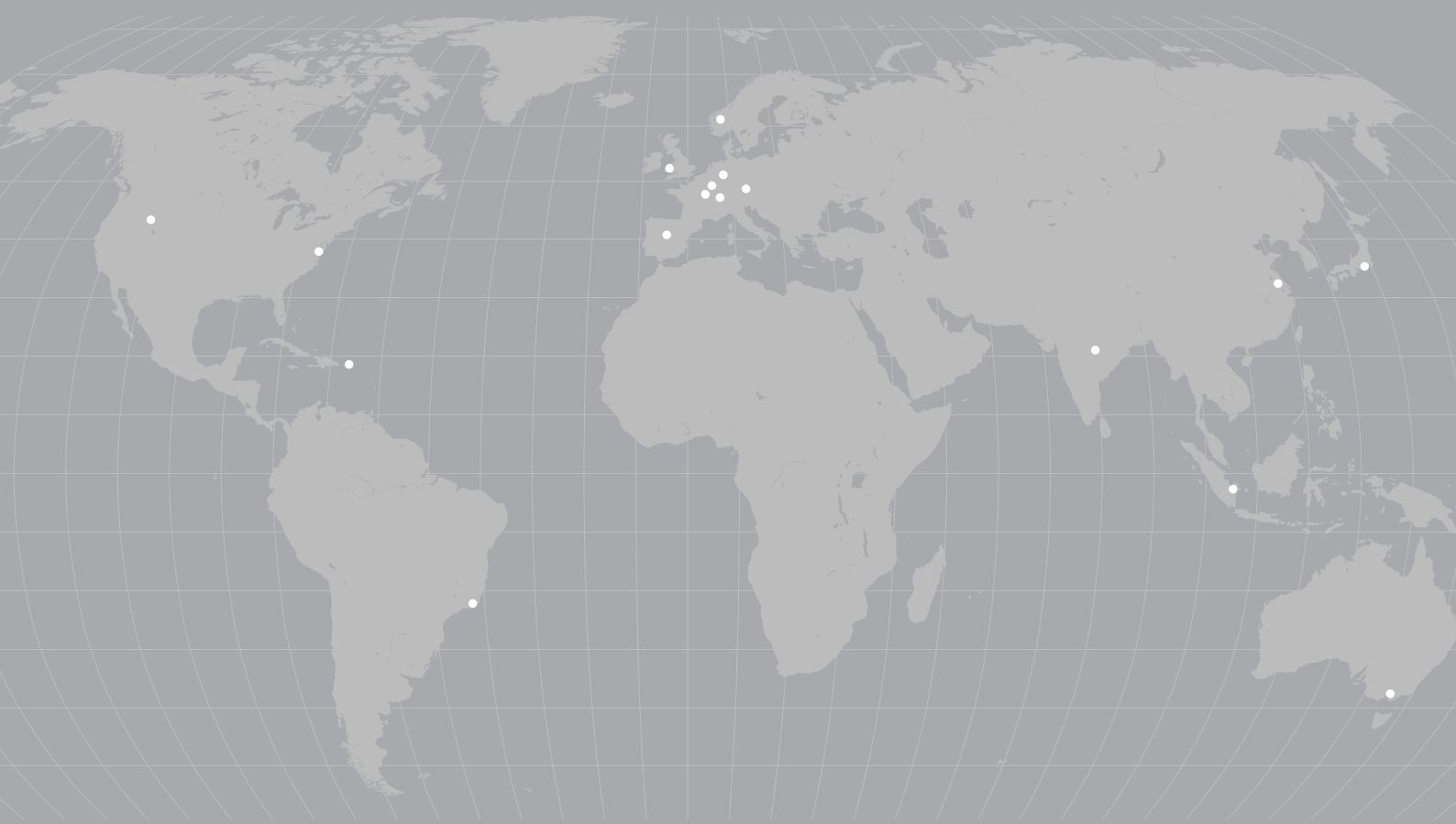




ChargePoint DL

Containment and material handling
for a safer, more productive process





ChargePoint® Technology are market leaders in the supply of containment valves and integrated material handling equipment for the Pharmaceutical, Chemical, Food and other process based industries.

Our most important goals are to create lasting partnerships by providing high quality and reliable products, coupled with outstanding customer service.

As a pioneer of split valve technology our consultative approach will provide the right technological solution, as well as delivering the lowest cost of ownership benefits by maximising yield, reliability, productivity and flexibility.

With the introduction of the innovative DiscLock™ (DL) range of valves from ChargePoint® Technology, the fast and secure transfer of larger quantities of powder, granular and semi-solid ingredients has just become a whole lot more efficient and economical.

