CONTAINMENT SOLUTIONS

SOLVING PROCESS PROBLEMS FOR OVER 20 YEARS

AUTOMED

ENABLING SOLUTIONS

INTERCERT

CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that the Quality Management System of

AUTOMED SYSTEMS PRIVATE LIMITED

NO.9B, VEERASANDRA KIADB INDUSTRIAL AREA, ELECTRONIC CITY PHASE-2, BENGALURU-560100, KARNATAKA, INDIA

Has been successfully assessed as per the requirements of

ISO 9001:2015

For the scope of

DESIGN, DEVELOPMENT, MANUFACTURING, FABRICATION, ASSEMBLY AND TESTING OF CUSTOMISED SPECIAL PURPOSE EQUIPMENT, MARKETING, SALES, INSTALLATION AND SERVICING OF EQUIPMENTS, SUPPLY OF SPARES/CONSUMABLES TO PHARMACEUTICALS, FOOD AND CHEMICAL INDUSTRIES.

Initial Certification Date	: August 09, 2023
Certificate Issue Date	: August 09, 2023
Surveillance Validity Date	: August 08, 2024
Recertification Date	: August 08, 2026

Registration Number: IC-QM-2308102

Issued on behalf of InterCert
Head - Certifications

INTERCERT REGISTERED

INTERCERT

CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that the Occupational Health & Safety Management System of

AUTOMED SYSTEMS PRIVATE LIMITED

NO.9B, VEERASANDRA KIADB INDUSTRIAL AREA, ELECTRONIC CITY PHASE-2, BENGALURU-560100, KARNATAKA, INDIA

Has been successfully assessed as per the requirements of

ISO 45001:2018

For the scope of

DESIGN, DEVELOPMENT, MANUFACTURING, FABRICATION, ASSEMBLY AND TESTING OF CUSTOMISED SPECIAL PURPOSE EQUIPMENT, MARKETING, SALES, INSTALLATION AND SERVICING OF EQUIPMENTS, SUPPLY OF SPARES/CONSUMABLES TO PHARMACEUTICALS, FOOD AND CHEMICAL INDUSTRIES.

Initial Certification Date	: August 09, 2023
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Registration Number: IC-OS-2308104

Issued on behalf of InterCert
Head - Certifications

INTERCERT REGISTERED

INTERCERT

CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that the Environmental Management System of

AUTOMED SYSTEMS PRIVATE LIMITED

NO.9B, VEERASANDRA KIADB INDUSTRIAL AREA, ELECTRONIC CITY PHASE-2, BENGALURU-560100, KARNATAKA, INDIA

Has been successfully assessed as per the requirements of

ISO 14001:2015

For the scope of

DESIGN, DEVELOPMENT, MANUFACTURING, FABRICATION, ASSEMBLY AND TESTING OF CUSTOMISED SPECIAL PURPOSE EQUIPMENT, MARKETING, SALES, INSTALLATION AND SERVICING OF EQUIPMENTS, SUPPLY OF SPARES/CONSUMABLES TO PHARMACEUTICALS, FOOD AND CHEMICAL INDUSTRIES.

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Registration Number: IC-EM-2308103

Issued on behalf of InterCert
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INTERCERT REGISTERED

CONTAINMENT PROBLEMS – **SOLVED.**

Solving containment problems needs understanding of the product, volumes being handled, exposure time, background of the work environment amongst other factors, to make the right choice of equipment that provides not only operator safety, but also offers easy of operations, and meets compliance requirements.

Automed with its 20 years of process knowledge, working with international partners, understanding customers process challenges & operational problems approaches its containment designs with the operator and the regulator in mind.

Benefit from our team of experienced containment experts, call us we are listening.

AUTOMED

ENABLING SOLUTIONS

Solving containment problems, for over 20 years.

PHARMACEUTICALS • FOOD • CHEMICALS

WHY AUTOMED CONTAINMENT EQUIPMENT ARE DIFFERENT

Every unit is custom built to match your needs.	Operator comfort is the overriding design rule.	Built to meet international standards.	Economical doesn't mean, compromised features.	Unmatched service support.	Comes from more than 20 years of containment experience.

