
AGIERRE
Engineering & Innovative Solutions

AGIERRE®

Engineering & Innovative Solutions

ADVANCED TECHNOLOGY

in the handling of powders and
for containment systems

AGIERRE - TAILOR MADE SOLUTIONS

Engineering and Innovative Powder Handling Solutions

Powder Handling

VTS - Vacuum Transfer Systems
- *VTS - Vacuum Conveyor*
- *VTS - Vacuum Conveyor (PED version)*
- *VTS - Vacuum Conveyor Filtervac*
- *VTS - Vacuum Conveyor Hoppervac*

HopperPress Pneumatic Conveying System

Powder Dosing

Powder Handling Systems (operated by Dosing Valves)

Blending

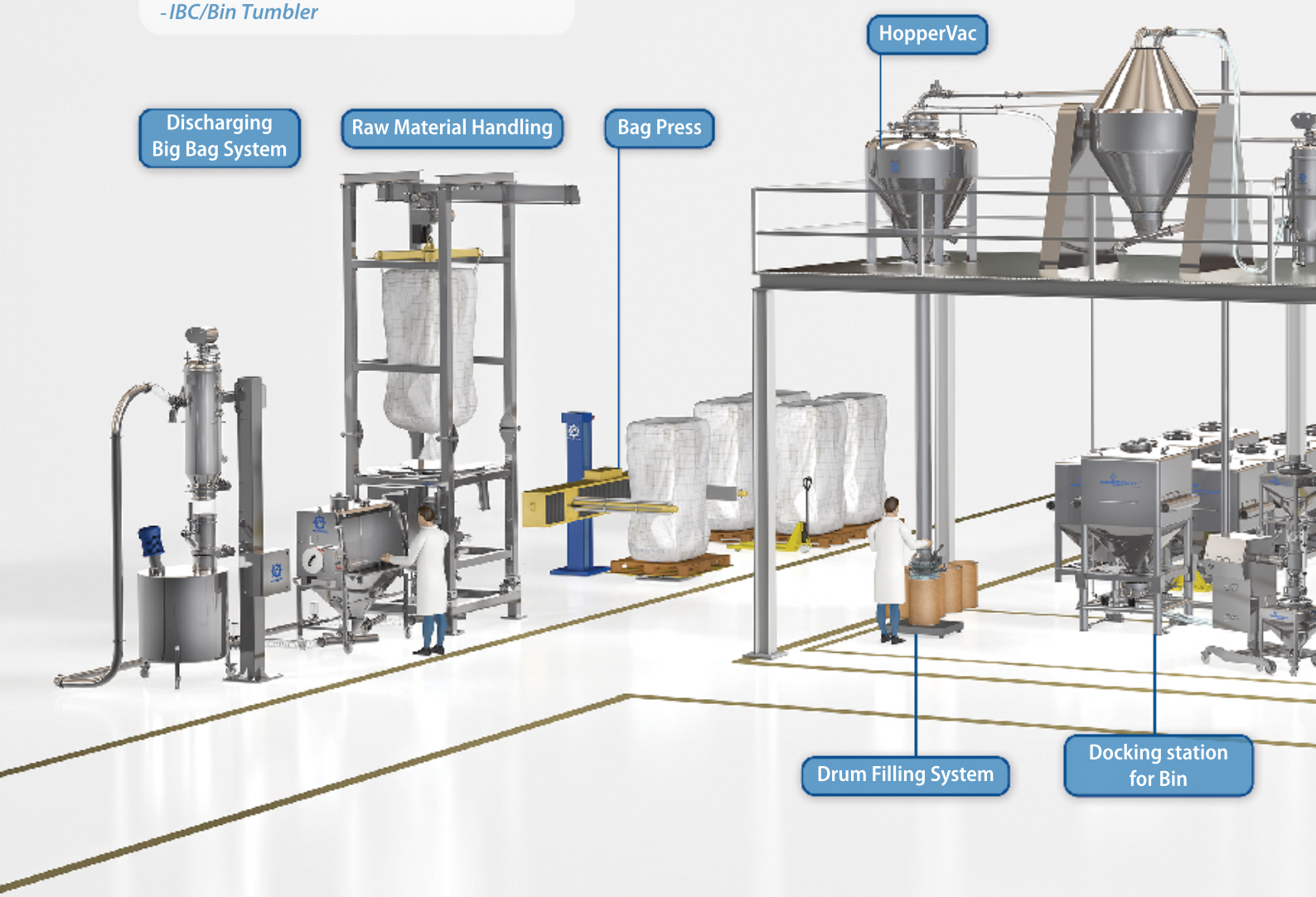
Bin Blender Column
- *Mobile Blender for Bins and Drums*
- *IBC/Bin Tumbler*

Containment

Brum and bag Glove box
- *Containment Powder Handling Systems*

Bulk Handling

Big Bag Filling Station
- *Big Bag Discharge Station*
- *Bag Filling System*
- *Drum Filling System*
- *Emptying System for Bags and Drums*



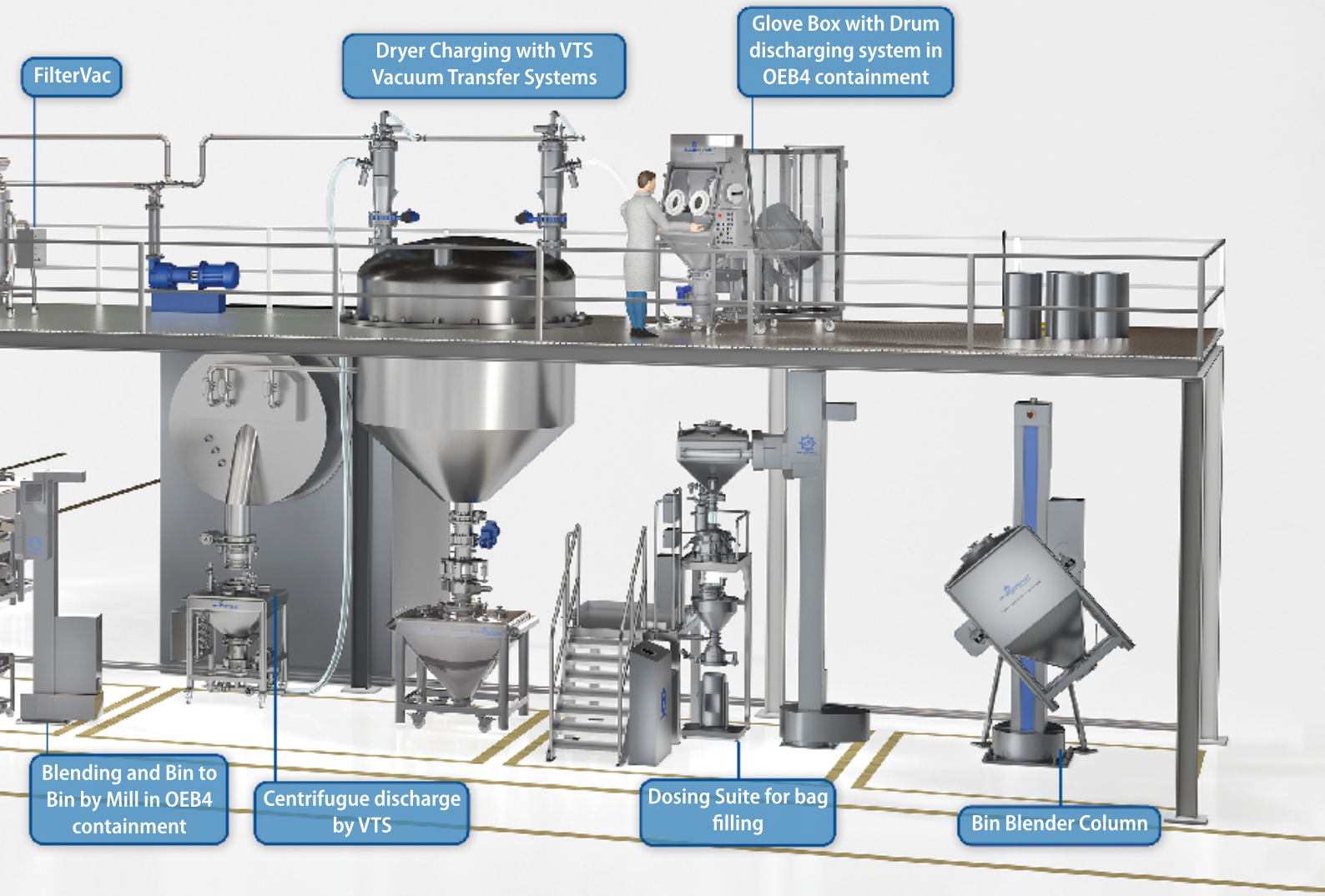
AGIERRE - CORE ACTIVITIES

Powder Handling and Process Containment Systems

- *Process-Integrated Turnkey Systems*
- *Engineering activities to determine the tailor-made project answering Customer's needs*
- *Standard Equipment and Spare Parts Sale*
- *Factory and Site Acceptance Test (FAT/SAT)*

