

## DOX Air Web Cleaning

### Aero Surface Cleaning System

Surface cleanliness is very important in processing of paper, board and other web materials. Pulp or similar particles, dust, or other impurities which might settle onto the cylinder rolls, or other machine parts result in extensive problems, not only for the paper manufacturers but also for the converters. Trials have proven that a web cleaning unit must not only remove loose dirt particles to achieve satisfactory results but also must eliminate electrostatically charged particles which stick to the web surface. The DOX Air Web Cleaning according to the construction and function is the optimal solution for all dust problems.

### Advanced Web Cleaning System

#### DOX Web Cleaning Description

The aerodynamic surface cleaning system consists of a vacuum head with a conical suction pipe and a dust extraction unit. The cleaning unit is designed for large capacity vacuum. The cleaning effect works evenly and continuously across the full width of the web.

During operation, the web enters the vacuum chamber for absorbing all dust particles. An air doctor (blade) and an antistatic high-voltage bar are installed in this section. By passing through the ionization field developed by the antistatic bar, the web is deionized. The air doctor can be infinitely adjusted at various angles to the web to ensure that all dirt and fine particles are loosened and absorbed.

The combination of deionization, doctoring with air, and an extensive vacuum ensures that all dust particles are removed. The antistatic bar ensures that after the web leaves the unit it will not attract new dust particles.

Air supply to the air blade is provided by an air pressure system which must be adjustable to cope with the degree of surface contamination of the web (average air pressure = 0.4 - 0.8 bar). The level of vacuum can be adjusted by means of a regulation flap in the vacuum pipe. It is not possible to specify the required vacuum level in this description since this depends on the degree of surface contamination and the desired quality of the finished sheet. Therefore, the vacuum level must be adjusted due to grade and process variables.

### Benefits for the Paper Industry

- Neutralizing the web from static electricity by antistatic units, thereby loosening the dust binding to it
- Aerodynamic dust removal
- Dust reduction of 90 - 95%
- No change in surface or moisture content
- Dust-free and ionized compressed air for the jet rake
- Dust extraction unit with special filters for recirculation the clean air into the working room
- On-line installations into papermaking and

### Technical Features

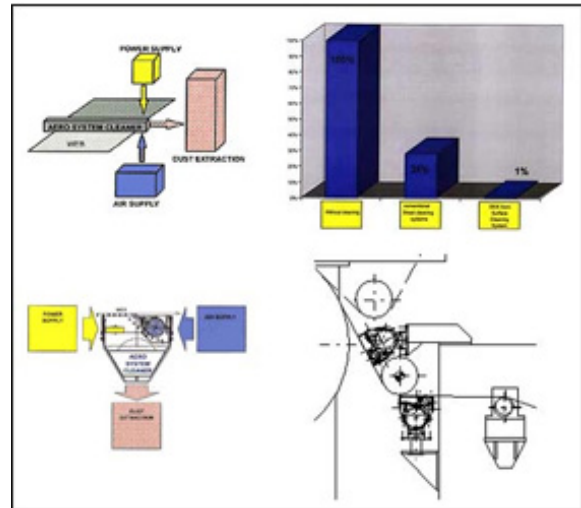
- System cleaner of self supporting stainless steel construction
- Special jet air pipes (air knife)
- Double antistatic units with double phase power supply unit
- Supporting construction with lifting device for system cleaner
- Dust extraction unit
- Air supply unit
- Electric control system

### Technical Specifications

- Contact-free aerodynamic dust removal
- No change of surface structure or moisture
- Separate compressor for clean air for web cleaning
- Separate suction device with filters
- Integrated antistatic unit in the aero system

### Options

- Single or double side web cleaning (top or underside)
- Dust extraction unit with or without filters
- Air supply unit or mill air
- Supporting construction with lifting device for system cleaner
- Electric control system connected with PLC



*Advanced Web Cleaning System*

### DOX Family

- DOX Brush Finishing
- DOX Air Web Cleaning
- DOX Knife Dust Removal
- DOX Spray Tech<sup>Fine</sup>
- DOX Brush Spray Unit
- DOX Brush RollHighTech