

## Containment Performance

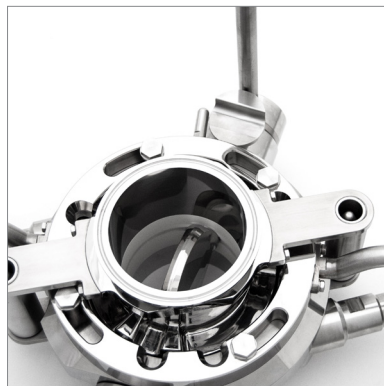
PharmaSafe	<10 µg/m <sup>3</sup>
PharmaSafe plus	<1 µg/m <sup>3</sup>
PharmaSafe pro	<1 µg/m <sup>3</sup>
PharmaSafe excel	<1 µg/m <sup>3</sup>

## ChargePoint PharmaSafe® pro

ChargePoint PharmaSafe® patented split valve technology has become the pharmaceutical and fine chemical industry standard for the high containment transfer of potent ingredients, by providing a common transfer interface at each process step.

Operator safety is assured at every level with advanced designs to meet some of the most demanding of exposure control targets in modern manufacturing.

The PharmaSafe pro achieves a high level of containment performance by utilising a simple extraction process, which is integral to the valve, to minimise the volume of airborne contamination when the valve halves are separated, post transfer.

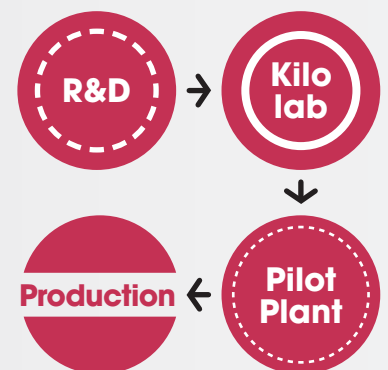


## Applications

Contained filling and dispensing for all production processes.

Processes		Ingredients	Materials
Dispensing	Blending / Mixing	API	Powder
Vessel Charging	Milling	Reagents	Semi-solid
Filtration / Separation	Sieving	Intermediates	Granular
Centrifugation	Compression	Excipients	Suspension
Drying	Filling	Formulated blends	Tablets / Capsules
Sampling	Coating	Raw materials	Liquid
Mixing			
Wet/Dry			
Granulation			

...from R&D to full scale production.



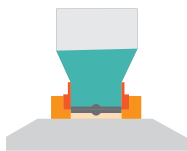
## Features and Benefits

- Optimum seal design for repeatable performance and easy manual operability even at larger valve diameters
- Simple GMP metal-to-metal disc seal offers reduced risk of compromising integrity
- Single piece, robust body design with minimal parts for easier maintenance and trouble free performance
- Secure pressure rated system with multiple process benefits
- Safety interlocks ensure valve halves cannot be opened when not docked together
- Compact footprint throughout the size range even with integral extraction and washing systems
- Simple extraction and operation process, without the need for interlocks and control systems, designed to utilise existing customer onsite air handling systems (when available)

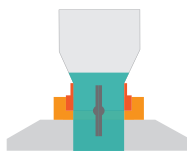
## Operation Sequence



The Active and Passive units are docked together. Each half of the valve consists of one half of the butterfly valve disc. Each unit is sealed and cannot be opened unless they are docked together.

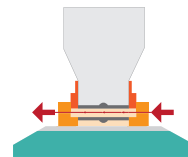


Two disc halves are locked in place to form a single sealed unit. The previously exposed interfaces are now sealed together to form a single butterfly valve disc.



The Active unit is the driving half of the valve. Once operated the disc will open to allow the transfer of material through the valve. The active and Passive interface is sealed to ensure no material can penetrate the critical area. Once the transfer has taken place the valve is closed.

### Extraction Process



The extraction process is run to ensure that any particulate that could potentially become airborne is safely taken into the extracted air stream during the undocking process.

Subsequently the Passive unit is partially undocked to create a gap between the two valve discs for maximum cleaning performance.



The Active and Passive units are then fully unlocked and undocked revealing the previously closed interfaces ensuring a dust free transfer.



Assisting you throughout the warranty period and continuing to offer our responsive support to ensure continuity of production with Onsite Service Packages, Spare Parts, Consumables and Training delivered via our dedicated support centres in Europe, North America and Asia.

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