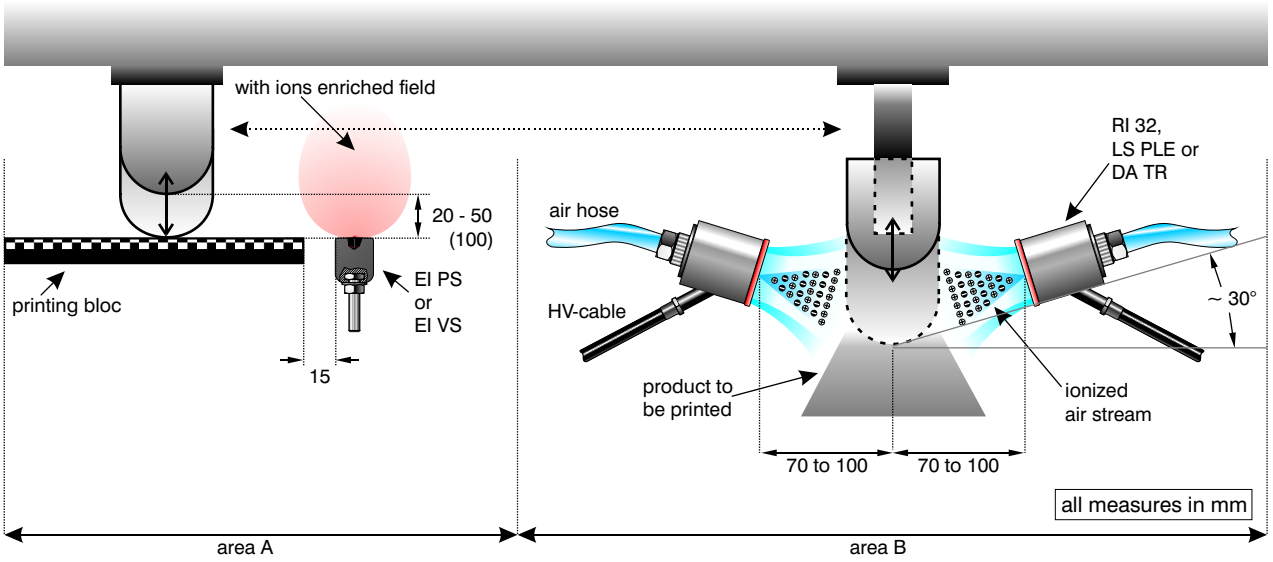
HAUG Ionizing systems – in tampon print machines



The most frequent problems with electrostatic charges in tampon print machines and their solutions

Problem	Cause	Solution	Ionizing system
Dust or small particles are shown on the print.	Dust or particles cling to the surface of the product to be printed and/or on the tampon caused by electrostatic charges.	Blow on the product to be printed and the tampon with ionized air just before and after the printing. The tampon must be consistently surrounded by ionized compressed air. Blow in the distance between tampon and product to be printed.	2, 3 or 4 ring ionizers RI 32, 2 air gates LS LE or Delta blower DA TR depending on the size of the product to be printed. (see area B)
Fine paint splashes on the print.	High electrostatic charges caused by deformation of the tampon by touching the product to be printed. While the tampon is slackening fine paint threads are torn out of the paint film and diverted by electrostatic field strength powers.	Blow ionized compressed air gently and consistently from all sides around the tampon and the product to be printed.	2, 3 or 4 ring ionizers RI 32, 2 air gates LS LE or Delta blower DA TR depending on the size of the product to be printed. (see area B)
Fine paint splashes on the tampon while taking paint from the printing block.	High electrostatic charges caused by deformation of the tampon by touching the product to be printed. While the tampon is slackening fine paint threads are torn out of the paint film and diverted by electrostatic field strength powers.	Discharge the tampon on its way to and from the printing bloc with an ionizing bar.	1 ionizing bar type EI PS at right angles to the way the tampon moves, if the tampon is not lifted higher than 20 – 30 mm. 1 ionizing bar type EI VS if the lifting distance is higher, due to its larger distribution area (see area A).

