New Electrostatic Charging Technology

Hildebrand Technology's IONtacker FUSION is the latest generation of electrostatic charging systems. The high voltage power supply is integrated inside the charging bar profile. High voltage cables with their problems and disadvantages are history. A simple 24 Volt DC supply is sufficient. IONtacker FUSION is available in 0- 20 / 30 / 40kV and up to 4500mm active width. The NT version of the charging system additionally combines the newest embedded intelligence technology and communication by using a state of the art microprocessor. This enables the system via a CanOpen Bus to become interactive with its operators and communicate from and to a master. In this version the electrode contamination as well as emitter pin status and aging can be monitored and visualized in "real-time". Accessibility is ensured via a hand held computer for easy reading and changing of system parameters. The system utilises the latest high voltage decoupling technology with resistors located in front of each high voltage emitter point. A 5mm pin pitch makes IONtacker FUSION a class leading system. Our unique Tungsten Steel "Long Life" emitter pins increase the life time of the emitter points and guarantees a constant high performance during its full life cycle. These emitter pins generate ions to produce a contactless charge on the substrate surface and as a result generate the so called " electrostatic gluing effect".



Embedded Microcontroller

Principle of function

■The IONtacker FUSION charging system is designed to apply electrostatic charges to an insulating substrate surface. In order to charge the substrate a suitable opposite field polarity is essential. Fig. 1. If this opposite polarity cannot be ensured via a machine metal/ground an opposite polarity charging electrode must be installed. The charging bar itself needs to be installed at a defined distance to the substrate surface depending on its use and application. The substrate will pass in between the two electrode polarities. Due to the high voltage generated at the emitter pins, the ions generated settle on the insulating substrate surface. They try to recombine with the opposite charge ion on the other substrate side and therefore generate, due to the insulation of the substrate in between, an electrostatic bond.



Fig. 1

Typical Applications









Chill Roll Tacking

Bonding

In Mold Labelling

Laminating











Ribbon Tacking

Splicing

Stack Tacking

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