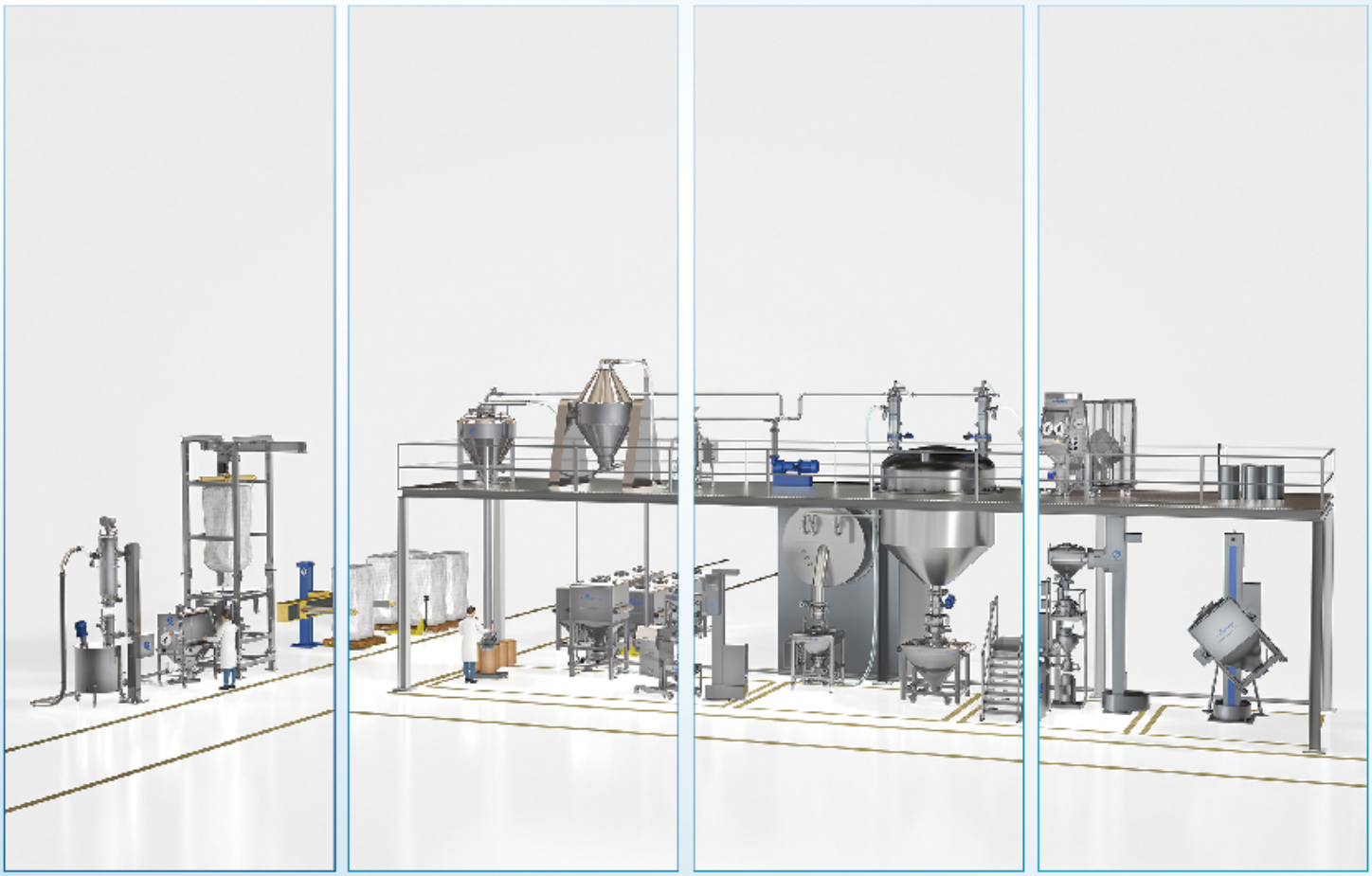
Validation Activity (IQ/OQ/PQ)

