

ANTI SEGREGATION DISCHARGE STATION

General:

The "Anti Segregation" IBC Discharge Station is part of the unique Matcontainer range of equipment designed to discharge Matcon's Cone Valve Intermediate Bulk Containers (IBCs). It is specifically intended for use with delicate blends which are free-flowing and prone to segregation.

Discharging:

The "Anti Segregation" Discharge Station incorporates a powerful but slow moving lifting "probe" which engages and locks to the Cone Valve in the IBC. On demand this probe lifts slowly and gently using a pneumatic bellows, carrying the Cone Valve upwards into the contents of the IBC and creating an annular gap around its perimeter, through which the material will discharge. The lift height of the probe (and thus the annular gap around the Cone Valve) and the flow rate of air into the bellows may be set to suit the flow characteristics of the material and the desired discharge rate. Once lifted, the probe remains fully open until the contents of the IBC have been transferred.

Cone Valve Mass Flow:

The presence of a "cone valve" in the centre of an IBC outlet prevents "core flow" from happening and causes material to flow from the outer walls of the IBC, resulting in "mass-flow". Adjusting the lift height of the cone valve can influence this pattern to suit solids with differing flow properties.

Segregation - Venting & Elutriation:

Elutriation is defined as "the process of separating the lighter particles of a powder from the heavier ones by means of an upward directed stream of air." When certain blended powders fall through air volumes, elutriation can take place, causing segregation.

The Matcon "Anti Segregation" Discharge Station incorporates the following features specifically intended to eliminate or minimize segregation.

- Low profile hopper which minimizes the drop height of material from the IBC;
- Small volume hopper reduces the amount of air which must be displaced;
- Integral vent in hopper body to prevent air being forced back into IBC;
- Slow acting lifting probe;

Feed To Process:

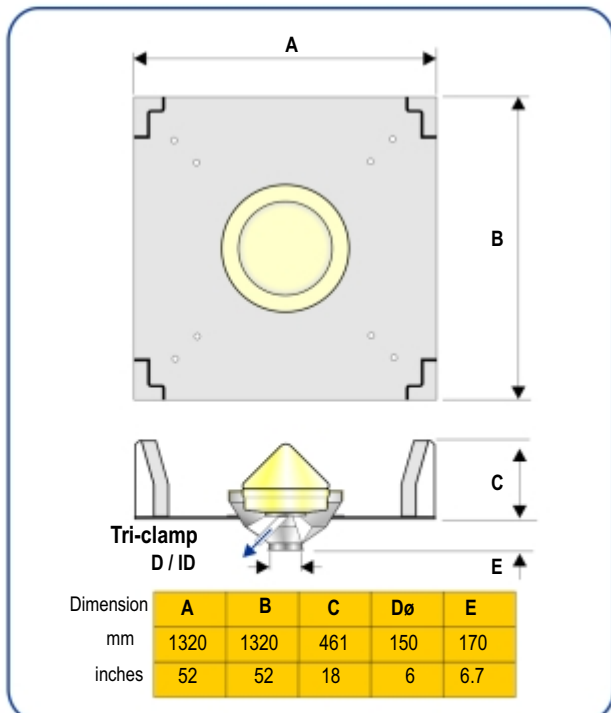
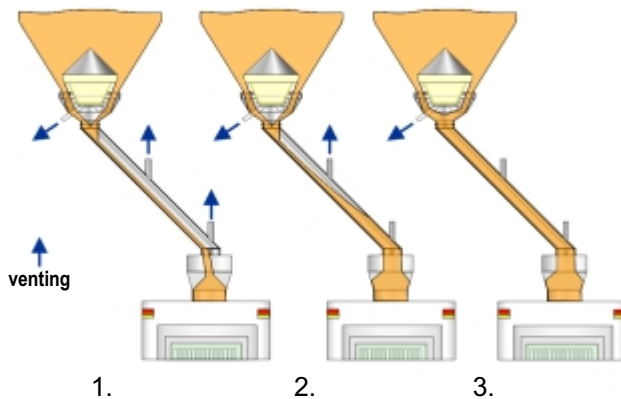
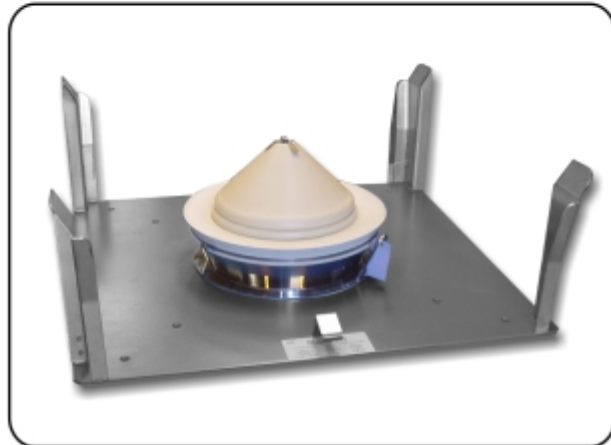
The Matcon "Anti Segregation" Discharge Station addresses only one source of elutriation in the transfer process. Attention must also be paid to venting in the IBC itself and the process feed chute. An inclined feed chute allows powder to slide gently down the bottom face, venting along the top face (not through the powder).

Sealed Operation:

The Lip Seal is a feature that is fitted to all Matcon Discharge Stations. This provides a sealed connection between the outlet of the IBC and the Discharge Station during material Discharge. In addition, an expanding "Pneumaseal" locks the Discharge Station probe to the IBC Cone Valve to deliver an even higher level of dust tight operation before, during and after material transfer.

Cleaning:

The IBC Discharge Station is designed to be easily and thoroughly cleaned. Working components are fully sealed behind an air-tight flexible cover. Cleaning may be done off place by removing the central hopper (material contact surfaces) and washing manually in a suitable location.



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