Features that make Automed Containment Equipment meet all international regulatory requirements

- IOT ready systems
- Auto pressure test
- Inflatable gasket
- Door open/close condition feedback
- PLC control panel & HMI interfaces
- Lamp to the box
- Differential pressure interlock for pass box
- Automatic WIP
- Pressure switches
- Complete proper documentation
- A lamination layer over toughen glass, Safe change double HEPA filters.
- You can't override interlocks
- Tagging

IOT INDUSTRIAL BENEFITS

- Data driven analytics for timely informed predictive maintenance.
- Advance information on filter replacements.
- Calibration notices, out of range signals.
- Parts replacement notices.
- Schedule maintenance of geographically distributed assets.
- Maximize asset uptime and efficiency by predictive analysis
- Minimize operational cost by remote diagnosis of assets
- Fault identification & troubleshooting remotely.

AUTO PRESSURE TEST

- Is designed to check the integrity of the whole containment system before each batch.
- Auto pressure test features offers the benefit of knowing your isolator is completely leak proof before every batch. No second guess
- The System doesn't allow operations without the pressure test passing, making it a must have feature in your isolator.
- Benefit is that operators can be 100% sure that their isolators are offering them and their product protection every time they use it.

FLEXIBLE ISOLATORS

Automed's range of flexible weighing and dispensing isolators provide high levels of containment at the most crucial stage of potent processing. The flexible isolator will allow an OEB 4 and OEB 5 containment performance when the API (Active Pharmaceutical Ingredient) is at its most concentrated.

The system can be used with the full range of containment split valves and active passive split valve for product bag charging, or with a simple product container and BIBO (Bag In Bag Out port).

With bespoke designs to provide many different environmental conditions, you can ensure your product processing specification and GMP compliance are achieved.

Key Features

- Short lead times
- Nanogram containment performance
- Mobile
- Simple installation
- Cost effective containment
- Easy to use

Containment standards

Flexible containment solutions to protect people and product up to OEB 6

Solving Process Problems for Over 20 years

SAMPLING & DISPENSING ISOLATORS

A negative pressure isolator is a machine which isolates the worker from the processing units of OEB 5 compounds with the help of a physical barrier. Its physical isolating barriers include contained chambers, operating gloves, continuous liners, RTP valves, A/B valves, etc. The air inlet and exhaust of the negative pressure chamber make their way through the high-efficiency filter to prevent the cross-contamination of the material and the environment.

Designed to meet all regulatory requirements of ISO 10648-2 standards.

- Fully Automated PLC controlled system.
- Integrated Wash-In-Place (WIP)
- Virtual control Network
- Calibrated weighing scale with operator interface
- Effective containment of OEB 5 and OEB 4 compounds.

COMPOUNDING ISOLATORS

Each Automed isolator is designed with the customers requirements in mind.

Our negative pressure compounding aseptic containment isolators offer a contained, leak-tightnegative pressure work area suitable for hazardous pharmaceutical compounds, chemotherapy agents that can be harmful to personnel.

Automed compounding isolators creates a unidirectional HEPA-filtered airflow within the negative pressure chamber to contain hazardous contaminants to the outside and to minimize cross-contamination across the direct compounding area.

- Offers a contained, pressurized work area for customized applications.
- Built for comfort, with oval gloveports that offer easy reach to interior surfaces.
- Slanted, top-hinged glass doors allows for full opening for loading and unloading instrumentation or equipment.
- HEPA-filtered, unidirectional airflow.
- Combines industry-leading airflow technologies with exceptional design and ergonomic features to improve worker comfort and increase, productivity.
- All Automed built equipment are built to meet 21 CFR part 11 compliance.

Solving Process Problems for Over 20 years

GLOVE BOX - SINGLE / DUAL CHAMBER SYSTEMS

Glove boxes are designed to protect researchers and operators from applications that involve handling hazardous material or manipulating substances that require a controlled environment. Automed offers a range of inflatable glove bags, basic glove boxes, controlled atmosphere glove boxes, or bio-hazard and multi-hazard glove boxes.

Standard Glove Boxes will have a two-glove port single chamber or can be customized to be dual chamber with pass boxes . With HEPA filters, ports for inert gases and a blower systems for maintaining differential pressure Automed Glove boxes offers completely safe work environment.

Environment can be customized by back-filling with gas, typically nitrogen, although argon is also common. The combination of glove box, airlock, vacuum pump, and gas port, with associated gauges and monitors, allows fine control of relative humidity and oxygen content.

