

# 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 reach satisfactory results but also must eliminate electrostatical loaded 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 aero 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 operates 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 as developed by the antistatic bar, the web is deionized. The air doctor can be infinitely adjusted to various angles towards the web to ensure that all dirt and fine particles will be loosened and absorbed.

Through the combination of deionization, doctoring with air and an extensive vacuum, all dust particles will be 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 accommodate 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 re-

gulation 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 to the Paper Industry

- neutralizing the web from statically electricity by antistatic units and therefore loosening of the dust binding
- aerodynamic dust removal
- dust reduction of 90 - 95 %
- no change in surface or moisture content
- dustfree 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 paper making and converting systems, printing systems and for corrugated board converting

## Technical Features

- aerodynamic dust removal by non contact
- no change of surface structure or moisture content
- separate compressor for clean air for web cleaning
- separate suction device with filters
- integrated antistatic unit in the aero system cleaner

## Options

- single or double side web cleaning (top or bottom side)
- 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

## Technical Specifications

- 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

## 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 Roll<sup>HighTech</sup>

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