

**WE DON'T
STIR-UP
DUST ...**



EFFICIENT · POWERFUL · SAFE

DUST REMOVAL SYSTEMS BY DUO-TECHNIK

WE CREATE SOLUTIONS

DUO-TECHNIK

PRODUCTS FOR PRINT

DO YOU NEED DUST REMOVAL?

// Dust reduces quality and productivity

Dust and loose particles are a big problem in the printing industry.

- Dust adheres to the printing plates, so the ink won't lay down properly creating hickeys and other print defects in these areas
- The dust mixes with the ink adhering to the printing plate and or the Anilox, eventually re-depositing on the board leading to spots on the printed image spoiling the finished print quality.



Fish eyes on a printed surface

// Frequent machine stoppages, required to clean the print plates, result in significant non-productive press downtime.

// You can remove the dust

• In the corrugator

By cleaning, early in the process, the web/sheets in the corrugator; plastic, metal, dust particles, and paper strips and angel-hairs will be removed. The total amount of dust pollution in the plant will be reduced.

This will create a positive effect on all printing machines in the entire plant and will have a significant, favorable effect on the overall plant health and safety goals.

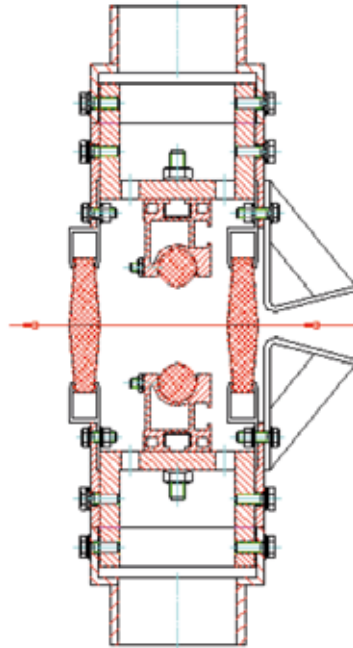
• And / Or just prior to the print process

Dust and particle removal is highly recommended for printing machines with a high volume of HQ printing. Therefore cleaning before the first print unit is judicious. Dust adheres to the board the surface by a robust static charge. Even one dust spot will spoil the quality of the printing potentially leading to a press stoppage and expensive downtime.

DUST REMOVAL SYSTEMS FOR CORRUGATORS OR WEB-TO-WEB

// The dust removal system consists of

- 2 ionization bars
- 2 vacuum chambers
- 4 brushes
- 2 in-feed plates
- 4 pneumatic cylinder for move/adjust the system
- 2 vacuum pumps
- Complete plumbing
- Electrical cabinet



The system is integrated with the corrugator. At job changes or machine jams, the upper part is raised rapidly to avoid damage to the system or cause machine stoppages. The vacuum levels are set though pump frequency converters based on the board and web thickness.

Our centrifugal dust collector can be added to collect the dust particles.

// Depending the available space on the corrugator, the system can be either installed after the slitter or after the cross cutter.

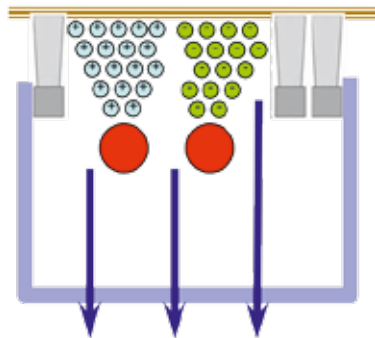
// How effective is the system?

- Experience shows that jobs with full surface printing, the time between press-stoppages for dust-related issues has been doubled, and even sometimes tripled.
- Overall print quality will be increased, reducing customer complaints and increasing customer satisfaction
- A significant and favorable effect on overall plant health and safety goals is achieved

SHEET CLEANING WITH IONIZATION

// How the cleaning system works

- A vacuum chamber is located beside the static brushes.
- The first brush removes angel-hair and/or larger paper particles.
- These larger particles are drawn away in the first vacuum chamber.
- The Electrodes are designed for press speeds up to 1000 ft. /min., electronically ionizing Oxygen (O_2) and Nitrogen (N) atoms.
- While creating an ionic field above the electrodes, the electrodes create positive or negative ions. The polarity of the electrodes alternates at a frequency of 50 Hz and neutralizes the static charge of the dust particles.
- After the board passes through the electrostatic field, the neutralized dust particles are loosened and removed by the second brush and drawn away in the vacuum chamber



// How effective is the system?

Efficiency of the system will depend on the process; plant cleanliness, the precision of the edge trimming process and the type of boards in use have to be considered. Nevertheless, a reasonable goal of 4000-5000 sheets/h, without stoppages caused by dust-related issues, is easily attained. The Return On Investment of our system is between 18 – 24 months.

// What are the auxiliary accessories?

- Depending on the machine, automatic board thickness adjustment is available
- For severe angel-hair problems, the addition of a rotating brush in front is available
- Where a dust collecting system is not available, our centrifugal dust collector can be installed

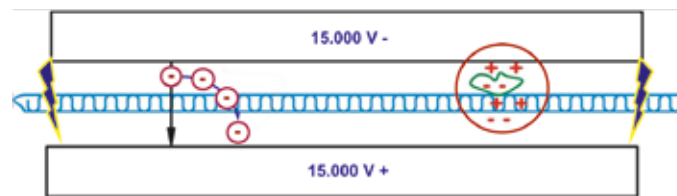
// On which machines can this system be installed?

This system can be installed on nearly every type of printer (Bobst, Bobst DRO, Bobst FFG, Gopfert, BGM, Emba, Celmach, MHI, LMC etc.)

SHEET CLEANING WITH CORONA

// How does this system work?

- This system has upper and lower electrodes.
- Both electrodes have a voltage of 15 000 volts and alternate between positive and negative, 7000 times per second
- A corona field between the electrodes is created, ensuring that all particles on the board surface between the electrodes are polarized
- Since corona field exists only at maximum energy during the interim periods the dust with a counter-polar static charge while move to the appropriate electrode.
- The detached loosened particles from the board surface collected at the electrode is exhausted



The principle of cleaning

- This concept is especially made for fine paper dust.
- Additionally to remove metallic particles and/or angel-hairs, the system includes two stationary brushes at the board in-feed.
- This system is designed to clean both sides of the boards.



Lower part with brushes

// How effective is the system?

Again, the efficiency of the system will depend on the process; plant cleanliness, the precision of the edge trimming process and the type of boards in use, have to be considered. Nevertheless, a reasonable goal of 4000-5000 sheets/h, without stoppages caused by dust-related issues, is easily attained. The Return On Investment of our system is between 18 – 24 months.

// What are the auxiliary accessories?

- Depending on the machine, automatic board thickness adjustment is available
- Situations with severe angel-hair problems, adding a rotating brush in front is possible
- Where a dust collecting system is not available, our centrifugal dust collector can be installed

// This board cleaning system can be installed on these machines!

This system can only be installed on Bobst Flexo, Bobst Flexo Vision, Bobst Dynaflex, Bobst Masterflex A, L&HD.

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