Technical Specs

- Type: Negative pressure
- MOC: Contact Parts: SS 316,
- Non-Contact Parts: SS 304
- Inlet/Exhaust filter/: Cylindrical HEPA, Push-Push type, H14, Media: Glass fiber
- Diff pressure gauge: 4'' dia, 0-250 Pa,
- Lamp: LED lamp,20W
- Catch pot: 25L
- Spray gun: Delrin/SS 316
- Healthy working zone: -100 Pa±30 Pa
- Exhaust filter block range: >-400Pa

FUME HOOD ISOLATORS

For labs that need to convert their Existing Fume hood into an isolator or labs that need to dedicate a High potent zone in their labs Automed designed Fume Hood isolators are a perfect solution.

Using existing extraction system and scrubbers Fume hood isolators offer protection to operators from the potent chemicals they work with.

Product Description

- Poly carbonate fume hood fronts to suit existing or new FumeHood system.
- Anticipated exhaust rate – open fronted 1200- 1500 CFM.
- Estimated flow with HEPA filter inlet 300 to 500 CFM with operating negative pressure of -40 to -200 Pa.
- Pass box and 3 Hypalon gloves on mainframe.

Fume Hood Screen

- 10 mm thick bonded /heat formed polycarbonate. The screen will incorporate a single pass box and 3 glove sleeve points. The air supply into the fume hood will be via two over-head mounted HEPA filters to protect against back flow of API during power failure.

CUSTOMIZED ACRYLIC CONTAINMENT SOLUTIONS

Customized Acrylic containment solutions designed for reactor vessels.

For detailed specification contact customer care : 18003093042

DOWNFLOW BOOTH / RLAF

During dispensing sampling and charging operations the dust generated can be hazardous. Clean air from the ceiling is circulated evenly across the entire work area pushing any breathable dust generated downward and away from the operators breathing zone.

The high velocity exhaust grills direct the dust into the on-board filtration system which then recirculates the clean air back into the ceiling. Down flow booths are custom designed to meet customer requirements.

Operator and Environment Parameters

- Operator Protection: <100□g/m3 within the safe working zone
- Downflow Velocity: 0.45m/s ± 20% measured at 50mm from the filter
- Lighting Level: > 400 Lux at 1m above the floor
- Standard Safety Feature: - Lights do not operate without the fan running
- < 80 dBA at1m
- Customized Size
- Flowrate of downflow booth: 12000 m3/hr
- A fixed bench with an antivibration set-up to accommodate a balance
- Exhaust and Supply HEPA Filter which is a Mini Pleat Gel type HEPA Filter confronting to EU 14

Associated Services

- Automed standard documentation package as detailed.
- Automed standard Factory Acceptance Test of one Booth only at manufacturing site.
- On site supervision of installation.
- On site Commissioning and execution of IQ, OQ documents & OEL testing.

CLOSED RESTRICTED ACCESS BARRIER SYSTEM (C-RABS)

Automed built customized RABS to meet the containment or aseptic requirements of process equipment & meet compliance requirements. Our designers have developed a robust design taking the best of the active and closed RABS to offer our clients a solution that not just protects the operator and the product but also meets compliance requirements.

Specifications

- Glove port main chamber with Hypalon Glove
- MOC: ContactPart:SS316
  Non-ContactPart:SS304
- Control panel: PLC+ 9" HMI based SS Control Panel
- 21 CFR Part 11 complaint.
- Chamber Door Seal: Inflatable Seal
- Surface Finish: <0.8µm Ra External
  <0.6µm Ra Internal
- ISO-5 Air classification (Grade-A)
- Noise level:<80 dB
- Light level:> 300 lux avg of 5 locations
- Laminar air flow with velocity 0.45 m/s ±20%
- Velocity Sensor
- Temp and RH sensor

POWDER CONVEYING SYSTEM

Automed designs and builds powder conveying systems for the processing of dry bulk materials. Our Systems solves your powder transfer challenges in a holistic manner, we study your powder, site conditions process requirements and design and build PCS that work. Call our experts we can help you improve your process & SOLVE your powder transfer challenges.

Applications

- Contained Powder transfer
- Reactor charging
- Blender charging
- ANFD charging from Centrifuge
- Bag charging
- Silo filling.
- RCVD Charging
- Multiple powder handling
- RIVA contained tablet press

