High containment process feeding for powder out of drums

Isocharge for Drums

- Fast operation for multiple drum emptying
- Safe handling of toxic, sticky or lumpy powders
- High containment (< 0.1 µg/m³)
- Stand-alone unit
- Cost effective
- Mobile
- Optimizes processes
- One unit can be used to charge multiple receiving vessels

ATEX

Cost Effective

Time Saving

OEB 4

High Containment

CIP

Easy Cleaning

Operator Safety

High containment process feeding for powder out of drums

Isocharge for Drums

Dec's Isocharge* is best described as a hybrid design, crossing laminar flow technology with a glove box isolator. It provides the operator with the protection of a gloved visor and the flexibility of an open laminar flow booth providing a high containment solution for rapidly dispensing and charging powders into any process. The system is designed to feed powder from bags or drums into process equipment whilst managing all contamination risks for both operators and the environment.

In addition to bags, the Isocharge system has been further developed for emptying also drums up to 150 kg. The drums are lifted on the side of the unit by a drum tipper and the liner with powder can be pulled inside by using a specially conceived pulley system preventing the operator to have to handle heavy loads.

The bag is then moved inside the chamber where it can be lifted and emptied into the discharge hopper, which can be connected to a PTS Powder Transfer System® to safely charge process equipment. The hopper can be chosen with various options such as a delumper in case of lumpy and hard materials. Both bag and drum versions are equipped with an integrated filtration system including a pre-filter, a double HEPA 14 filter and its own ventilation fan suitable for ATEX zone 1/21. The system can also be connected to nitrogen for cleaning with solvents.

In addition, the system includes a perforated internal partition wall guaranteeing optimal laminar flow behaviours in the discharge chamber.

Versions
Open and closed (see below)

Features
- Containment levels up to < 1 µg/m^3
- Fully surrogate tested, can be operated with closed or open door
- Safe for operator and environment
- Fast emptying of multiple drums
- Good working ergonomics
- Good visibility
- Integrated fan including control options
- Continuous liner waste Bag-Out Port
- Safe Change HEPA Filtration
- WIP facility

Options
- Precise dispensing with integrated scale
- Assistance for handling
- CIP with independent wash down facilities
- Integration of delumper for lumpy and agglomerated products

Design
- 0.7 m/s face velocity
- AISI type 316L stainless steel, glass and EPDM
- Other materials available (HC22, internal coating etc.)

Accessories
- Integrated scale
- Drum tipper
- Pulley system with clutch

*patent pending

Open Version (Containment reached < 1 µg/m³)

The door (manual or automatic) is open when the drum is connected. The space between Isocharge opening and the drum remains open with an air velocity above 0.7 m/s preventing any particles to be released outside. The door remains closed when the unit is not in

Closed Version (Containment reached < 0.1 µg/m³)

In order to reach a higher containment level or to guarantee a cGMP environment inside the system, Isocharge can be equipped with an internal door and a special annulus purge ring system connected to a secondary fan and HEPA filter. The drum is sealed to the inlet by an inflatable seal and the internal door can be open after sealing the drum. The purge ring will guarantee an internal gas flow velocity, similar to the open version, preventing migrating of dust towards the Isocharge opening.

Dec Group Headquarters: Dietrich Engineering Consultants sa · Z.I. Larges Pièces A · Ch. du Dévent · P.O. Box 9
1024 Ecublens · Switzerland · Tel +41 21 694 20 40 · Fax +41 21 694 20 59 · info@dec-group.net