

UNIQUE

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TOTAL DISCHARGE

2

CONTROL

3

CONTAINMENT

4



Ingredient
Batching
Systems

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CONE VALVE TECHNOLOGY

FOR FOOD, PHARMA, CHEMICALS &
OTHER INDUSTRIES



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ABOUT THE COMPANY



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ISL was incorporated in the United Kingdom by Mr. Ivan Semenenko in the year 2000. Prior to ISL, he was the original inventor of the 'Cone Valve' technology. Asia saw a rapid growth of industrialisation in the early 2000. Taking advantage of this, ISL Asia Technologies Pte. Ltd was incorporated in 2002.

Since its humble beginning in the year 2002, ISL Asia Technologies serves customers worldwide.

CONE VALVE TECHNOLOGY

In process-based industries, some of the raw materials come in powdered or granular form. These raw materials come in various types of packaging. ISL manufactures Intermediate Bulk Container Systems (IBC) for storage, transfer and discharge of powders.

key features



INTEGRATED SYSTEM

ISL's 'Cone Valve' has an integrated system which promotes and controls product flow.

Other container systems: Use discharge valves such as butterfly valves and slide-gate valves that does not promote flowability.



SYSTEMATIC DISCHARGE

When the Cone Valve is lifted for discharging the product or blended material, there is systematic discharge of materials to avoid Segregation.

Other container systems: When blended materials are stored, segregation is the main problem during discharge.



PROVIDES CONTAINMENT

ISL IBC's when placed on the discharge station, the ceiling mechanism provides a good level of dust containment. ISL also provides high level of containment systems for critical powders for pharma and speciality chemicals.



EASY CONNECTION

When ISL IBC system is placed on the discharge station, no further manual intervention is required.

Other containment systems: Some level of manual integration is required.

ROLE OF IBCs



LEAN MANUFACTURING

When introduced in any manufacturing process, an IBC system provides a systematic approach to the identification and elimination of all kinds of waste. It is also another form of Just-in-time manufacturing.

As each IBC has a fixed volume of material it can hold, it gives an accurate information on Batch Accountability.

BATCH ACCOUNTABILITY



FLEXIBILITY MANUFACTURING

An IBC system is not a fixed and rigid system. Since the IBCs are mobile in the manufacturing process, it is a flexible form of manufacturing option.

In manufacturing industry, most companies require equipment to be cleaned. IBC systems can be cleaned off place, thus significantly reducing downtime cleaning.

LOWER DOWNTIME



EXPANDABLE SYSTEM

If the business grows, more IBCs and discharge stations can be installed in the manufacturing process, without the need to discard the old system.



Cross-section showing the position of Cone Valve in an IBC



A D V A N T A G E S

FILLING SYSTEM



The cyclonic design features of the fill head ensure maximum dust containment.

ISL works along with their industrial partners to provide total dust containment system during filling of IBC for critical and most demanding application in the pharmaceutical and chemical industry.



IBC FILL HEAD

The Fill Head can only be lowered once the IBC is in position. There is a sensor on the Fill Head that ensures that the IBC lid is removed before filling.



ISL manufactures IBCs from 0.5 cu.m to 3.0 cu.m in Stainless Steel: 304, 316L or plastic moulded IBC



FLOOR LOCATOR

A floor locator during a filling operation ensures:

- IBC is placed directly under the Fill Head
- IBC has a cone Valve installed in place

Floor Locator comes with an optional floor scale to make sure the correct quantity of product is filled in the IBC.