We can help you

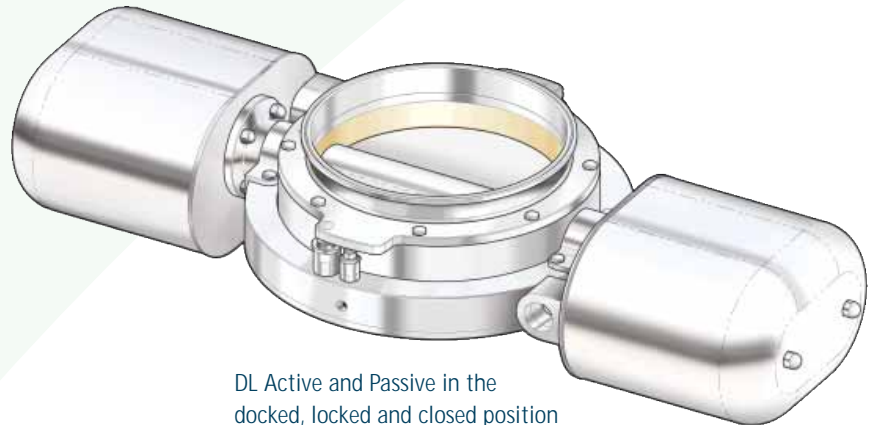
- Eliminate dust in the processing of your raw materials.
- Process your more potent or toxic powders, ensuring the safety of your product, personnel and environment.
- Maintain your required OEL (Operator Exposure Level) over extensive operating periods with our independently validated and proven technology.
- Speed up the transfer of bulk materials between different process equipment.
- Increase your product yield by incorporating split valve technology.

Improve your Overall Equipment Effectiveness (OEE)

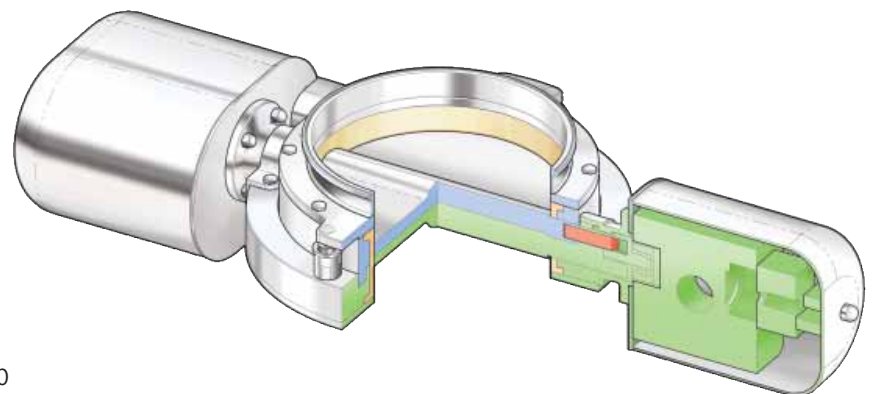
The design of our DL range of valves can help you improve the three key elements of OEE:

Availability
Performance
Quality

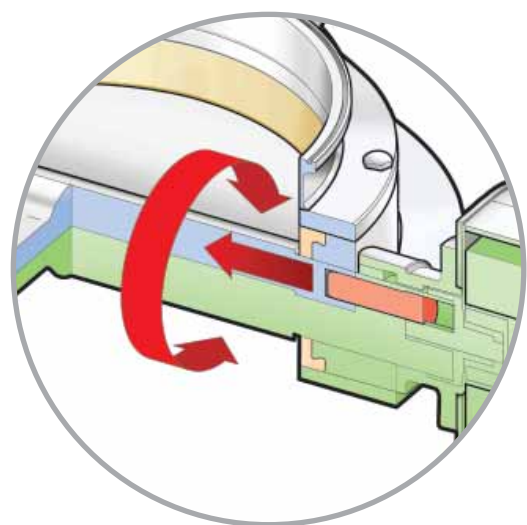
The body of our valve is machined from one solid piece of material with no fragile or unnecessary components providing a long lifetime of trouble free performance. Increased automation using our DiscLock™ technology, PowerDock™ and Wash-In-Place options will increase the performance of equipment and actual line output. Quality is enhanced by eliminating loss of materials in comparison to manual or other non-contained valve systems, thereby increasing good throughput.



DL Active and Passive in the docked, locked and closed position



Cross section showing the Active (green), Passive (blue) and the DiscLock™ system (red).



Dual action of the actuators for DiscLock™ and opening/closing of the valve

Containment and Dust Control

Our DiscLock™ technology (patent pending) provides a means to directly lock the Passive and Active disc halves together to maintain the containment seal. This design ensures there is a much reduced risk of disc separation when forces are being exerted on the valve via IBC loading and offset mechanical forces.