- *Assembly Supervision*
- *Commissioning and Training*

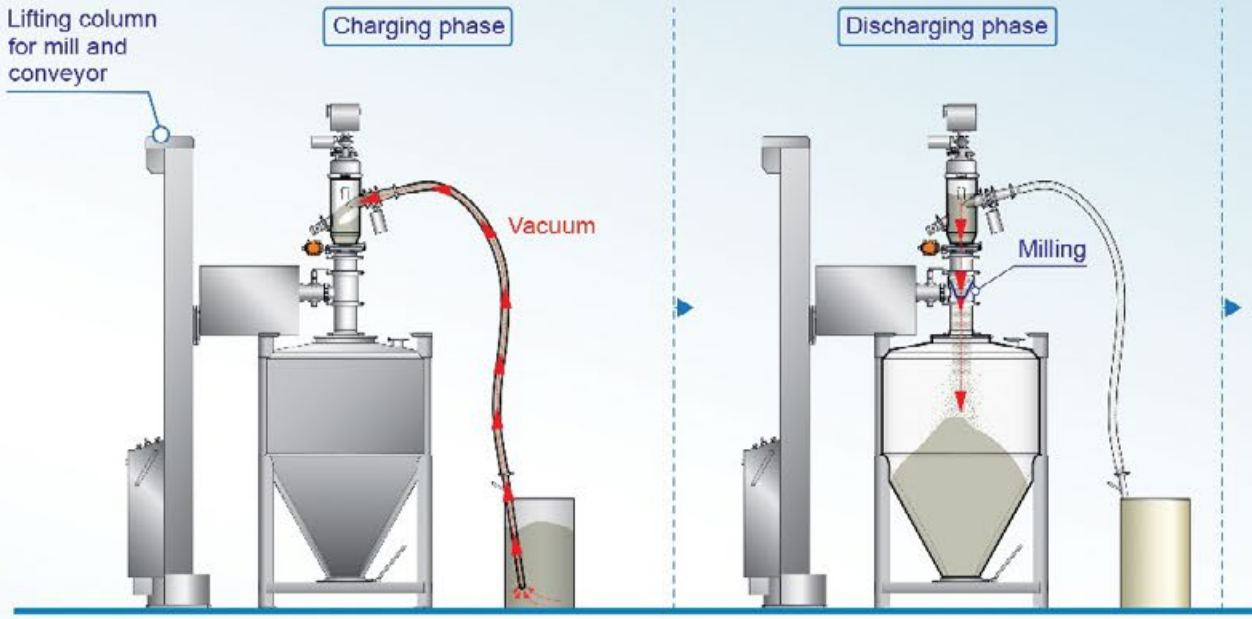


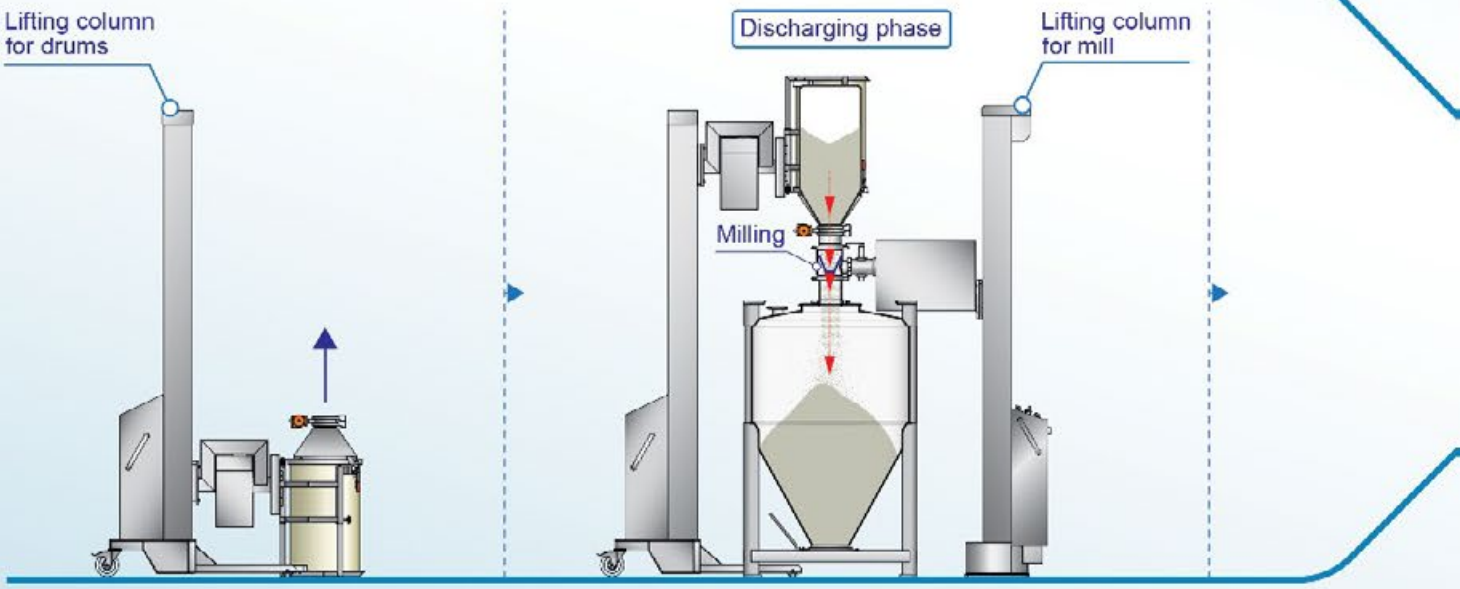
PRODUCTS

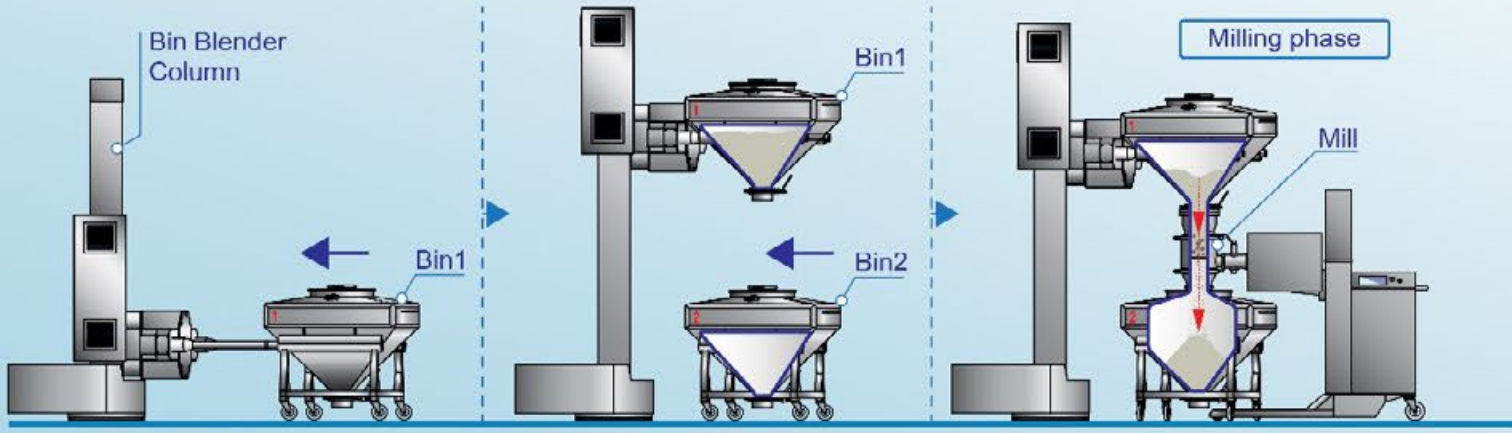
SIMULATIONS OF SOME APPLICATION SYSTEMS

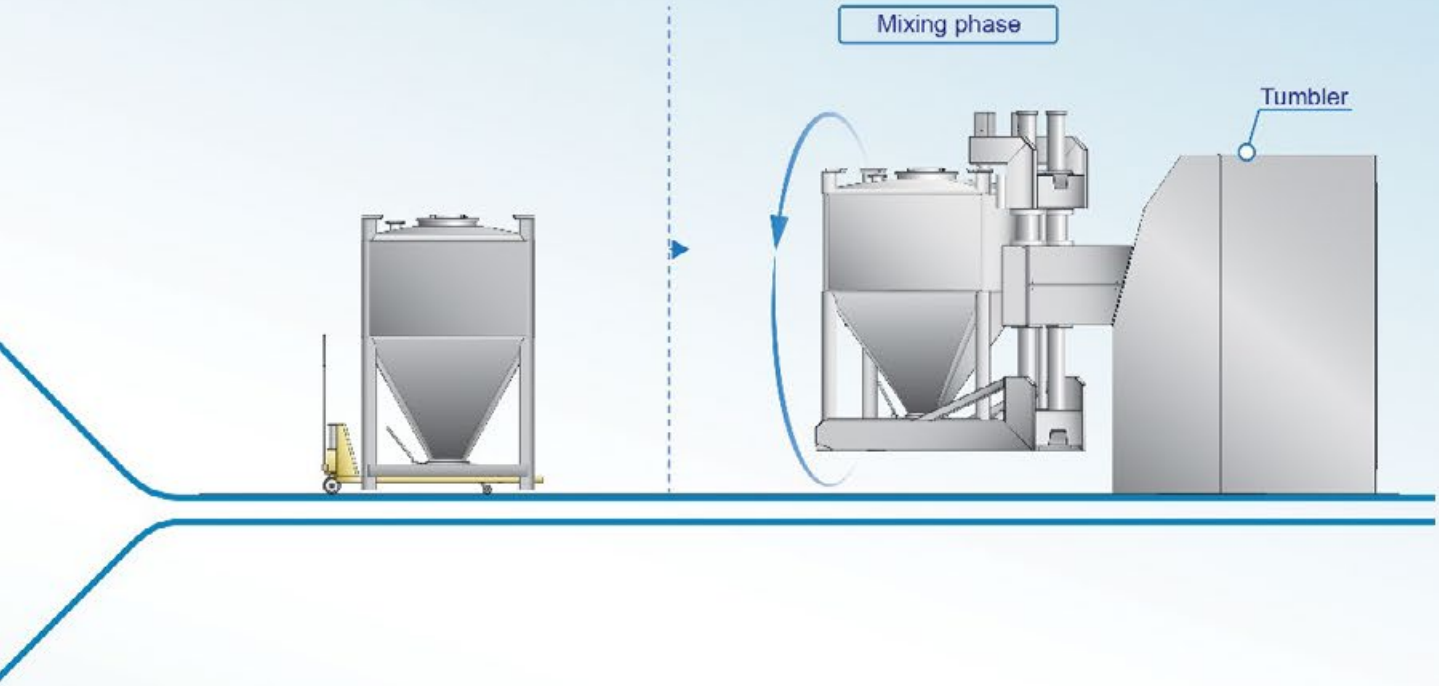


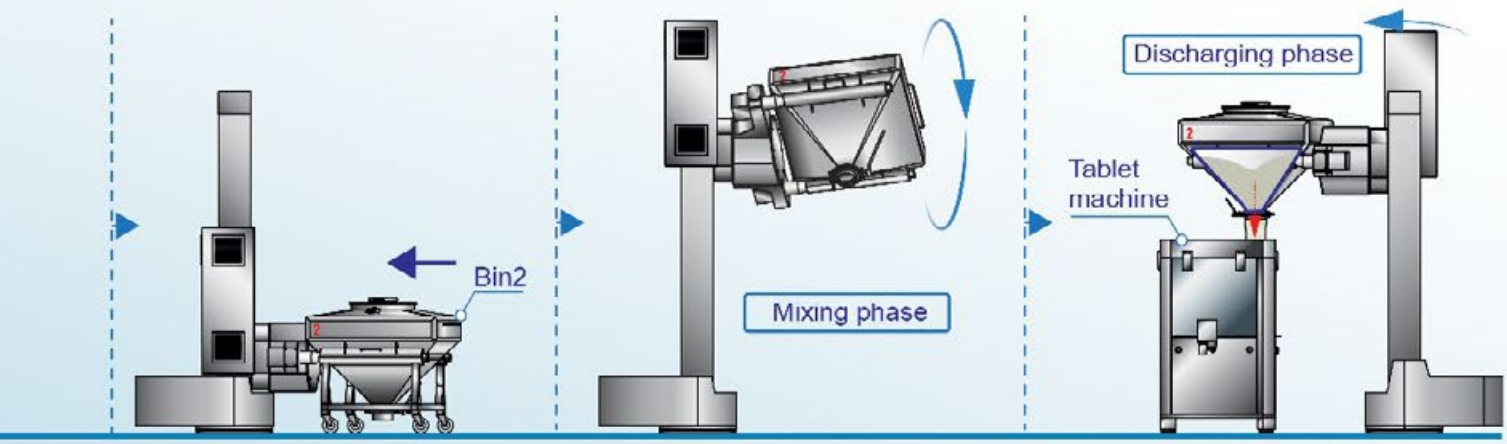
Simulations of some application systems



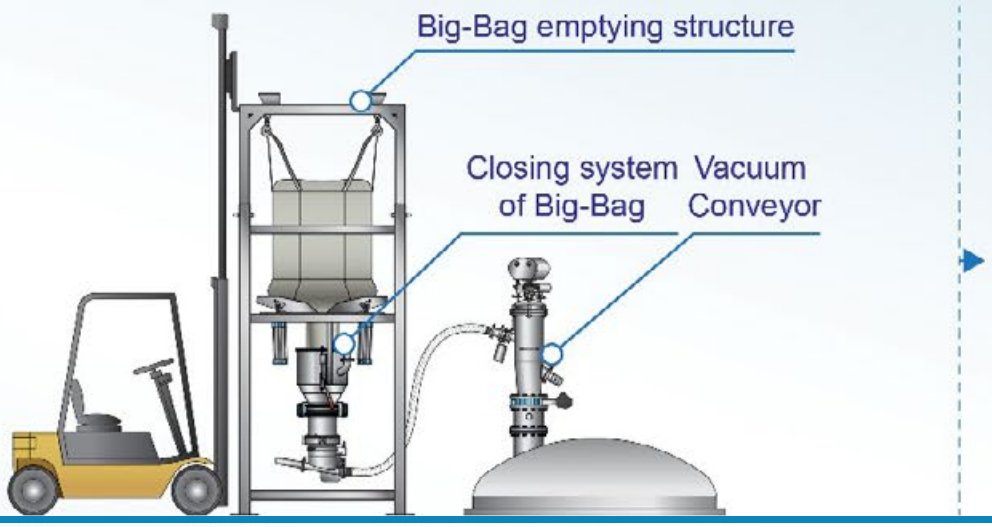


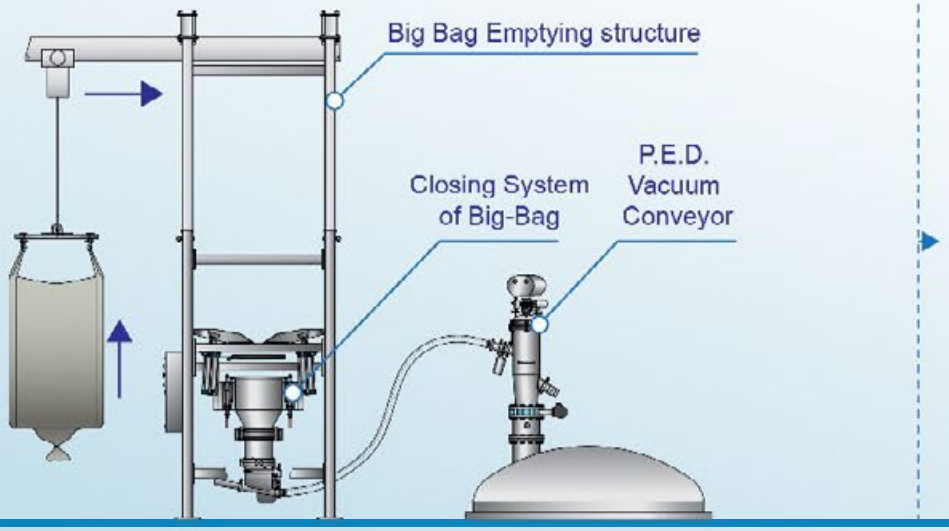


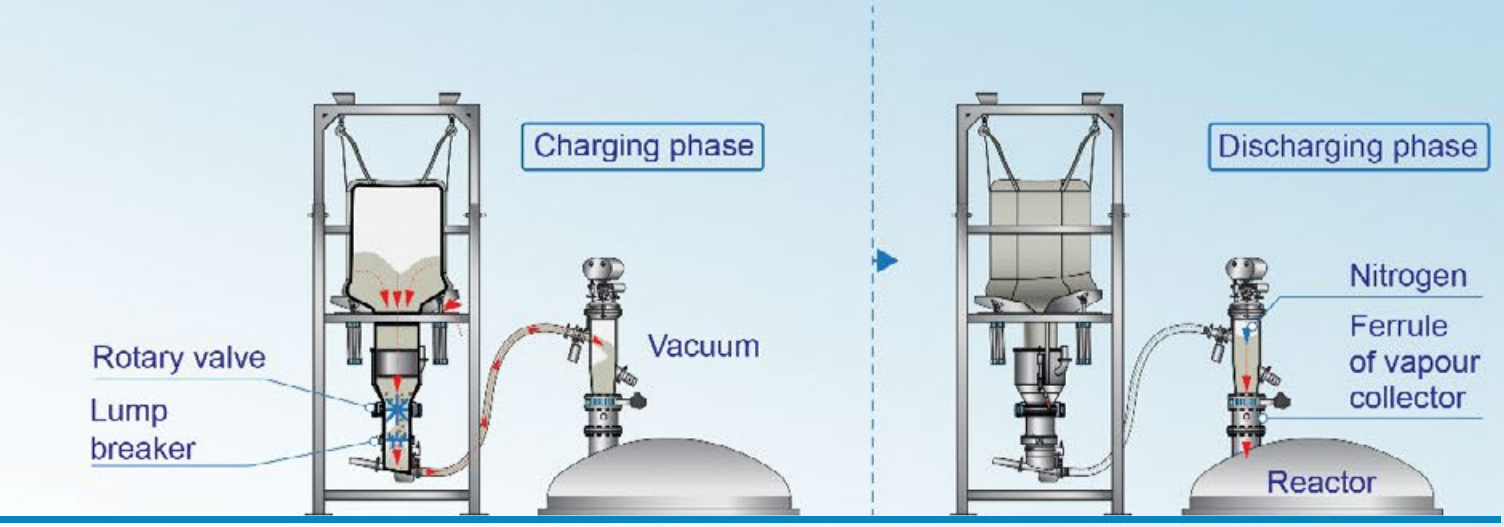

Mixing phase
Tumbler

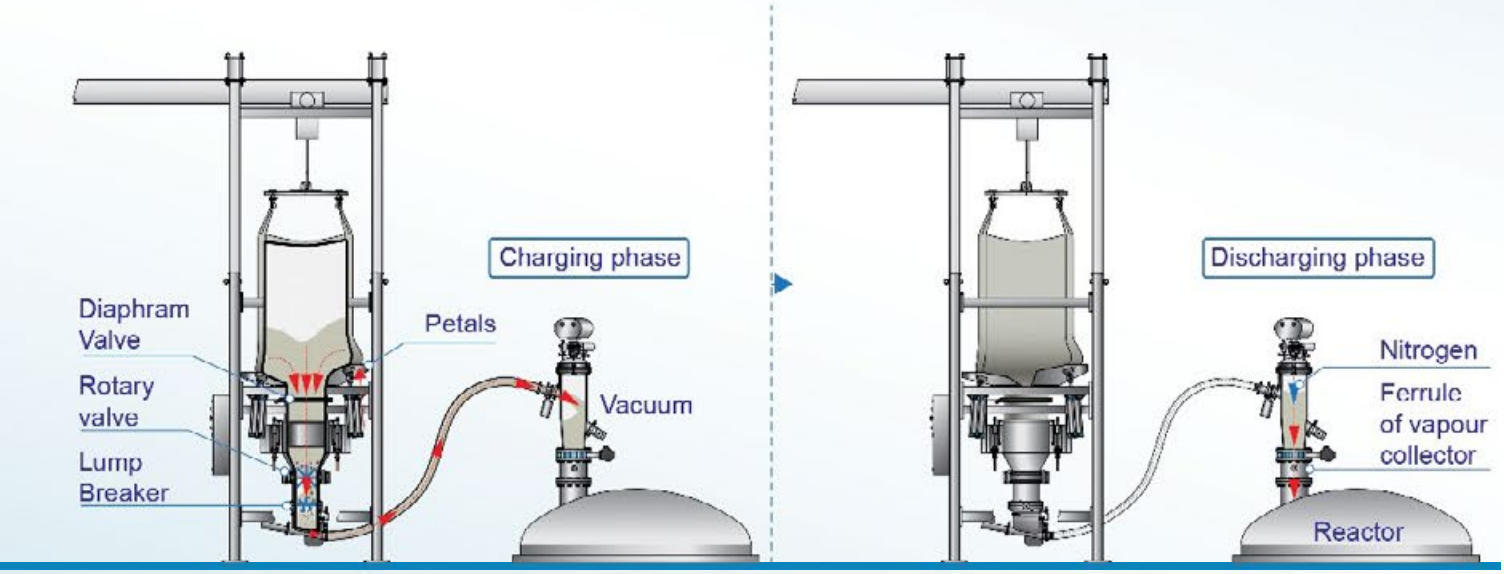

Bin2
Mixing phase
Discharging phase
Tablet
machine

Simulations of some application systems

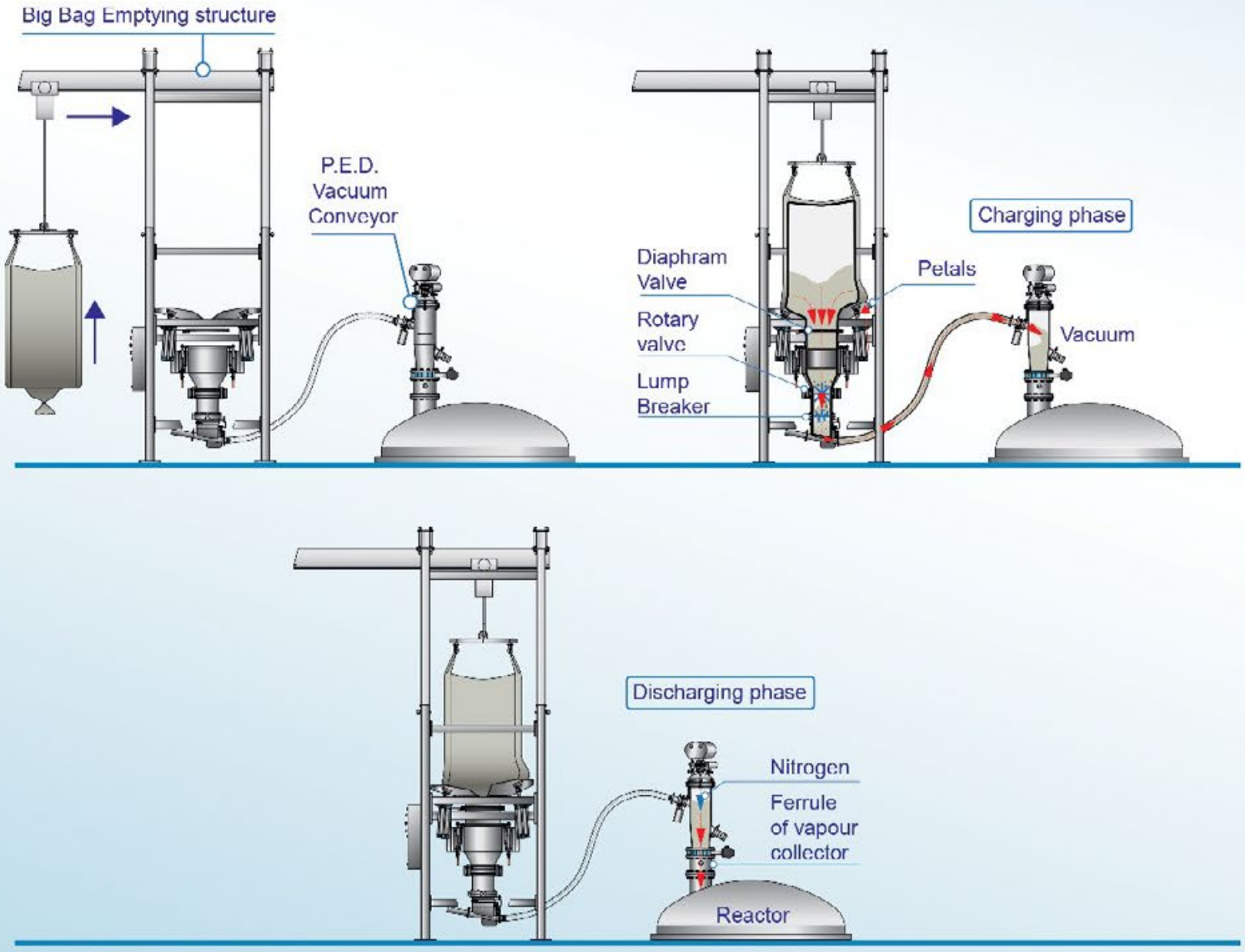





Charging phase
Rotary valve
Lump
breaker
Vacuum
Discharging phase
Nitrogen
Ferrule
of vapour
collector
Reactor


Charging phase
Diaphram
Valve
Rotary
valve
Lump
Breaker
Petals
Vacuum
Discharging phase
Nitrogen
Ferrule
of vapour
collector
Reactor

Simulations of some application systems



AGIERRE®
Engineering & Innovative Solutions

VTS - Vacuum Conveyor

VTS - Vacuum Conveyor (PED version)

VTS - Vacuum Conveyor Filtervac version

VTS - Vacuum Conveyor Hoppervac version

VACUUM TRANSFER SYSTEMS
FOR POWDER HANDLING




VTS – Vacuum Transfer System – Vacuum Conveyors

Vacuum Transfer System AGIERRE *provides an advanced solution for safe and efficient powder and granules conveying operations between processing, packaging equipment, and storage units.*