Material Inlet



DISCHARGE SYSTEM

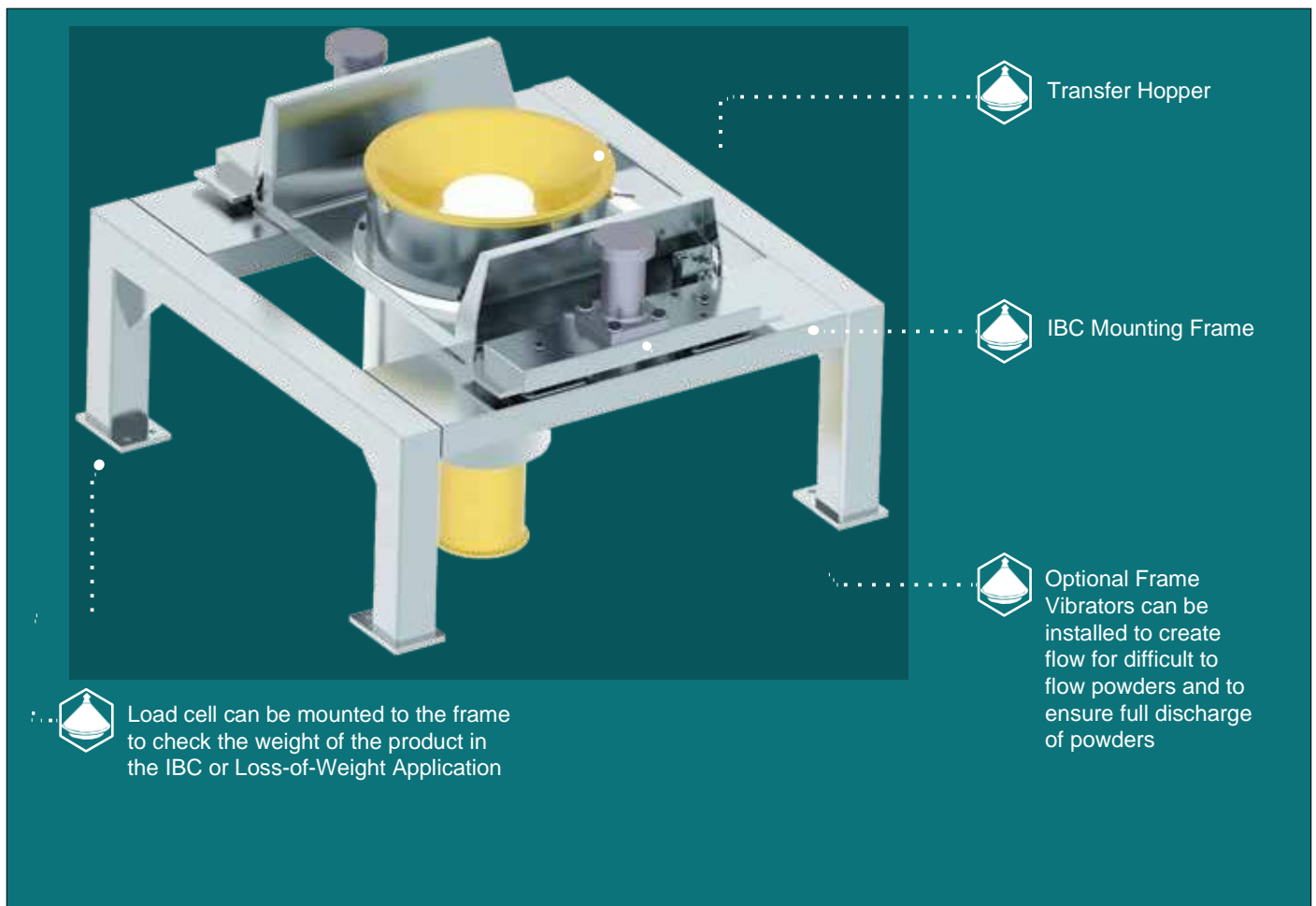


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unique features

- The **Lifting mechanism** is not in the product flow
- **Free passage** for the products to flow
- **Easy to clean/ Minimum downtime:** Can be dismantled and assembled in matter of minutes
- **Least number of components:** Less spare parts requirements
- **Programmable variable lift height** enables the discharge station to be used in weighing / batching application



IN-BIN BLENDING



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Creating mix products directly within the IBC is most suitable where the product must be handled gently with minimum damage or degradation.

Mixing directly within the IBC reduces the number of product transfer by Two (02) and a unique advantage of Cone Valve is that during each revolution, it separates and re-mixes the product, so creating a better quality mix.

IBC WASHING/ DRYING SYSTEM

The biggest advantage of an IBC System installation, is that the IBC can be washed and dried without, any downtime at the production level.

Depending on what type of powders are stored in the IBC, we at ISL can design an appropriate Washing and Drying System (application specific).

Our sales and application engineers can sit down with your team to go through requirements in detail and provide your company a solution, which meets the specification and also your budget demands.



RAW MATERIAL INTAKE SYSTEM



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The majority of all the raw material that comes into manufacturing facility is either 25 kg / 50 kg sacks or Big bags. Some of the raw material for the Pharmaceutical industry and Chemical industry may come in Drums too.