Design Process that makes our PCS work

Understanding powder characteristics

↓

Studying of Site / Plant enviornment

↓

Expected transfer rate & conveying distance

↓

Dense / Dilute phase

↓

Pressure / Vacuum

↓

Design, Build & Test PTS for expected parameters

Custom Solutions

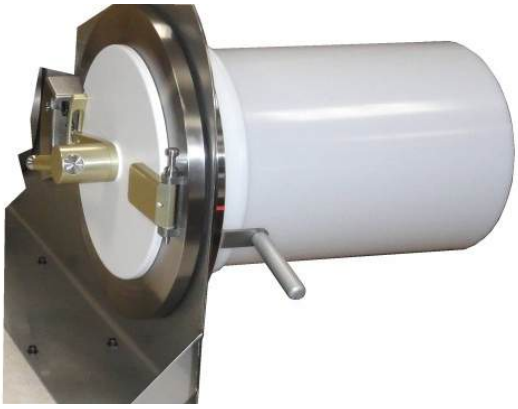
- Contained transfer.
- Dust free operation
- Easy to clean
- Transfer of dry as well as wet powders
- 1 micron filtration membrane
- Robust design
- ATEX rated
- Integration support
- Available with PTFE and Halar coating

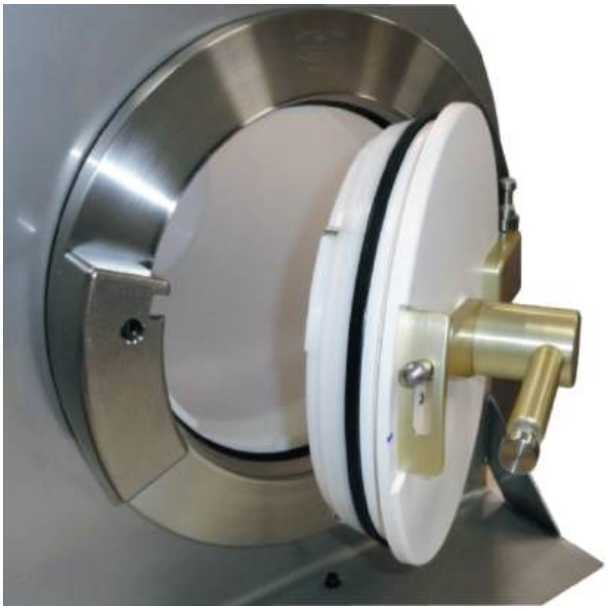
Sl. No.	PTS TYPE	Outlet Nozzle of PTS #150 Flange	Volume in L	Powder Transfer Capacity in kg/hr	Vacuum Pressure in mmHg	Vacuum flowrate m^3/hr
1	PTS - 100	100 NB	6	75 to 200	600 to 760	150 s
2	PTS - 150	150 NB	14	200 to 500	600 to 760	200 s
3	PTS - 200	200 NB	24	400 to 800	600 to 760	200 s
4	PTS - 250	250 NB	42	800 to 1200	600 to 760	300 s
5	PTS - 300	300 NB	60	1000 to 1800	600 to 760	300 s

RAPID TRANSFER PORTS

From Cape Europe rapid transfer system is a patented design. The Optima^{TS} design takes rapid transfer technology to a new level of performance. The Cape rapid transfer system is fully compatible with the La Calhène DPTE range of alpha and beta flanges including the injection moulded consumable flange.

The Optima^{TS} alpha ports have the same fixing diameters as DPTE alpha ports.





The Optima^{TS} security mechanism is fully interlocked with the following automatic functions:

- The alpha port cannot be opened without a beta part connected.
- The alpha port cannot be opened if a beta flange is docked without the beta door.
- The beta cannot be detached from the alpha door while the alpha door is open.
- The alpha and beta doors are mechanically locked together when the beta is connected and the alpha door open.
- It is impossible to “cheat” the interlocks from the outside of the enclosure.
- Improved reliability of mechanical interlocks by the use of rotating parts only.
- No parts moving parallel to the axis of the alpha flange so no fragile membranes are used for sealing the security mechanism.
- Standardised design. The OptimaTS security mechanism is standard for all the Cape ports with the use of the same parts on different diameters.
- Ergonomic design of Alpha door handle for easily operation when wearing neoprene or hypalon gloves.
- Careful choice of materials for all components for minimum weight and optimum mechanical reliability.

CONTAINMENT SPLIT BUTTERFLY VALVE

Safety of personnel
Reduced environmental contamination
Reduced risk of cross contamination

Sterisplit is a high-containment valve designed to transfer powders in safety sterile or potentially toxic products. It is made up of two parts, active and passive, both provided with semi-butterfly and seal, which are coupled perfectly during the product transferring. Parts in contact with product in Stainless Steel EN 1.4404 (AISI 316L), part not in contact in stainless steel in EN 4301-AISI 304.

