

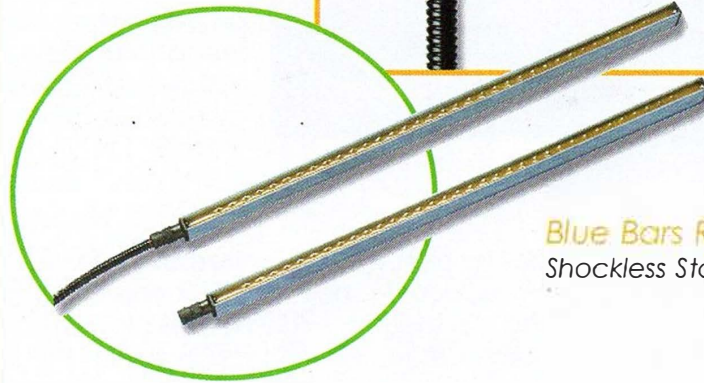
## Static Control for Heidelberg Presses

SIMCO static control products reduce down-time and increase speeds and profits on Heidelberg presses, including Speedmaster 64, 72, 74 and 102 presses.

Static Control on Heidelberg Sheet-Fed Presses:

- Reduce jams at the infeed by preventing double sheet pick-ups and skewing on the feedboard
- Reduce jams, improve jogging and produce more uniform delivery stacks
- Increase run speeds on plastic sheets and lightweight coated stock

R55 Ionizing Air Nozzle

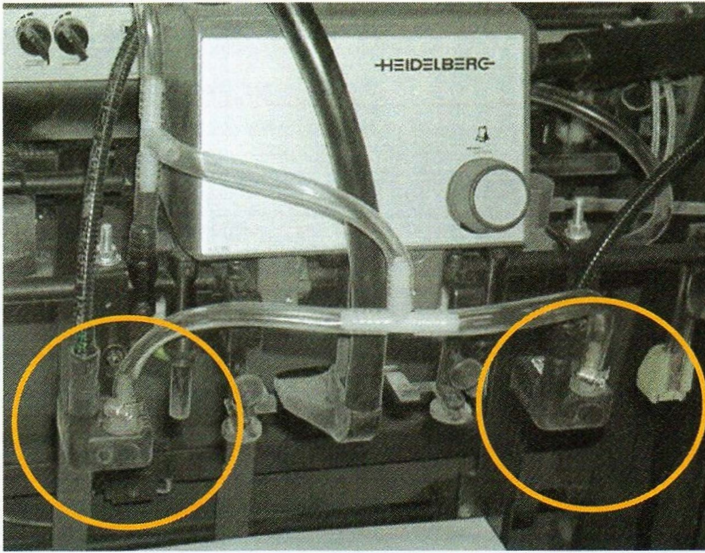


Blue Bars R50 and R55  
Shockless Static Neutralizing Bar

Sheet materials often arrive in the pressroom with static charges already "built-in" to the material. Some materials, such as clay coated and resin coated stock, can retain static charges for several days, especially in low humidity environments and during winter months. Plastic sheets can retain charges for weeks or months in most environments. Additional static charges accumulate on the material as it is fed and stacked during the printing process.

Simco's ionizing nozzles, static bars and sheet cleaners neutralize these static charges and provide increased efficiency and profits.

## Static Problems on the Feeder



R55 Ionizing Air Nozzles on a Heidelberg Speedmaster 74

### **P**roblem 1 - Double sheet pick-ups

Electrostatically charged sheets on the feed pile attract to each other and stick together. When the vacuum suckers try to pick up the top sheet, an additional sheet or two can also be picked up, causing a jam at the infeed cylinder. The existing sheet separator nozzle may mechanically separate the sheets at the edge but cannot neutralize the charge between the sheets.

### **P**roblem 2 - Sheet skews on feedboard

A static charge on a single sheet, especially near an edge or a corner, will cause it to attract to the feedboard. This will cause the sheet to drag and pull out of alignment. The grippers on the infeed cylinder will miss the sheet, resulting in a jam.

### **S**olution

SIMCO's R55 Ionizing Air Nozzles deliver high velocity ionized air to the feed pile to separate the sheets while neutralizing static charges, preventing double sheet pick-ups and skewing on the feedboard. As the vacuum suckers lift the edge of the top sheet, the R55 Nozzles blow high velocity ionized air between the sheets. The R55 neutralizes the static charge, allowing separation of the sheets. Most presses require two R55 Nozzles, however 40-inch presses printing on plastic or lightweight coated materials may require two additional nozzles (one on each side of the feed pile) and an additional power supply.