As standard, the containment performance is between 1-10µg/m³. This can be improved with the addition of optional extraction systems.

The result, whether you need high containment or not, you can be assured of a dust controlled environment and maximum yield from your product transfer.

An Economic Solution

A further benefit of our DiscLock™ design is the dual action of the actuators. This feature reduces the weight, height and cost profiles of the valve. This provides a solution for existing facilities where height restrictions can limit the introduction of new equipment.

Fast, Secure Product Transfers

Our proven metal-to-metal disc sealing method eliminates the need for additional solid or inflatable seals. This avoids unnecessary parts that may become damaged or be subject to a loss of air pressure, both of which can affect the containment integrity of the valve.

The other key benefit of this design is that the disc profile is minimised ensuring more rapid transfer of the material - a key requirement for bulk material transfer.

Our BridgeBreak™ technology can be fitted to the IBC (Intermediate Bulk Container) to enable a consistent flow of product.

Optimum Operational Performance

The DL range of valves are fully actuated as standard. This includes both secure locking and unlocking of the Passive to the Active and the opening and closing of the valve disc.

Compensator

A Compensator device can be attached between the valve and the process to protect the process equipment from the forces encountered during docking.

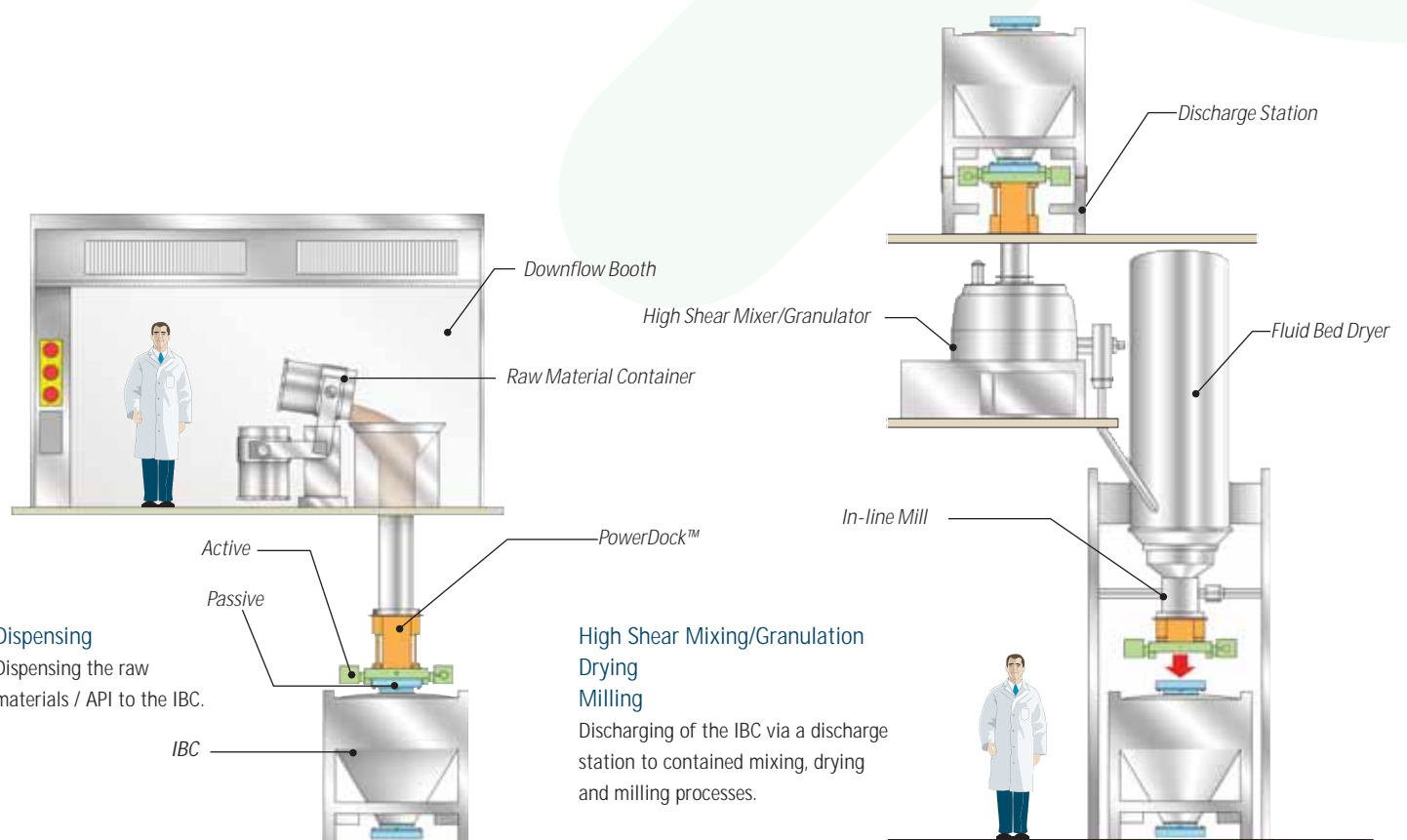
PowerDock™

The PowerDock™ system facilitates the automated raising and lowering of the Active when docking to the Passive.