MAIN FEATURES

BUTTERFLIES MATERIALS

- Active butterfly in Duplex
- Passive butterfly in EN 1.4404- AISI 316L

FINISHING

- Parts in contact with product: Ra<0,5µ. Other parts: Ra<1,2µ
- Welds: completely grounded and polished
- Electropolishing upon request
- Other finishing upon request

CONNECTIONS

- Machined-out spigot H=15mm; thickness 3 mm
- Tri-Clamp IDIN 32676 Reihe A,B, or C H=15mm
- Tri-Clamp BS4825-3 H=15mm
- Tri-Clamp ISO 2582 H=15mm
- Connection flange for Steriflange and aseptic gasket
- Connection for Steriflange with Bayonet system: to facilitate the Steriflange mounting
- Lifting system
- Compensation system

PRESSURE VALUES

ND [mm]	Standard Pressure Test [barg]	Vacuum pressure test [barg]
50	1,5	-0,5
100	0,5	-0,5
150	0,5	-0,5
200	0,3	-0,3

The pressure data refer to saparated and closed valves.The gas tightness test is carried out according to EN12266-1 norm, test P12.

CERTIFICATES AND DECLARATIONS

- Material certificate EN 10204-3.1 for metallic parts
- FDA 21 CFR 177.2600 or FDA 21 CFR 177.1550 for polymeric parts
- USP class VI biocompatibility declaration (*)
- Traceability report
- Roughness test map (*)
- Gas tightness test to EN12266-1, test P12
- ATEX 2014/34/EU (*)
- CE declaration of incorporation as per Directive 2006/42/EC
- Free BSE/TSE declaration for elastomers (*)
- Free bisphenols declaration for elastomers (*)

GASKET MATERIAL

- Silicone
- Black Condictive EPDM
- VITON
- EPDM

SECTORS

Pharmaceutical, API, chemical, nutraceutical, food and nuclear industries.

FIELDS OF APPLICATION

Every time it is necessary to preserve the safety of the operator and the quality of the product: active substances, hormones, antibiotics, injectables, toxic products.

ATEX ZONE CLASSIFICATION/VALVE CATEGORY

Valve Category inside	Valve Category outside	Process Area (inside)	
		1/21	2/22
2GD	2GD	✓	✓
2GD	3GD	✓	✓

Operating temperature range: -20 °C < Ta < +60 °C
Gas class: IIB MIE Powder > 1mJ
Temperature class: T4, T=135 °C

MOTION DRIVE

Actuation	Position feedback and control system
Hand Lever	Inductive sensor switches
Quarter turn gearbox manually or automatically operated	Position cam
Pneumatic actuator made of anodised aluminium, single or double effect	Electropneumatic or pneumatic positioner
Pneumatic actuator made of stainless steel, single or double effect	Solenoid valve, 5/2 or 3/2 type
Steribox: stainless steel enclosure for actuator	PLC Control Panel

SMEPAC CERTIFIED CONTAINMENT PERFORMANCE

VEGA ENVIRONMENTAL CONSULTANTS LTD.

CERTIFICATE OF CONFORMANCE

When tested as a 'Single Point Transfer System' in accordance with Protocol No.1 of the International Society of Pharmaceutical Engineering (ISPE) Standardised Measurement for Equipment Particulate Airborne Concentration (SMEPAC) Good Practice Guide 'Assessing the Particulate Containment Performance of Pharmaceutical Equipment', the equipment (as detailed below) achieved to the following containment performance:

Manufacturer:	SteriValve srl, Lucca, Italy
Equipment:	SteriSplit Automated ND100 Split Butterfly Valve
Containment Achieved:	0.37 µg.m^{-3}
Vega Report/ Project No.:	ENV/08/2112
Date of Test:	21 May 2008
Location of Test:	Extract Technology Ltd, Huddersfield, England

Authorised Signatory:

Duncan George Smith

Licentiate of the BOHS Faculty of Occupational Hygiene

SteriValves SteriSplit ND 100 containment performance has been valudated by an indipendent third party: OEL 0,37 µg/m3

MATCHING TOLERANCES

In order to ensure the proper functionning of the valve, please refer to the matching conditions stated below.

Matching tolerances	
Coaxial tolerances	2,5 mm
Maximum iclination between the butterflies	0,5°
Angular tolerance between the butterflies rotation axis	1°

We recommend the adoption of an appropriate compensation system. SteriValves can provide adequate solutions, contact our sales office for more information.