The R55 Nozzles are easily mounted in place of the existing sheet separator nozzles using the supplied brackets. The nozzles operate on compressed air and use the original blower system's air hoses. A SIMCO power supply provides high voltage to the R55 Nozzles to produce the ionization necessary to neutralize static charges.

## Static Problems at Delivery

### **P**roblem: Uneven stacks, paper curl-ups and paper jams at the delivery stack

Static charges develop on the surface of the paper or plastic sheets as they are transported through the press. Static charges may cause the sheets to be repelled from, or attracted to the stack. This causes the sheets to curl under or drag on the stack, resulting in a paper jam at the top of the stack or uneven stacks.

### **S**olution

SIMCO's R51 Blue Bar is a shockless static bar that neutralizes the static charge on the sheet at delivery, eliminating paper jams and uneven stacks.

The Blue Bar is mounted across the paper path, adjacent to the first row of blow-down fans just above the gripper chain return. As the sheets pass under the Blue Bar the static charges are neutralized and the sheets are delivered uniformly onto the stack.



## Static and Dirt Contamination Problems on the Press

### Problem 1 - Frequent wash-ups

Profitable quality printing depends, in part, on clean stock. Even the cleanest of sheet stock carries spray powder, paper dust, lint, loose paper fibers and paper chips into the press. As the sheets are fed through the printing stations, particulate can be deposited on blankets and plates. As the particulate accumulates, more frequent wash-ups are required, dramatically reducing production and profits.

### Problem 2 - Poor print quality because of particulate and static charges on sheets

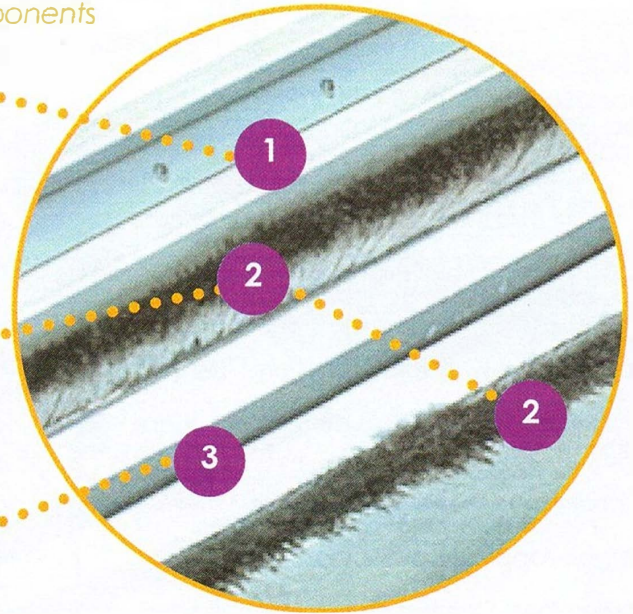
Static charges on sheets can result in two types of printing imperfections. Charges on sheets can cause ink to be attracted to or repelled from a charged area of the sheet resulting in printing imperfections such as bows feet and lightning tracks. Charged sheets can also attract particulate from the

#### Mark I Components

Static Bar

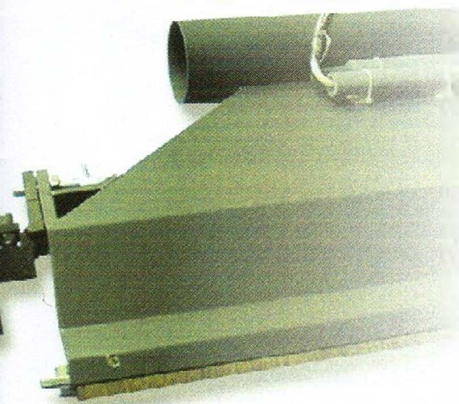
Brushes

Intake Slot



environment. This particulate, in addition to debris from the converting process, can cause hickies and voids on the final printed image. Overall poor print quality or costly reprints affect both profits and customer satisfaction.

#### Mark I for Heidelberg Presses



### Solution

The Ion-O-Vac Mark I Sheet Cleaning System helps produce higher quality printed material without imperfections caused by spray powder, static and dirt. At the same time, production costs are lower because less time is spent cleaning blankets and dirty ink.

The Mark I eliminates static charges and lifts spray powder and other particulate from the sheets as they pass over the impression cylinder.

