process LINK

LINKBIN

(PATENTED)

POWDER HANDLING SYSTEMS

POWDER HANDLING FOR THE 21ST CENTURY ENVIRONMENT

Application showing polyethylene Linkbins in a system for a major food producer

The 35 years of materials handling experience and expertise in solving dust problems resident in Process Link has been utilized to design a revolutionary patented powder handling system.
It has been designed to meet 21st Century requirements, which impose ever increasing levels of energy efficiency and reduction in dust emissions and noise levels in the working environment.

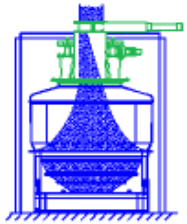
In addition to reducing dust and noise pollution, the system has the distinct advantage of being able to discharge and control diverse and particulate powders, including difficult products that bridge, rathole, flush and segregate.

As a system it is made up of proven components i.e. dust tight jam free valves, inflatable seals

ensuring dust tight connections, vibro technology applying minimum but effective agitation, plus

DUST TIGHT FILLING

Linkbin Filling Station



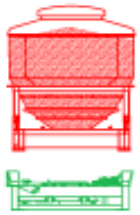
Dust tight filling to controlled weight if required.

Filled and sealed Linkbin

Moved to stores or process by fork lift truck and/or overhead hoist.

DUST TIGHT DISCHARGING

Linkbin to process discharge point.



Linkbin discharge station connected to process for product dust tight transfer

Linkbin docked onto link discharge station.

System detects Linkbin in place and all connections correctly made, before allowing product discharge to take place.

Linkbin discharging to process.

By means of a pneumatic cylinder arrangement, the system can provide adjustable valve opening positions to give good product discharge control.

Linkbin removal and return to stores.

System permits the Linkbin to be resealed, thus allowing a part discharged bin to be removed.

Linkbin empty - return for refill or cleandown.

The system ensures Linkbin is empty and resealed before permitting bin removal.

weighing and/or feed control where applications dictate. These have all been linked together to make a complete efficient system. We have called this:-
"THE LINKBIN POWDER HANDLING SYSTEM".

The illustrations show how effectively it can act as an important link in typical powder processing and manufacturing operations. The system provides "Dust Tight" Linkbin filling and, once the product is in the sealed Linkbin, it can be moved or conveyed up, down or horizontally around the processing area without fear of product leakage causing atmospheric pollution, or product suffering cross contamination by ingress of foreign material from outside the bin.

Carrying on with the theme of isolation or integrity of the product (both to and from outside contamination), when the Linkbin is located on its specially designed Link Discharge Station (docking like a spacecraft to a space station), the Linkbin allows transfer of product to process to occur with continuing product and environmental integrity.

Below shows how the intelligent use of the system frees up other process plant machinery - milling machines, sifters, mixers, dryers, etc... by charging and discharging them quickly and efficiently rather than leaving them to act as very expensive intermediate storage and feed systems.

The potential number of applications for this efficient system are too numerous to mention in this leaflet, therefore please contact Process Link with your application/problems, so recommendations can be discussed.

Linkbins are manufactured in metal and/or polyethylene in a range of sizes and finishes appropriate to the application. More detailed information is available on request.

Application showing stainless steel Linkbin system, for use in hygienic fine chemicals manufacturing process.

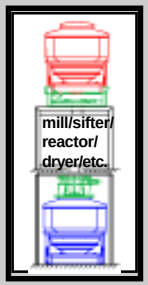
TYPICAL POWDER PROCESSING USING THE LINKBIN

STATION 1
Raw Material Filling

Linkbin filling from sack, drum tip, FIBC, Silo etc.

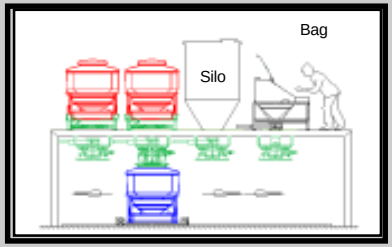
STATION 2

Linkbin discharging into next process and back into Linkbin for transfer to next stage.



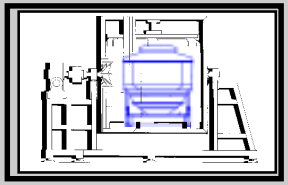
STATION 3
Product Formulation

Linkbin discharging via formulation station and back into Linkbin for transfer to mixing process

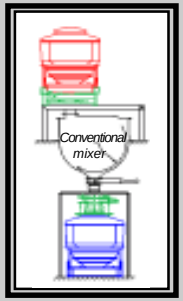


STATION 4
Linkbin Blending

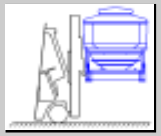
Linkbin Blender speeds up the mixing process. Place Linkbin in unit and blender is 'charged'. Remove blended bin and blender is 'discharged' ready for next mix without the need for cleandown etc.



STATION 5
Mixing Process

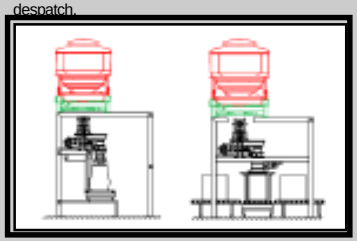


Linkbin charging into mixer and then mixer discharging into Linkbin for transfer to pack off stations.



STATION 6
Final Packing Off Process

Linkbin discharging into Process Link Bag Filling Station (or sacks/boxes/drums with liners etc.) or any final process e.g. tabletting machine prior to despatch.



A SELECTION OF EQUIPMENT PRODUCED BY PROCESS LINK

"DUST TIGHT" VALVES

Membrane Valves

Diverter Valves

Flap/Dump Valves

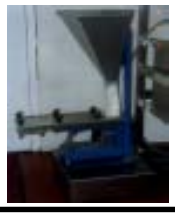
Cassette Membrane Valves

"DUST TIGHT" VIBRO FEEDERS AND CONVEYORS

Feeders

Conveyors

Scalping Screens



Loss in weight feeders

"DUST TIGHT" INFLATABLE SEALS

'A' type docking seals

'B' type bag seals

'C' type tube/FIBC seals

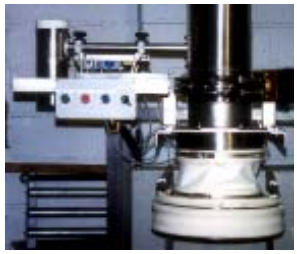
'D' type containerseals

"DUST TIGHT" WEIGHING AND PACKING OFF STATIONS

Sack filling

Drum filling

Bags in boxes/ kegs filling



In line sampling unit s
(these can be applied to any filling station and typical sampling points)

"DUST TIGHT" FIBC FILLING/DISCHARGE STATIONS (INC' WEIGHING WHERE REQUIRED).

Filling and weighing

Filling, compacting and weighing

FIBC Discharging

FIBC Discharging into sacks

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