The classification of the hazardous area is customer's duty according to the directive 2014/34/EU. The installer has to verify the compatibility between the area classification and the valve category. Manual valves are out of ATEX directives application scope.

It is advisable to replace the wear parts after 18 months from purchase. Only SteriValves is authorized to carry out maintenance on the actuator.

DEVICES

Customizable upon request
THE IMAGE IS FOR ILLUSTRATIVE PURPOSES ONLY

COMPENSATION SYSTEM

Designed to facilitate the coupling phase between the active valve and the passive valve.

STERISPLIT VALVE COVER PLATE ACTIVE/PASSIVE PART

Allows the use of the valve with pressures of 3 or 4 barg.

LIFTING AND COMPENSATION SYSTEM

Combines the advantages of the compensation system (facilitating coupling) with those of valve lifting thanks to the use of pneumatic cylinders.

WASHING DEVICE

Designed for washing the internal surfaces of the active and passive valve.

3-LEVEL DISPENSING

Components of a dosing system for batch preparation with in-line screening and weighing.

DEAGGLOMERATION
ROTOCRUSHER

It is a lump breaker with a capacity ranging from a minimum of 750 kg/h to a maximum of 3t/h.

FLEXIBLE CONNECTION
SILEND

Flexible connection ideal for absorbing any vibrations and compensating for off-axis movements.

ACCESSORIES
QUICK DISASSEMBLY

Allows separating the valve from the actuator quickly and without the need for tools.

DOSING
ROTOVALVE PLUS

Rotary valve for feeding and volumetric dosing of solid products. Our rotary valve ensures pressure and vacuum tightness and is suitable for CIP/SIP cleaning.

INTERCEPTION
STERIVALVE

Ultra-sanitary butterfly valve for interception/ interruption of the flow of solid products (powders, granules, etc.).

ACCESSORIES
TRI-CLAMP

Quick and safe connection in accordance with BS, DIN, ISO standards.

Solving Process Problems for Over 20 years

CALIBRATION AND PNEUMATIC TRANSPORT

Components of the calibration and pneumatic transport system for powdered or granulated products.

INTERCEPTION
PHARMALITE

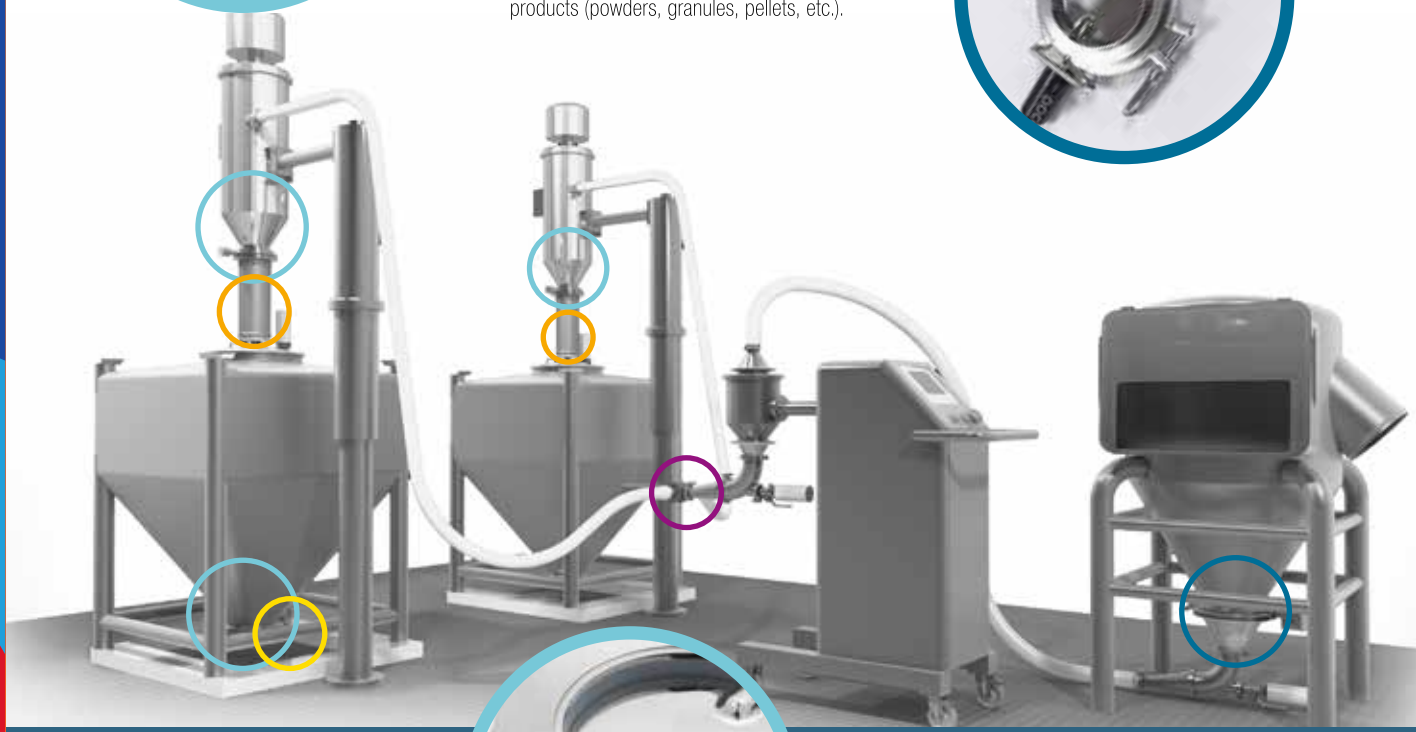
Eccentric butterfly valve with inflatable gasket that prevents the dispersion of the elastomeric material of the sealing gasket into the processed product.