Applications: *Vacuum Conveyors are widely used in pharmaceutical, chemical, and food industries and serve various purposes, including charging/discharging materials to/from Bins, Drums, Hoppers, or other containers. They also facilitate the loading/unloading of mixers, reactors, fluid bed dryers and coolers, and dosing and packaging machines.*

Functionality and Operation: *The VTS works on the principle of vacuum suction generated by a Venturi pump, electric or liquid ring pump, or customer's central air system. A high-quality filter safely removes excess air and keeps the product inside the conveyor body, ensuring minimal contamination and maintaining product integrity. When accumulating enough product, the valve at the bottom of the Conveyor opens, allowing the material to discharge, and the filter cleans, allowing the process to repeat. Vacuum transfer allows powder handling at a low velocity (dense phase conveying), guaranteeing constant and consistent product transfer without causing shocks or de-mixing.*

Construction Materials:
- *AISI 304 steel;*
- *AISI 316 steel;*
- *Coated for use with corrosive powders.*

Connection between Body and Lid:
- *Tri-Clamp Connections;*
- *Wing Nut Connections;*
- *Flanged Connections (incl. UNI PN16 version).*

Filtration Systems:
- *Bag Filter;*
- *Pleated Filter*
- *Stainless Steel Filter;*
- *Titanium Filter;*
- *Hastelloy Filter.*

Control Panel Operation Logic:
- *Pneumatic;*
- *Electro-pneumatic;*
- *Electrical with PLC.*

Compliance with Industry Standards:
- *cGMP and FDA Guidelines;*
- *UNI EN ISO Standards;*
- *ATEX and Machinery Directives.*

Installed Vacuum Pump Options

Liquid Ring Vacuum Pump
Venturi Pump (Venturi Eductor)
Electric Vacuum Pump