Ion-O-Vac systems consist of a vacuum cleaning head, dust collector and ducting. The cleaning head has three cleaning components:

- Static bars break the static bond between charged particulate and the sheet. Removing the static charge also minimizes reattraction of charged particles
- Brushes loosen particulate. Brushes are economical and very easily replaced. Each set lasts up to 12 months. Different bristle types are available
- Intake slot suctions particulate into collector. High velocity vacuum loosens and lifts more stubborn particulate

# Ion-O-Vac Cleaner for Heidelberg Speedmaster 102 Press



An Illinois Tool Works Company

## R55 Ionizing Nozzle



**Operating Voltage:** 5 kV 50/60 Hz via authorized Simco Industrial Static Control power supplies

**Ionizing Pin Current:** 40  $\mu$ A at Short Circuit

**Maximum Operating Temperature:** 140° F (60° C) without blown air; 176° F (80° C) with blown air

**Maximum Blown Air Temperature:** 86° F (30° C)

**Air connection:** 5/16" (8 mm) nipple (hose barb)

**Humidity:** No dewing permissible

**Weight:** approximately. 4 oz. (100 g)

**Ionizing Pins:** Stainless steel, current-limited and low capacitance, shockless

**Emission Rows:** Two rows of eight pins each, one row passive and one active (with an air outlet located between them)

**High Voltage Shielded Cable:** 2.5 meter cable is standard; 5, 7.5 and 10 meter cable available

**R55 Nozzle Air Consumption:**

|        | <u>Slotted</u> | <u>Perforated</u> |
|--------|----------------|-------------------|
| 30 psi | 2.9 scfm       | 4.0 scfm          |
| 45 psi | 3.7 scfm       | 5.2 scfm          |
| 88 psi | 5.6 scfm       | 7.3 scfm          |

## S165 and S265 Power Supplies

**Input Power Rating S165:** 120 V AC, 20 VA, 50/60 Hz.

**Input Power Rating S265:** 230 V AC, 20 VA, 50/60 Hz.

**Output Voltage:** 5,100 Volts ( $\pm$  10%)

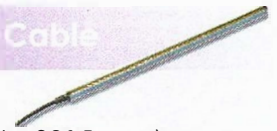
**Output Current:** 3.0 mA maximum; 5.0 mA short-circuit

**Overall Dimensions:** 5 3/4"L x 3 7/8"W x 3 3/8"H

**High Voltage Connection:** Two screw-in type connections with a maximum capacity of two R55 Nozzles

**Use only SIMCO Industrial Static Control power supply models S165 and S265.**

## R50 Blue Bar Static Bar with Fixed Cable



**Bar Profile:** .63" x 1.25" (16 mm x 32 mm)

**Effective Length:** 5.9" to 154.1" (150 mm to 3915 mm)

**Overall Length:** 8.7" to 156.9" (220 mm to 3985 mm)

**Operating Voltage:** 7kV AC

**Mounting:** Nylon mounting bolts and metal brackets provided

**Ambient Temperature:** 32° F to 176° F (0° C to 80° C)

**Connection and High Voltage Cable:** Fixed cable at the bar; 2.5 meters (8.2') standard length, 5 and 7.5 meters optional (16.4' and 24.6' respectively)

### M167 and M267 Power Supplies

**Input Power Rating M167:** 120 V AC, 20 VA, 60 Hz.

**Input Power Rating M267:** 230 V AC, 20 VA, 50/60 Hz.

**Output Voltage:** 7,000 VOLTS AC  $\pm$  5 %

**Output Current:** 3.0 mA maximum; 5.0 mA short-circuit

**Overall Dimensions:** 8 1/2"L x 6 1/16"W x 4 1/2"H

**Monitoring System:** Lighted on/off switch, green output voltage indicator lamp and red arc detection indicator lamp. Remote signals available for monitoring high voltage output and arc detection functions.

## R51 Blue Bar Static Bar with Detachable Cable



**Bar Profile:** .63" x 1.25" (16 mm x 32 mm)

**Effective Length:** 5.9" to 154.1" (150 mm to 3915 mm)

**Overall Length:** 9.1" to 157.3" (300 mm to 3995 mm)

**Operating Voltage:** 5 kV AC

**Mounting:** Nylon mounting bolts and metal brackets provided

**Ambient Temperature:** 32° F to 176° F (0° C to 80° C)

**Connection and High Voltage Cable:** Detachable cable at the bar (cable must be ordered separately); 2.5 meters (8.2') standard length, 5 and 7.5 meters optional (16.4' and 24.6' respectively)

### M165 Power Supply

**Input Power Rating M165:** 120 V AC, 20 VA, 60 Hz.

**Output Voltage:** 5,000 VOLTS AC  $\pm$  5 %

**Output Current:** 3.0 mA maximum; 5.0 mA short-circuit

**Overall Dimensions:** 8 1/2"L x 6 1/16"W x 4 1/2"H

**Monitoring System:** Lighted on/off switch, green output voltage indicator lamp and red arc detection indicator lamp. Remote signals available for monitoring high voltage output and arc detection functions.