DIVERSION
DIVERTER

3-way valve for diverting the flow of solid products (powders, granules, pellets, etc.).

DOSING
VIBEDOSER

The Vibedoser valve is a butterfly valve with a vibrating disc designed to intercept and dose solid products quickly and with high precision



ACCESSORIES
SILCAP

Silicone caps used for the mechanical protection of the butterfly valve disc, avoiding contamination during the BIN handling phases.

INTERCEPTION
STERIVALVE

Ultra-sanitary butterfly valve for interception/ interruption of the flow of solid products (powders, granules, etc.)

FLEXIBLE CONNECTIONS
SILEND

Flexible connection ideal for absorbing any vibrations and compensating for off-axis movements.

Solving Process Problems for Over 20 years

DOSING AND PACKAGING

Components for dosing and packaging systems in bags and drums. Bags made from continuous liners with sealing by welding or mechanical seal.

FINE DOSING
ROTOMETERING

The Rotometering valve is a high-precision gravimetric dosing valve. The rotor ensures high flow rate, while the screw allows for the physical transfer of the product and high-precision dosing.

FINE DOSING
ROTODOSER

Fine dosing valve consisting of two concentric rotors of different volumes operated individually to control the flow and dosing of the product.

ACCESSORIES
CONTROLS

For the correct operation of the valve, it's necessary to use the appropriate actuation. Sterivalves offers the most suitable actuators or motors for the application.

ACCESSORIES
STERILINER

PE liners for the automatic fractionation of powders in bags with weighing and in-line heat sealing of the continuous liner.

ACCESSORIES
STERIDRUM

Made according to GMP regulations, the drum consists of clamps and a lid with a gasket. Other accessories available on request: bulges, handles, trolleys, hoppers, etc.

Solving Process Problems for Over **20** years

FEEDING OF TABLET PRESSES

Components for feeding systems for powdered and granulated products, even in high containment.

ACCESSORIES
LINEAR VIBRATOR

The high-frequency linear pneumatic vibrator is a device used to facilitate the discharge of poorly flowing products. It is attached to the surface of the hopper with a suction cup operated by a venturi meter.

INTERCEPTION
FLEXIVALVE

The Flexivalve is designed to interrupt and intercept the flow of fragile products such as capsules, tablets, and anything that can be damaged by a steel valve.

CONTAINMENT
STERISPLIT

High containment valve for the safe transfer of potentially toxic products. It consists of two parts that fit perfectly when the product is transferred to prevent cross-contamination.

FEEDING
ROTOVALVE LIGHT

Rotary butterfly valve for flow control used for feeding hoppers or machines.

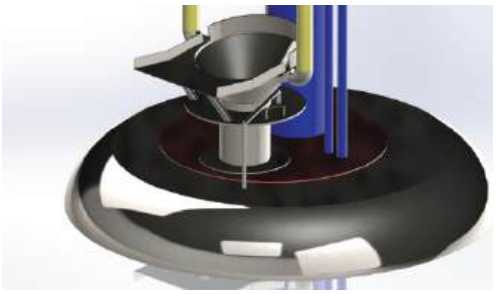
DIVERSION
DIVERTER

3-way valve for diverting the flow of solid products (powders, granules, pellets, etc.).