CIP System (Clean-in-Place)

The Cleaning-in-Place (CIP) system is an automated washing solution specifically designed for integration with Vacuum Conveyors that allows for thorough cleaning of all internal components. Cleaning-in-Place reduces downtime by avoiding the need to disconnect and deliver the Conveyor to the washing area. After the cleaning cycle, the system dries the machine, permitting the Vacuum Conveyor to start transferring the next batch of the same or different product immediately.

The integrated cleaning system allows easy, efficient, and automatic washing of the Vacuum Conveyor's internal surfaces and filter units

Vacuum Transfer System	MINIVAC			STARVAC		
Model	AGR 150	AGR 200M	AGR 200	AGR 250	AGR 300	AGR 400
Volume (liters)	4,2	8	12	25	50	80
Diameter	150	200	200	250	300	400
Capacity (dm^3/h)	from 100 to 300	from 300 to 700	from 500 to 1200	from 1200 to 2500	from 2500 to 4000	from 4000 to 9000
Filter	P.T.F.E. bag filter, stainless steel AISI 316L sintered filter, Hastelloy, Titanium					
Materials (body, lid and valve)	Stainless stell AISI 316L/304, glazed, PTFE coating					
Control Console	Pneumatic, electropneumatic and with PLC functioning					
Internal finish	Mirror polished RA<0,4 micron					
External finish	Mirror polished RA<0,4 or satin RA<0,8 micron					
Gaskets	SILICONE / KARLEZ / VITON / PTFE / EPDM					

Basic Version (Dense Phase Conveying)

It is characterized by product suction using a vacuum. Once the Conveyor's body is full, a valve at the bottom opens, and gravity forces facilitate the product's discharge into the receiving equipment.