The system also corrects any misalignment of the process equipment for repeatable docking accuracy.



DL Valve







High Shear Mixing/Granulation Drying Milling

Discharging of the IBC via a discharge station to contained mixing, drying and milling processes.

TransferPoint™

The TransferPoint™ provides a technically superior yet cost effective solution for transferring material from one IBC to another.

Our unique design enables both operational and flexible installation benefits to be realised:

-  Transfer material from container to container using the same or **different** sizes of Active or Passive valves.
-  When space, availability or budget does not permit the use of permanent hoisting (lifting) arrangements, utilising two of our PowerDock™ systems will accurately connect the containers together.
-  Ease and flexibility of installation is assured by the use of our compensating system. This corrects any misalignment on docking, overcoming the positional accuracy problems normally associated with lifting equipment.
-  A combination of our compensation system and PowerDock™ provides an economic, accurate, dust free and secure means of transferring product between containers.

Integrated Systems

If you have preferred suppliers of IBC's, Lift or Hoist Systems, Blenders, Mills, Sieves or Isolators, we will work in partnership with these OEM's (Original Equipment Manufacturers) without bias or conflicts of interest.

If you have no specific OEM preferences we will engineer a solution and provide an integrated system tailored to both your individual process requirements and your budget.

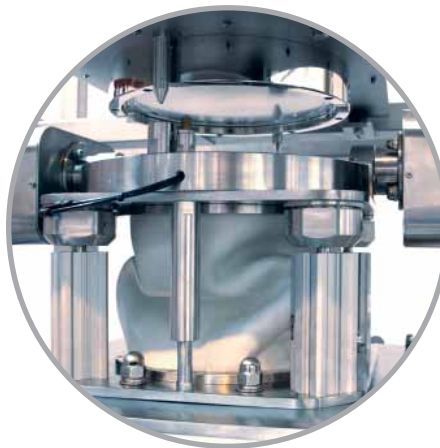
BridgeBreak™

The ChargePoint® BridgeBreak™ device can be fitted to new or existing systems to effectively prevent bridging or rat holing within the IBC / container during discharging.

Vibration of the BridgeBreak™ device ensures a constant, uniform material flow with the added benefit of preventing segregation.

Process Applications

Pharmaceutical & Biopharmaceutical	API Production; Formulations, Parenteral, Generics and Nutraceuticals
Chemical	Actives, Intermediates Reagents
Food and Beverage	Dairy, Bakery, Tea, Coffee, Spices, Herbs, Flavours, Cereals, Flour, Cocoa, Fragrances, Colourants.
Consumer Goods	Cosmetics, Detergents
Metallurgical	Metal Powders, Batteries



PowerDock™ retracted

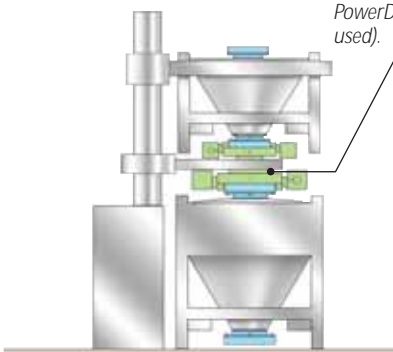


PowerDock™ fully docked

Excipient/Lubrication Addition

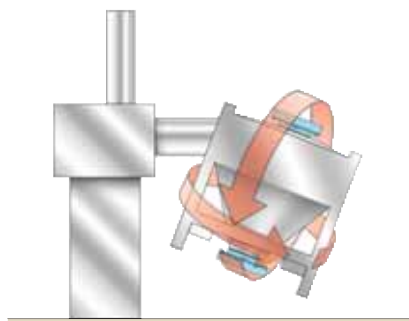
Addition of excipients to the raw material via the TransferPoint™.

TransferPoint™ Direct IBC to IBC Transfer (design shown utilises post hoist. Alternatively PowerDock™ can be used).