Solving Process Problems for Over **20** years

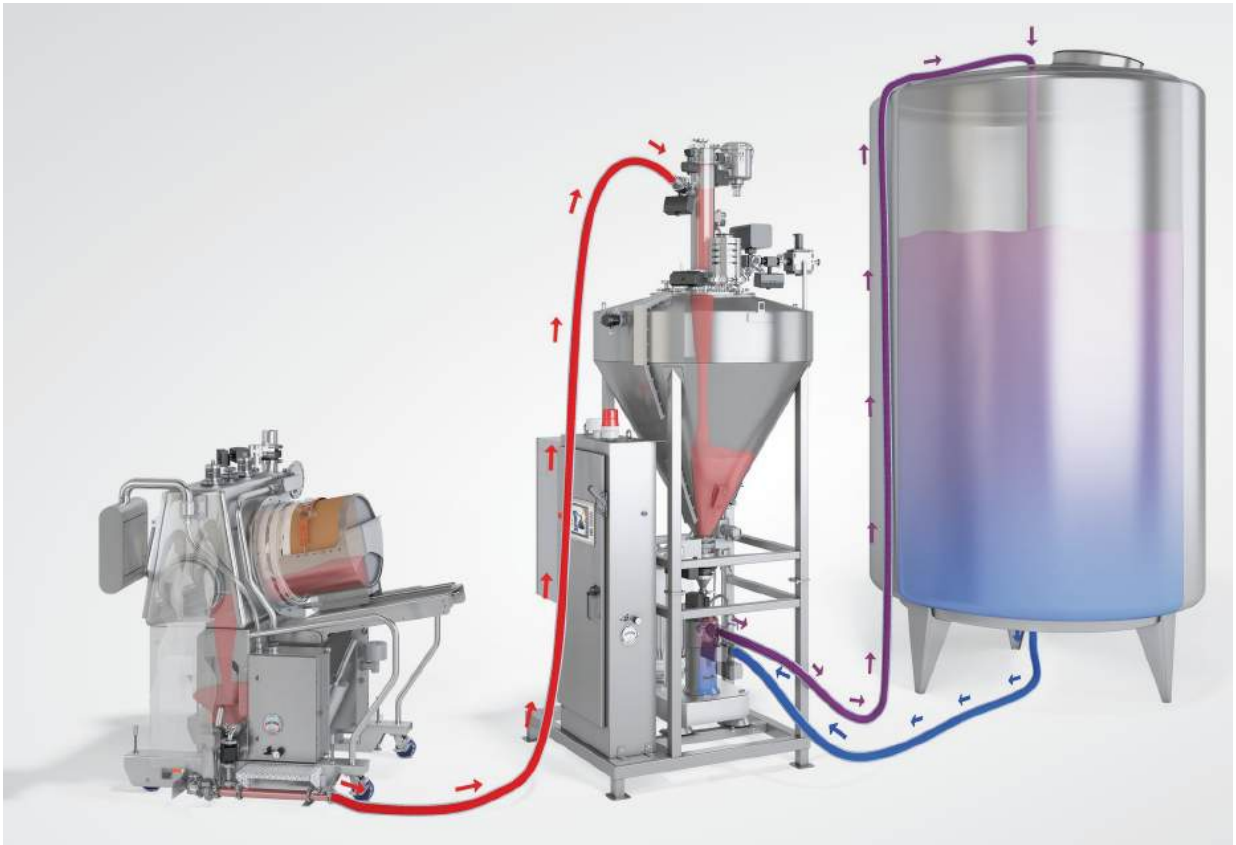
HAZARDOUS POWDER CHARGING

Closed Powder Transfer



The manway nitrogen purge hopper serves as an engineering control to help maintain low oxygen concentrations within a process vessel during the manual addition of solids. This device utilizes a safe pneumatically opened flap valve that reduces the amount of time the tank is opened to the room environment. A full perimeter annular ring injects nitrogen at dual flow rates to dilute oxygen concentrations.

Inert Transfer



The challenge of adding hazardous High potent dry solid safely into the reactor to avoid fire risk. The system allows for safe and efficient solids transfer into a process vessel. Product is transferred through a small port on the vessel (manway remaining closed) to maintain an inert vessel and ensure operator safety.

CONTAINED DRUM WASHING SYSTEM

DRUM CONTAINMENT SYSTEM

AUTOMED

ENABLING SOLUTIONS

AUTOMED SYSTEMS PVT. LTD.

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AN ISO 9001 CERTIFIED COMPANY