Overpressure Version

During product discharge, air or nitrogen gas is injected into the Conveyor's body, creating an overpressure environment and ensuring smooth product flow into the receiving container or machine.

Version with Inertization

The air is completely extracted from the Conveyor's body before introducing nitrogen gas , which eliminates any potential risk of fire or explosion, making it suitable for handling sensitive or hazardous products.

Bottom Valve

Customization Options:
At AGIERRE, we understand that each application is unique. That is why we offer personalized solutions to meet specific needs. Whether adapting to space constraints or integrating additional features, our Vacuum Conveyors can be adapted accordingly.

Handling Explosive Substances:
The VTS can safely transfer hazardous powders. During the discharge phase, the system maintains a residual oxygen level of less than 6% through an inertization process.

Installations & Applications

Vacuum Conveyor charging Bin from Several Big Bag unloading Structure

Vacuum Conveyor to load a Roller Compactor

Vacuum Conveyor on a Lifter for loading a plate Filter

Vacuum Conveyor on a arm for charging a solis

Vacuum Transfer System installed on Mobile Lifting Column

VTS - Vacuum Conveyor Filtervac version

Vacuum Conveyor type Filtervac *offers a material transfer solution for scenarios where direct installation on machinery is not feasible. Instead, tubes and pipes are used to connect the Conveyor to other equipment.*

Working Principle

The Filtervac generates a vacuum (negative pressure) within the receiving container or the machine, ensuring continuous product suction from the storage container or other equipment. The vacuum can be supplied to the Conveyor either by a pump installed on board or the customer's centralized air system to create the high vacuum values required for this VTS configuration. During the product aspiration phase, the Vacuum Conveyor regularly cleans the filter and collects residual material in a small container installed at the bottom of its body. At the end of the operation process goes a so-called "purge phase" in which the powder accumulated in this container is recovered either manually or automatically via a closed system using an aspiration hopper.

Customization Options

Design philosophy AGIERRE emphasizes Customer satisfaction. The VTS - Filtervac is available in a fixed version without wheels or can be mounted on a movable structure with antistatic wheels for ATEX applications, allowing easy positioning wherever needed. The Filtervac can be equipped of an automatic CIP (Cleaning-In-Place) or SIP (Steaming-In-Place / Sterilizing-In-Place) washing system that improves cleaning efficiency, prevents cross-contamination, and ensures product purity for the production process. All Vacuum Conveyors, including the Filtervac version, can be further customized to meet specific production process requirements.

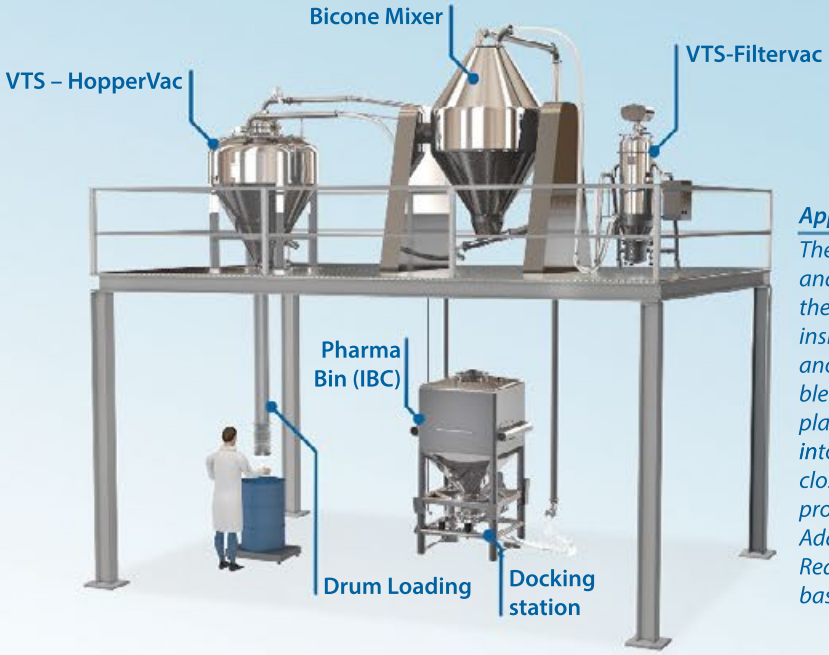
Compliance and Safety

The Vacuum Conveyor type Filtervac complies with cGMP and FDA guidelines, UNI EN ISO standards, ATEX and Machinery Directives, and other safety regulations.

Control Panel:
- Pneumatic;
- Electro-pneumatic;
- Electrical with PLC.

Filtervac FT400 PED 3bar with CIP and SIP for sterile applications

Filtervac FT250 PED 3 bar with CIP and SIP for mixer loading



Applications

The image to the left represents the system for conveying, blending, and dosing powders. The process starts by loading the Bicone from the Bin using a FilterVac Conveyor, which creates negative pressure inside the Bicone. It causes powder suction from one container into another due to the pressure difference. After the Double Cone Mixer blends the powder, it goes into the HopperVac Conveyor, which plays the role of a Controlled Dosing System for charging material into the Drums. All described operations are carried out through a closed system (Continuous Liner and Docking Station), preserving product integrity and eliminating contamination risks.
Additionally, VTS - FilterVac can be used for loading Mixers, Reactors, and other equipment where a flanged connection for the basic Vacuum Conveyor is unavailable or impractical.

Vacuum Transfer System	FILTERVAC			
Model	FT 200	FT 250	FT 300	FT 400
Volume (liters)	3	6	12	20
Diameter	200	250	300	400
Capacity (dm^3/h)	from 500 to 1200	from 1200 to 2500	from 2500 to 4000	from 4000 to 9000
Filter	P.T.F.E. bag filter, stainless steel AISI 316L sintered filter, Hastelloy, Titanium			
Materials (body, lid and valve)	Stainless stell AISI 316L/304, glazed, PTFE coating			
Control Console	Pneumatic, electropneumatic and with PLC functioning			
Internal finish	Mirror polished RA<0,4 micron			
External finish	Mirror polished RA<0,4 or satin RA<0,8 micron			
Gaskets	SILICONE / KARLEZ / VITON / PTFE / EPDM			

Filtervac FT200 for reactor charging

Filtervac FT400 for Bicone loading

VTS - Vacuum Conveyor - PED version

*The **Pressure Resistant Vacuum Conveyor** is a specialized Vacuum Transfer System designed to safely transfer bulk materials like powders, granules, and pellets into high-pressure (>0.5 barg) chemical reactors.*
Fully compliant with the Pressure Equipment Directive (PED) 2014/68/EU requirements, it is typically installed directly on the reactor to facilitate efficient charging into the vessel while preventing explosion and contamination risks.

Technical Characteristics

Manufacturing Materials: AISI 316L / AISI 304 / Acid and Corrosion Resistant Coating;
External and Internal Finish: Mirror-polished / Coated;
Connection between Body and Lid: Flange / Wing Nut;
Control Panel Operation Logic: Pneumatic / Electro-pneumatic / Electrical with PLC;
Supported Pressure: from -1 to +3 barg / from -1 to +6 barg.

Compliance and Safety

- *cGMP and FDA Guidelines;*
- *UNI EN ISO Standards;*
- *ATEX 2014/34/EU and Machinery Directive 2006/42/EC;*
- *Pressure Equipment Directive (PED) 2014/68/EU.*

Customization Options

These Pressure Resistant Vacuum Conveyors can be integrated with CIP (Cleaning-in-Place) and SIP (Steaming-In-Place or Sterilizing-In-Place) systems to meet specific hygiene and sanitation requirements. This type of Vacuum Conveyor is named GMA.

PATENTED

CIP System (Clean-in-Place)

The integrated cleaning system allows easy, efficient, and automatic washing of Vacuum Conveyors

Ferrule of vapour collector

Through the Ferrule of Vapor Collector, the Vacuum Conveyor can be installed directly on reactors and/or dissolvers even with both solvents and vapor at 100 °, thanks to a double cavity wall structure that creates a laminar flow barrier. It traps the vapor rising from the reactor towards the inlet point. This system prevents any product accumulation on the discharge valve of the Vacuum Conveyor installed on the reactor, simplifying the product discharging phase.

