

Dec big bag loading and drum filling solutions

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Dec Group offers comprehensive liquid or powder filling and packaging solutions that extend from dust-free to high containment arrangements and meet the need for safe handling of liquids and powders for pharmaceutical and chemical applications.

These solutions span the entire range of manufacturing needs, from drum, bag and big bag filling, all achievable under high containment and compliance with low occupational exposure limits (OELs) for highly active pharmaceutical ingredients (HAPIs) and harmful chemicals.

Bag and drum filling systems

Dec excels in providing comprehensive technical powder filler solutions for filling into bags and drums from process equipment discharge such as a dryer or a mixer, milling and dispensing to the final packing of the product.

It has developed a wide range of solutions for filling various types of packaging such as bags and drums with liners, all adapted to specific powder characteristics, containment level, plant layout and required accuracy.

When focusing on high containment requirements, these solutions are generally based on three Dec technologies:

- PTS Powder Transfer System® that uses a combination of pressure and vacuum to move substances over distance safely and under total containment
- DCS® Drum Containment and Docking System that allow contamination free filling and emptying of drums and big bags of various sizes using single or double liners, again under high containment
- Dosivalve® dosing system that uses a pneumatically actuated piston to eliminate flow and accuracy problems associated with rotating or vibration valves

Using these systems in combination, Dec can create customized charging and discharging applications for drums, big bags, containers, silos, hoppers, etc., that use either gravity or active PTS powder charging to discharge from or fill to remote stations where necessary. Dec's extensive range of big bag filling machines and big bag loading solutions allow users to create big bag filling stations adapted to specific process and containment needs. Use of DCS® allows creation of a contamination free drum filling system that can handle single or double liner drums of various sizes under high containment at less than 1 µg/m³. DCS® guarantees both primary and secondary containment, with a glove box enabling the operator to connect the drum liners within a sealed environment. This is a fully cleanable DCS® system featuring a Push-Push HEPA filter to be connected to an extraction fan. DCS® can be installed on load cells and combined with Dosivalve® to create a drum filling machine that will deliver precisely metered amounts. Further, bag and drum filling and discharging solutions can both be combined with the **MPTS Sampling** Device for taking samples during the process.

Liquid Handling

DCS® Liquid was specifically developed for toxic and corrosive liquids, achieving containment levels below 1 ppb. The safe and contained emptying and filling of drums is thus made possible without additional precautions, such as full protective clothing or large laminar airflow booths.

DCS® Liquid is used with a suction lance which is housed in a special venting tube with a sealing plug.

The system can be equipped with load cells for precision dosing and drums can be partially emptied, eliminating the need for inefficient and time-consuming pre-dispensing. This versatile system can be adapted for the handling of drums of different sizes and types and can also be used with plastic canisters when using a dummy drum.

The liquid will be emptied by using an external pump (i.e. diaphragm pump) or using the vessel's own vacuum.



Dec DCS® drum filling station for active feed and weighing system for precisely metered amounts



Drum/bag dispensing into FIBCs, Isocharge and DCS Big Bag Filling Station with PTS and DosiValve®

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