

SOLUTIONS TO STATIC PROBLEMS PLASTICS LIGHT MOULDINGS

Static electricity causes unique problems to injection mouldings which have a high surface to weight ratio. This includes hollow, thin walled mouldings like disposable syringes and other medical products. These problems include:

Adhesion to Toolface

The mouldings stick to the toolface when ejected from the tool instead of falling into the collection system.

The static charge exerts a powerful attraction due to the relatively large surface area of the moulding.

The solution is to blow ionised air from the top of the tool when the tool opens. This will neutralise the static charge and blow the mouldings from the tool. Operation by solenoid or similar control is normal.

Fraser 5000 Ionised Airknives or 4200 Ionised Air Nozzle System can be used.

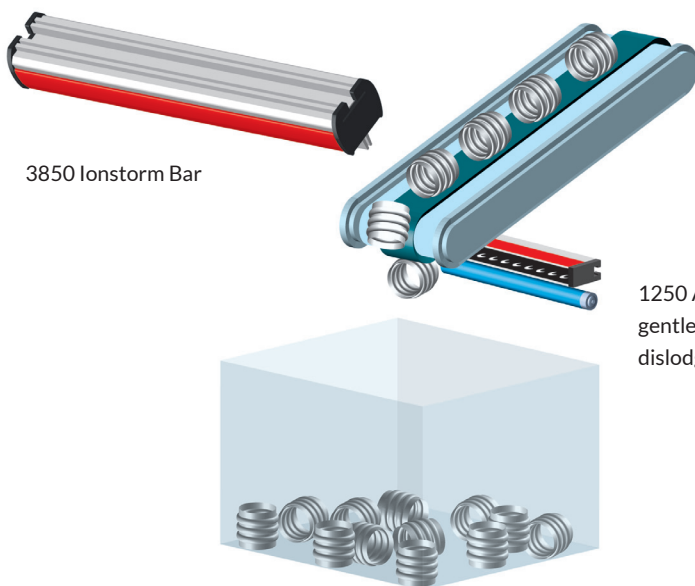
Adhesion to Conveyor

The static charge on the mouldings can cause them to stick to the conveyor instead of falling into the bin.

Misbehaviour of Mouldings

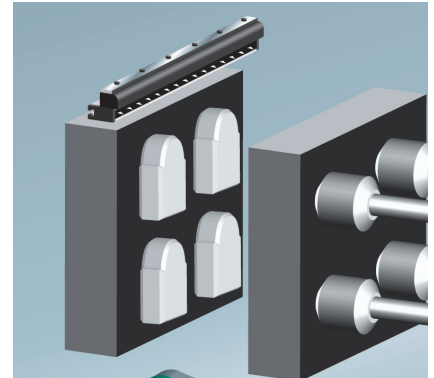
The charged moulding may cause shocks to operators. Dust may be attracted. The charge may be so high that the mouldings jump out of the container. The solution to all of these problems is to use an Ionstorm 3850 Bar as shown below. This will neutralise the charge in the mouldings as they fall into the container.

Neutralising the mouldings on the conveyor with a 1250 Bar is not always successful if the product is flat - the charge in the moulding couples with the conveyor. A better solution may be to use a 1250 Air Bar as shown below. The gentle airflow will stop the product following the conveyor and allow it to fall into the bin.



3850 Ionstorm Bar

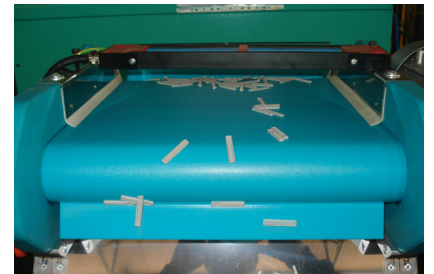
1250 Air Bar blowing a gentle ionised airflow to dislodge mouldings.



High speed ionised air is blown down toolface as soon as it opens to kill the charge and release the mouldings.



5000 Airknife



3850 Ionstorm Bar



1250 Air Bar