Nitrogen laminal flow

Vacuum Transfer System	MINIVAC	STARVAC		
Model	AGR 200 PG	AGR 250 PG	AGR 300 PG	AGR 400 PG
Volume (liters)	12	25	8	80
Diameter	200	250	300	400
Capacity (dm^3/h)	from 500 to 1200	from 1200 to 2500	from 2500 to 4000	from 4000 to 9000
Filter	P.T.F.E. bag filter, stainless steel AISI 316L sintered filter, Hastelloy, Titanium			
Materials (body, lid and valve)	Stainless stell AISI 316l /304, glazed, PTFE coating			
Control Console	Pneumatic, electropneumatic and with PLC functioning			
Internal finish	Mirror polished RA<0,4 micron			
External finish	Mirror polished RA<0,4 or satin RA<0,8 micron			
Gaskets	SILICONE / KARLEZ / VITON / PTFE / EPDM			

Installed Vacuum Pump Options

Liquid Ring Vacuum Pump
Venturi Pump (Venturi Eductor)
Electric Vacuum Pump

Overpressure Version

This configuration generates overpressure during discharge by injecting air and inert gas (such as nitrogen) into the system to prevent clogging and enhance safety by creating an inert environment during product unloading.

Version with Inertisation

The air is completely extracted from the Conveyor's body before introducing nitrogen gas, which eliminates any potential risk of fire or explosion, making it suitable for handling sensitive or hazardous products.

Coated Vacuum version

It is used for conveying acidic, corrosive, and aggressive powders. Coating Materials: Blue Armor; Halar ECTFE; PFA; SR60EX Antistatic Halar ECTEFE; SR65 Ivory White.

VTS model AGR400 for reactor loading at a height of 10 meters with a capacity of 800 kg/h.

Coated VTS model AGR300KK for acid and aggressive powders

Coated VTS model AGR250KK for reactor loading with solvents and acids.

VTS model AGR300 PED PN 6 for API loading

VTS model AGR250KK PN6 for reactor loading from Glove Box OEB4 for API

VTS - Vacuum Conveyor Hoppervac version

Vacuum Conveyor type Hoppervac *combines the capabilities of a Vacuum Transfer System with a storage unit, offering versatility in industrial settings. With its increased capacity to accumulate products within its body, the Hoppervac provides a comprehensive solution for conveying, storing, and dosing powders.*

Applications

The Hoppervac finds extensive applications across pharmaceutical and chemical industries, excelling in scenarios requiring material transfer, accumulation, and subsequent processing equipment loading. Its versatility allows it to handle active ingredients, raw products, powders, and granules for machines such as tablet presses, capsule fillers, coating machines, reactors, mixers, granulation systems, extruders, packaging lines, blenders, mills, dryers, and filling stations, making it an invaluable solution for diverse industrial processes.

CIP System Integration

For optimal hygiene and ease of operation, the Vacuum Conveyor type Hoppervac offers the option to integrate a Cleaning-in-Place (CIP) system. This automated system thoroughly cleans all filters and internal surfaces, minimizing downtime and ensuring compliance with strict regulations. The CIP system eliminates the need for disconnecting the machine and taking it to the washing area, allowing for the Hoppervac cleaning in place. After the cleaning cycle, the system dries the internal components, permitting Hoppervac to start transferring the next batch of the same or different product immediately.

AGIERRE VTS - Hoppervac is made entirely of AISI 316L stainless steel and features an innovative design preventing any product or liquid residue from accumulating anywhere inside the Conveyor body.

Vacuum Transfer System	HOPPERVAC						
Model	HPV800	HPV1000	HPV1200	HPV1400	HPV1500	HPV1800	HPV2000
Volume (liters)	300-500	520-820	760-1160	1150-1750	1800-2600	2400-3400	3000-5500
Volume for product (liters)	200-400	400-700	600-1000	900-1500	1500-2300	2000-3000	2500-5000
Diameter	800	1000	1200	1400	1500	1800	2000
Capacity (dm^3/h)	2000 to 9000	3000 to 9000	3000 to 20000	3000 to 20000	3000 to 20000	3000 to 25000	3000 to 30000
Filter	P.T.F.E. bag filter, stainless steel AISI 316L sintered filter, Hastelloy, Titanium						
Materials (body, lid and valve)	Stainless stell AISI 316L/304, glazed, PTFE coating						
Control Console	Pneumatic, electropneumatic and with PLC functioning						
Internal finish	Mirror polished RA<0,4 micron						
External finish	Mirror polished RA<0,4 or satin RA<0,8 micron						
Gaskets	SILICONE / KARLEZ / VITON / PTFE / EPDM						

Coated Hoppervac

Functionality and Operation

The VTS type Hoppervac can be powered either by an electric or liquid ring pump or a customer's centralized air system. Hoppervac Conveyor operates on the same working principle as a Standard Vacuum Conveyor, ensuring reliable and consistent product suction. During operation, the product is aspirated into the Hoppervac's body, where it accumulates for later use as a storage or dosing unit. The butterfly or pneumatic rotary valve regulates its discharge process via a control panel.

Compliance and Safety

The Vacuum Conveyor type Hoppervac adheres to stringent cGMP and FDA guidelines, UNI EN ISO standards, ATEX and Machinery Directives, and other relevant safety regulations, ensuring reliable and secure operation.

Hoppervac with CIP System

INSTALLATIONS & APPLICATIONS

Hoppervac with CIP System to charge Drums in OEB4 containment for Pharma Application

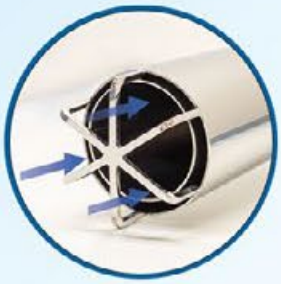
VTS Hoppervac for powder dosing system to charge a mixer

Vacuum Conveyor Hoppervac on a fixed column which discharge in drums

VTS Hoppervac with integrated washing system for chemical application

Jacket Hoppervac in sterile area

Suction Lance



Double-tube lance

Single-tube lance

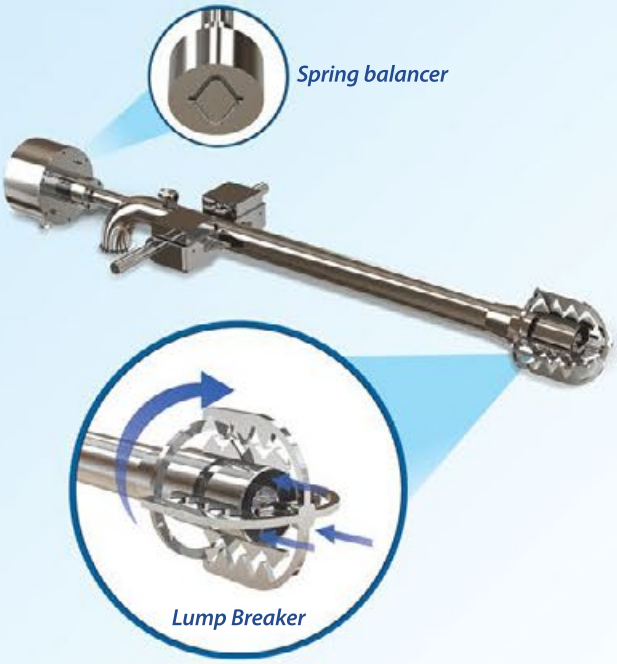
AGIERRE's **Standard Suction Lance** is designed for efficient powder granular material aspiration from drums, bags, tanks, and other containers. This equipment is manufactured from AISI 316L/AISI 304 stainless steel, with both internal and external surfaces being mirror-polished.

Applications: It is used in the chemical, pharmaceutical, and food industries, providing an alternative solution to product discharge by gravity, eliminating the need to tip the drum or bag. It is also useful for scenarios where direct installation of a VTS - Vacuum Transfer System on a material storage container is impossible or impractical.

Configurations: The Suction Lance is available in single or double-tube versions. The latter can be equipped with a quick coupling for the fluidization system, maintaining the correct air/nitrogen ratio for fluid dynamic balance. It prevents bag blockage/clogging during the suction phase.

Compliance: The Suction Lance is manufactured under cGMP guidelines, UNI EN ISO norms, and all relevant safety regulations.

Lump Breaker Lance



Spring balancer

Lump Breaker

AGIERRE's **Lump Breaker Lance** is an enhanced Suction Lance configuration specifically designed to suck humid powders prone to clumping into large pieces that would otherwise get stuck in the standard version. The equipment is manufactured from AISI 316L stainless steel with a mirror-polished finish on internal and external surfaces.

Working Principle: Being connected to a Vacuum Transfer System, the basic operation is similar to the standard configuration. In addition, an integrated lump crusher breaks up any hardened clumps formed in the material, facilitating product extraction from the storage container without any blockages.