Universal Big Bag Discharger (UBBD)



Sack Tip Station with Integral Dust Collector



Big Bag Discharge System for difficult to flow material

The ISL "Universal Big Bag Discharger (UBBD) enables an FIBC (big bag or super sack) to be used directly in process with the same containment levels as the ISL IBC and the same accurate batch and continuous weighing to process direct from the FIBC. It also has the same unique feature of being able to take a part empty FIBC off process without any untying/ retying of the outlet sock (thus maintaining

Raw Material packed in 25 Kg/50 Kg Bags, have to be emptied into an IBC. The Sack Tip Station is an Ideal System for manual discharge of powders and granular material that is supplied in Bags. It comes with an integral dust collector and fan, designed efficiently to create enough suction so that powders are not discharged into the atmosphere.

Materials packed in Big Bags, tend to compact during storage and transportation. Discharging material out from these Big Bags is always a challenge. ISL works with their partners to supply a Big Bag Discharging System, which has good sealing mechanism during discharge of material and bottom bag massaging mechanism to promote flow.

CONTROL PACKAGE

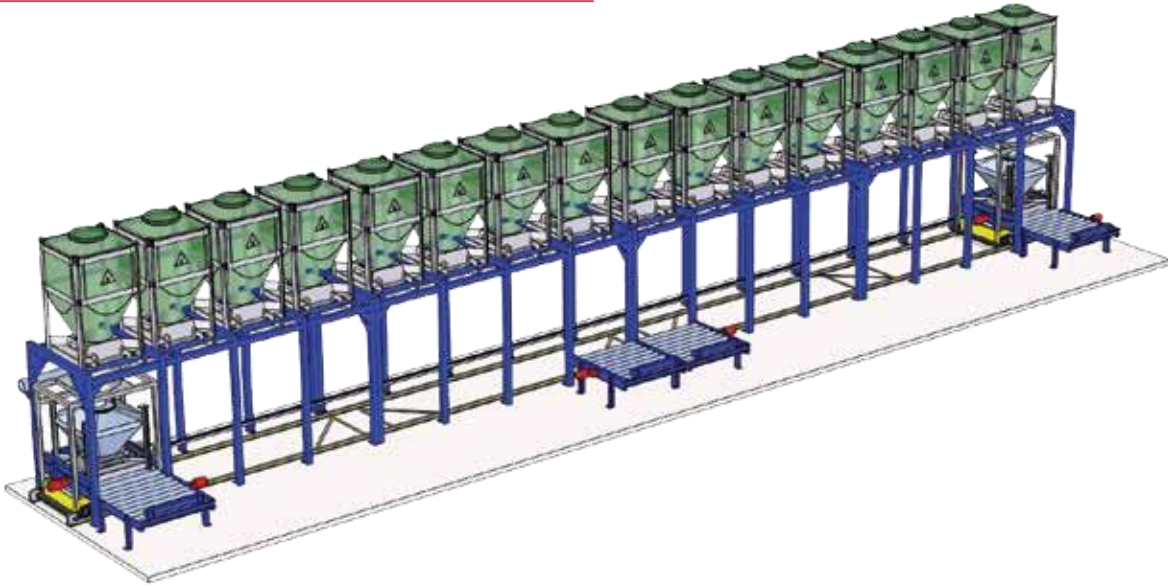
Whether it is a Control Panel for Standard Discharge Station or IBC Filling system, ISL is able to deliver a complete Control System package to suit the requirements of your project.

We have many years of experience in working with major brands of PLC's and providing system integration for Plant Formulation System.

FORMULATION SYSTEMS



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Regardless the scale of the project, ISL is always willing to sit with you and discuss the details of the project. An IBC system, may at times require support structures, frames and other components that may not be in our scope of supply, but we can undertake full design responsibility.

At ISL we have incorporated such projects which include Silos, Dust collectors, Vacuum / Pressure Conveying system, etc.

ISL also provides Roller Conveyors, Chain Conveyors or AGV, as required by the needs of the project, to move to the IBC system for formulation system.

GLOBAL PRESENCE

ISL has many partners and distributors around the world. They will be able to provide you with sales consultation and after sales service.

Contact details of your local ISL Representative:

For any further enquiries or assistance, please contact our Head Office in Singapore:

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