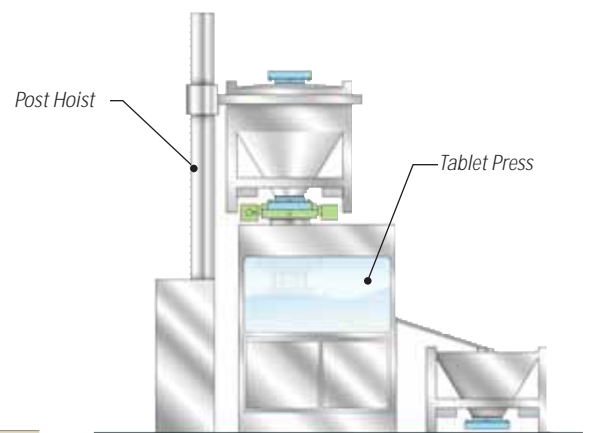
Blending

Blending of the excipient and raw material.



Tablet Compression/Coating/ Capsule Filling

Charging the blended material to the Tablet Press, Coater or Capsule Filling equipment.

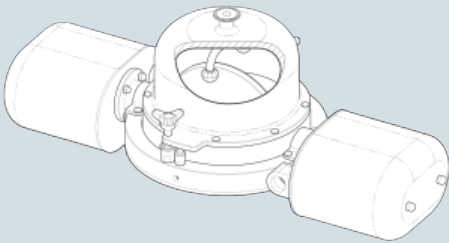


Cleaning and Washing

The ChargePoint® DL valves are specifically designed for effective washing either in place or within a remote station.

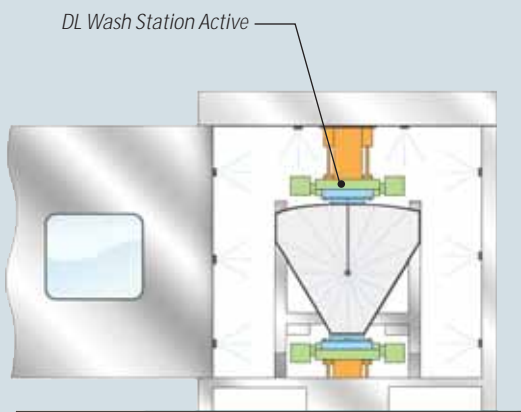
Wash in Place (WIP) of Active Valve

Once the IBC with the Passive is undocked a unique DL WIP Passive (dummy) valve can be fitted. This has a connection to the washing delivery system. A version with a drain connected is also available if the Active valve is in an inverted position. Using either of these options will ensure that all airborne dust is removed prior to any residual cleaning that maybe required, reducing downtime.



Cleaning Within a Wash Station

Customers using an automated IBC washing system will benefit by utilising our specifically designed Wash Station Active valve. This has a special profiled disc section designed to maximise the area exposed to the washing jets. This valve can be used in either high temperature or ATEX rated environments. We will liaise with your wash system supplier to ensure optimum results.



DL Valve Specifications

Size Range	200mm (8"), 250mm (10"), 300mm (12") nominal bore.	
Materials	Body & Disc Seals	316L Stainless Steel or C22 Alloy EPDM, FKM or FFKM.
Containment level	1-10 mcg/m ³ .	
Sensors	Pneumatic or electrical sensors for accurate detection of valve docking.	
Connections	Wide range available to suit IBC/container and process equipment.	
Actuator finish	Epoxy coated or stainless steel cover.	
Operation	Fully actuated as standard.	

Options and Accessories

Control System	Fully pneumatic independent control panel. Capability to integrate into customers existing control system. ATEX certified versions available.	
Extraction Systems	Integral extraction to provide improved containment performance with the additional benefit of maintaining valve cleanliness during multiple batch cycles. This can be supplied with a mobile extraction skid.	
TransferPoint™	Modular containment valve system for direct IBC to IBC transfer.	
Passive Valve Opener	Manual device allowing for the opening of the Passive valve for inspection, sampling or cleaning of the IBC/container when not docked to an Active.	
Protective Valve Covers	Maintain GMP and protect the valve whilst in storage or transit.	
Cleaning & Washing	DL WIP Passive	Special Passive valve for in-situ cleaning of the internal surfaces of the Active valve.
	DL Wash Station Active	Special Active valve for use within an IBC Wash Station.
Docking	PowerDock™	Mechanism for automated docking of Active to Passive.
	Compensator	Protects valve and process from docking forces.
Product Flow	BridgeBreak™	Prevents bridging within the IBC during discharge by ensuring good product flow.
	Deceleration	Devices are available to prevent segregation or particle damage during transfer by slowing product flow.
Aftermarket Services	Commissioning, Training and Validation services are all available.	

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