General remarks:

- The tampon is charged electrostaticly while deforming and therefore draws up dust and fine particles. As this is the main element of interference the tampon must be air flown constantly while deforming or slackening.
- Ionized compressed air must be blown in the distance between tampon and product to be printed. Both, the product to be printed and the tampon will therefore be discharged at the same time. Only a maximum of 0.5 – 1.5 bar of compressed air is needed.
- Caused by electrostatic charges the product to be printed often has already drawn up dust and fine particles which must be eliminated with a powerful compressed air blow (~ 4 – 4.5 bar) before the tampon contacts the product.
- As the paint would dry too fast it is recommended not to blow directly on the printing bloc.
- Only at a certain electrostatic charge paint splashes can be seen on the tampon while taking paint from the printing bloc. As electrostatic charges are build up gradually with each step of printing they can be controlled with the tampon passing a with ions enriched field either way (see illustration area A).
- Due to financial aspects it is recommended to control the compressed air flow via a magnetic valve or a pedal switch.
- With divergent tampon sizes or forms the device configuration is compiled with individual installation.

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Recommended ionizing systems for different tampon sizes

Tampon size / form	Area	Ionizing system	Mounting devices	Power supply
Diameter up to ~100 mm, round or oval or up to approx. 100 x 100 mm, angular.	A	1 pc. EI PS axial with 2 m HV-cable.	2 fixing screws M4 x 18 in T-groove of the bar (enclosed). Distance tampon / ionizing bar min. 20 mm, max. 50 mm.	Areas A and B: 1 pc. EN 8 LC (4 HV-connections with electronic function monitoring).
	B	2 pcs. ring ionizer type RI 32 with 2 m HV-cable each.	2 RI-holders 10.7207.000 (threaded rod, length 150 mm with long-hole angle and adjustable holds ring) or 2 pcs. RI-holder 10.7202.000 (flexible holder with adjustable holds ring, fixing clamp).	Only area A or B: 1 pc. EN SL LC (2 HV-connections with electronic function monitoring).
Diameter up to 200 mm, round or oval or up to approx. 200 x 200 mm, angular.	A	1 pc. EI VS, length 30 cm with 2 m HV-cable.	2 pcs. bar holder 10.0268.000 2 pcs. long-hole angle X-0404	Only area A: 1 pc. EN SL LC (2 HV-connections with electronic function monitoring).
	B	3 pcs. Ring ionizers RI 32 with 2 m HV-cable each.	3 pcs. RI-holder 10.7207.000 (threaded rod, length 150 mm with long-hole angle and adjustable holds ring) or 3 pcs. RI-holder 10.7202.000 (flexible holder with adjustable holds ring, fixing clamp).	For areas A and / or B: 1 pc. EN 8 LC (4 HV-connection with electronic function monitoring).
		or 2 pcs. Delta blower DA TR.	On integrated threaded bolt M6 x 22	
Diameter more than 200 mm, round or oval.	A	1 pc. EI VS, length 50 cm with 2 m HV-cable.	2 pcs. bar holders 10.0268.000 2 pcs. long-hole angle X-0404	For areas A and B using 1 VS bar and 4 ring ionizers: 1 pc. EN 70 LC (4 HV-connections with electronic function monitoring).
	B	4 pcs. ring ionizers RI 32 with 3 m HV-cable each.	4 pcs. RI-holder 10.7207.000 ((threaded rod, length 150 mm with long-hole angle and adjustable holds ring) or 4 pcs. RI-holder 10.7202.000 (flexible holder with adjustable holds ring, fixing clamp).	Otherwise for areas A and / or B: 1 pc. EN 8 LC (4 HV-connections with electronic function monitoring).
		or 3 pcs. Delta blower DA TR.	On integrated threaded bolt M6 x 22	
More than 200 x 200 mm, angular, up to a maximum length of 500 mm one side.	A	1 pc. EI VS, length 60 cm with 2 m HV-cable.	2 pcs. bar holder 10.0268.000 2 pcs. long-hole angle X-0404	Areas A and B: 1 pc. EN 70 LC (8 HV-connections with electronic function monitoring).
	B	2 pcs. LS PLE, length 50 cm with 3 m HV-cable each.	2 pcs. fixing screws M4 x 15 each in T-groove of LS PLE (enclosed).	Only for area B: 1 pc. EN 8 LC (4 HV-connections with electronic function monitoring).

Subject to technical changes!

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