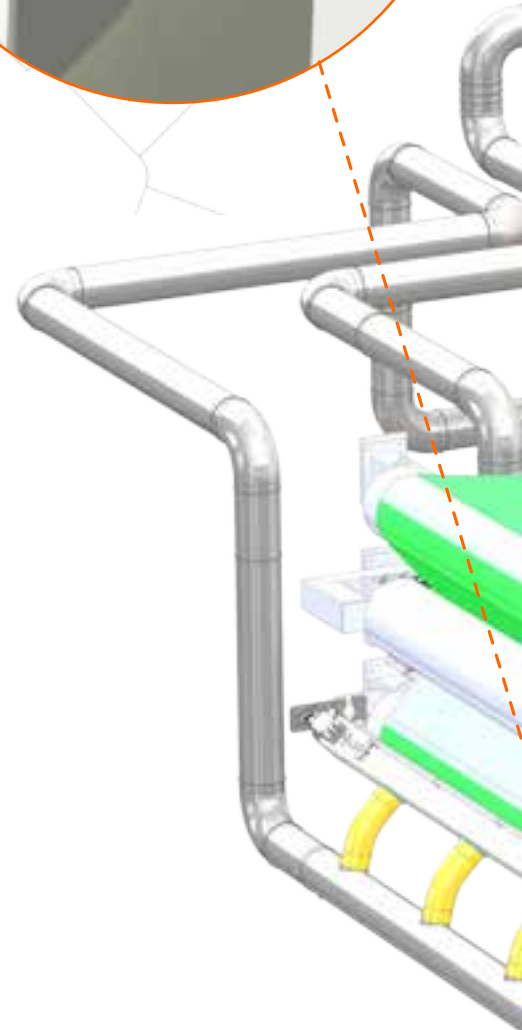


**Xstream ULTRA**  
Pharma/clean-room optical films, semi-conductor & glass coating/laminating film & foil



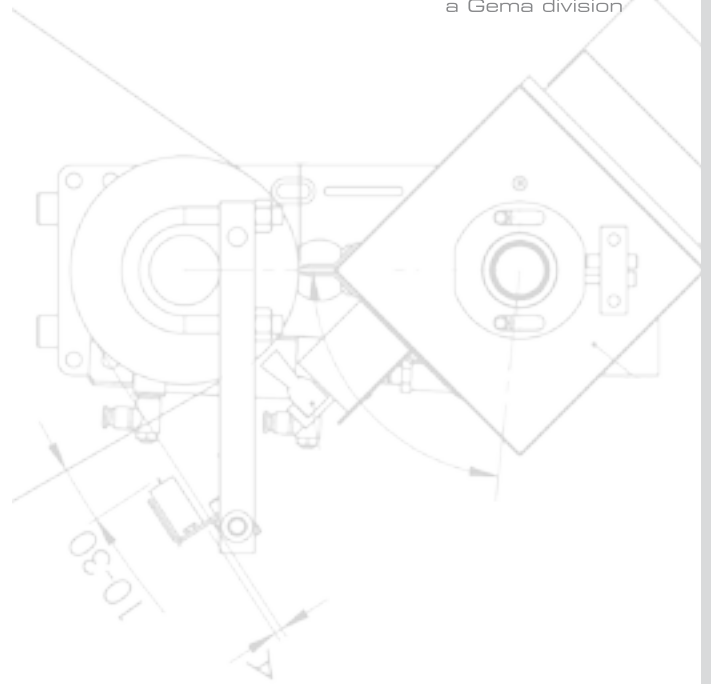
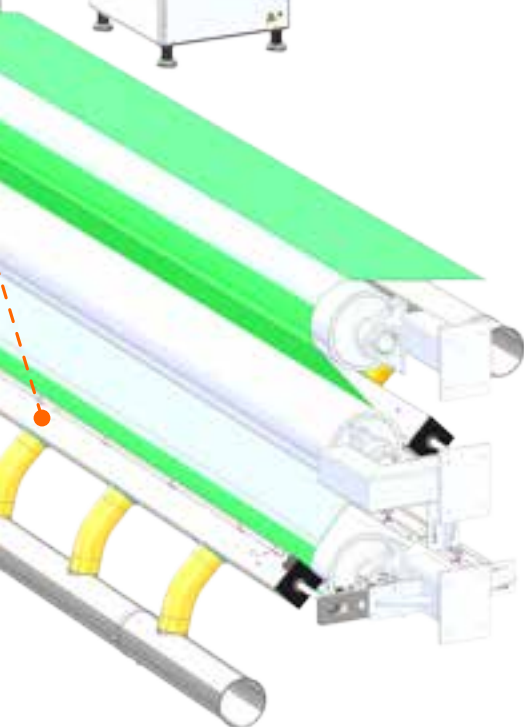
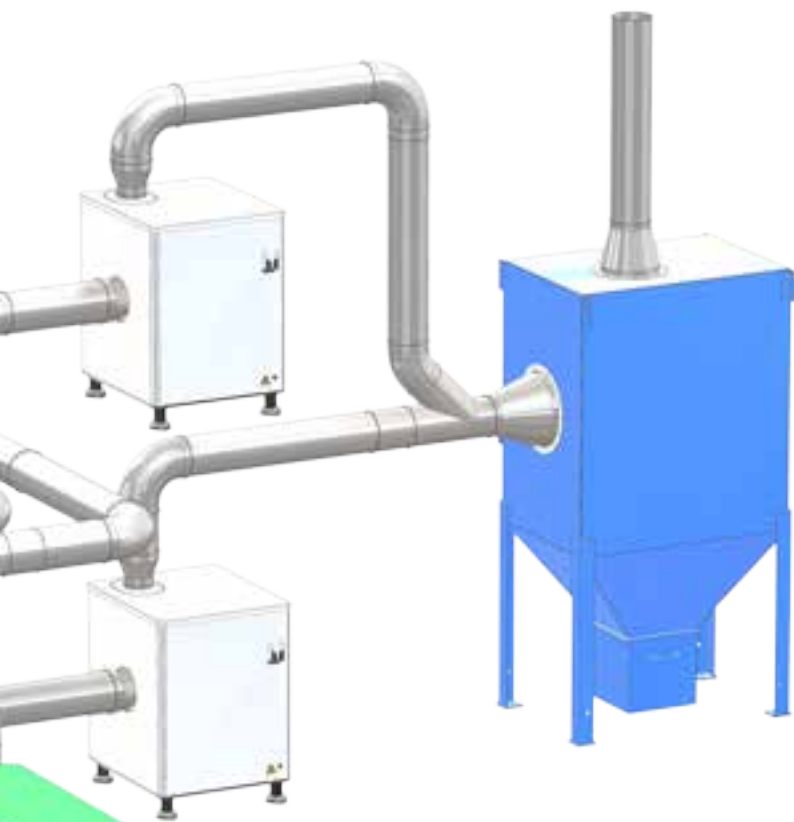
## Monitoring & communication

Access via **iONpilot** APP for Smart Devices, Tablet etc. or via Webbrowser.



## Complete Systems

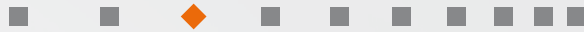
We offer a comprehensive and professional project process through installation to commissioning for either new or retrofit machines from any manufacturer.



- 99,8% cleaning efficiency
- **AUTO<sup>DC</sup>**® Ionising system
- Non-contact surface cleaner, wear and consumable free
- Network compatibility
- Visualisation and access to all network users



**Gema**



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Surface Dust Removal • Electrostatic Neutralising • Electrostatic Charging • Measurement Systems