Features: The Lump Breaker Lance consists of a metal suction tube equipped with a rotating lump breaker at the inlet. A double-acting pneumatic actuator drives the rotating crusher element through 0-180 degrees, breaking up solidified material. The lance also has a coupling for a spring balancer attachment, needed to support it in the absence of weight.

Compliance and Customization: The equipment is produced according to cGMP, UNI EN ISO, and safety standards. AGIERRE can customize its Lump Breaker Lance to meet the specific production process requirements of the Customer.

Suction Lance connected to a drum with a cap, thus creating a closed system preventing the product from escaping into the working area

Lump Breaker Lance with spring balancer

PRESSURE POWDER TRANSFER SYSTEMS

HopperPress

The AGIERRE HopperPress is a specialized dense-phase conveying system designed to transfer big quantities of powdered and granular materials over long horizontal and vertical distances that cannot be reached by a basic Vacuum Conveyor. It uses high-pressure air to transfer products, avoiding the degradation effects that can occur during conveying, such as changes in particle size, bulk density, demixing, and abrasion on the pipeline walls.

This pressure conveying system operates silently, requires minimal maintenance, and is easy to dismount and wash. Its product-contact surfaces are made of mirror-polished AISI 316L stainless steel, while the non-contact parts are made of AISI 304 stainless steel.

Functionality and Operation

The HopperPress Conveying System utilizes pressurized air to efficiently transfer materials through the pipeline. The process begins by loading the material into the HopperPress from the storage unit. Pressurized air is then introduced into both the HopperPress Conveyor's body and the pipeline system. This creates a pressure difference that propels the material into the receiving vessel at the other end of the pipeline.

Compliance and Safety

The HoppePress adheres to stringent cGMP and FDA guidelines, UNI EN ISO standards, ATEX and Machinery Directives, and other relevant safety regulations, ensuring reliable and secure operations.

Customization Options

At AGIERRE, we recognize that every industrial setting presents its own unique challenges. Whether it is integrating seamlessly with existing systems, incorporating specialized features, or handling aggressive products, our HopperPress can be customized to match specific production process requirements of each Customer.

Construction Materials

- AISI 304 steel;
- AISI 316 steel;
- Coated for use with corrosive powders.

Connection between Body and equipment on board

- Flanged Connections (incl. UNI PN16 version).

Control Panel Operation Logic

- Pneumatic;
- Electro-pneumatic;
- Electrical with PLC.

Application

The HopperPress Conveyors are used in food, pharmaceutical, chemical, minerals, and plastics industries where maintaining consistent powder characteristics is critical. It is an ideal solution for conveying materials between storage vessels when using vacuum is undesirable or impossible, so air pressure is used as a driving force instead.

LIFTING COLUMNS

Lifting Column for Vacuum Transfer Systems

Single Column Lifter for Vacuum Conveyor *is an AGR-LIFT series Lifting Column type used primarily to lift and support Vacuum Conveyors, allowing for easier connection to other machinery. The Column has the same structure and working principle as the standard AGR-LIFT series Lifting Columns.*
All functions of the Lifting Column (horizontal and vertical movement in addition to all customizable technical specifications) are managed automatically by the control panel with the PLC or pneumatic system. The lifting system has superior, intermediate, and inferior limit switches, allowing for precise manipulations when connecting to other machinery and positioning over the charging point. All Lifting Columns can be manufactured in compliance with ATEX regulations.

Applications

Lifting Columns for Vacuum Conveyors are mainly used in the following scenarios:
- loading the machinery in which the charging point is positioned high above the ground;
- loading the machinery when the direct installation of the vacuum conveyor is impossible;
- loading sachet filling machines, horizontal ribbon mixer, dryers, packaging machines, etc. automatically (not manually) by creating a closed system for product conveying;

Fully automatic vertical rotational movements and Conveyor operations managed via a control panel

In addition to the stationary version, AGIERRE manufactures Mobile Lifting Columns equipped with a wheeled structure to easily move the Vacuum Conveyor, enhancing further the versatility of its applications:
- positioning Conveyor where a fixed installation is not feasible or impractical
using the Vacuum Conveyor in several different applications in multiple production areas.

Lifting Column for Vacuum Conveyor for Drum Loading by Mill

Lifting Column with Vacuum Conveyor for Plate Filter Loading

Automatic Mobile Lifting Column for Vacuum Conveyor

Lifting Column for Drums *is mainly used to lift, rotate, position, and discharge cardboard, plastic, and metal drums of different sizes. It has the same structure and working principle as that of standard AGR-LIFT series Lifting Columns: the lifting system comprises a wind-screw mechanism driven by a self-braking gear motor.*
All functions of the Lifting Column, including rotational and vertical movements, drum overturning, and activation of the discharge valve (installed on the drum cone), are managed automatically by the control panel that could have a pneumatic, electro-pneumatic, or PLC operating system. All Lifting Columns can be manufactured in compliance with ATEX regulations.

Applications

Drum Lifting Columns are primarily used to charge and feed powders by gravity into packaging or processing equipment.

Tri-Clamp connection

Drum gripper with manual toggle clamp

Motorized Mobile Column

Stainless steel drum cone with manual or pneumatic discharge valve

Fully automatic column rotation, drum lifting, tilting, and discharge valve activation via control panel installed on board.

Motorized Lifting Column for Drums Discharge through Sieve

Fixed Automatic Drum Lifter for Reactor Loading

Stationary Automatic Drum Lifter for Packaging Machine Loading

Lifting Column for Bins

Pharma Bin Lifting Column *is designed for lifting, moving, supporting, and positioning pharmaceutical bins (also known as IBC containers). Its purpose is to create a closed system for powder transfer processes to prevent powders from escaping into the external environment and thus avoid "cross-pollution" and "cross-contamination".*

Applications: *The Bin Lifter is primarily used for discharging and transferring materials from Bins of different shapes and sizes into various processing (mixers, blenders, driers, coaters), packaging (capsule filling machines, tablet presses, blister lines), and storage equipment (bins, drums, containers).*

Working Principle: *The Column Lifter for Bins uses a mechanical lifting system with a worm-screw mechanism driven by a self-braking gear motor. The arm with a Bin gripping system can be customized according to the Customer requirements. The control panel installed on the Lifting Column automatically manages all of its operations, including vertical and horizontal movements, discharge valve control, and vibration system activation, in addition to the other customizable functions.*

Automatic Lifting & Rotation

Automatic Vibrator Activation System

Automatic Valve Opening System

Features: *The Pharma Bin Lifter has a simple and handy design with an integrated vibration system and high-quality surface satin finish for internal and external surfaces:*

- *The external structure: AISI 304 stainless steel casing;*
- *Internal supporting structure: galvanized carbon steel.*

The column height and rotation (automatic or manual) can be personalized according to specific Customer requirements.

Compliance and Safety: Column Lifter has a safety system consisting of a second nut triggered when the first nut wears out, accompanied by an "anti-fall protection" warning light activation on the control panel. In a row with all AGR-LIFT series Lifting Columns, the Lifters for Pharma Bins are fully compliant with cGMP and UNI EN ISO standards. Upon request, the columns can be manufactured for installations in powdery surroundings and/or ATEX classification zones, adhering to all relevant safety requirements.

Bin Lifting Column connected to the sachet packaging machine

Stationary Bin Lifter with brushless motor for the correct position of the Split Valve

Lifting Column for Bin with an integrated vibration system

Big Bag Discharge Station

Mobile and Fixed Lifting Column for Big Bag Discharging

EMPTYING SOLUTIONS FOR BIG-BAGS

Big Bag Discharge Station

The Big Bag Emptying Station is a modular system used to discharge products from Big Bags (also known as Bulk Bags or FIBC). It is available in different configurations suitable for different application types.
The frame can be made of painted steel or satin-finished AISI 304 stainless steel. It consists of two main parts: the base structure fixed to the ground and a lifting frame that supports the Big Bag.
The upper part of the frame has two configuration types for the Big Bag connection: one using the forklift and an alternative structure to support the beam, where there is an electric hoist motor with a cruise to support the Big Bag.
Big Bag Discharge Station has pneumatic massaging paddles on which the Big Bag is placed. During the product suction phase, pneumatic actuators in pairs drive the massagers into rotary motion, allowing quick and complete Big Bag emptying.
Upon request, the Big Bag Unloading System can be placed on load cells that measure and visualize the actual weight remaining in the bags and that of the product transferred and/or dosed into the receiving system.
A Big Bag Docking Station creates a closed system for product unloading that prevents any powder or dust exposure into the atmosphere and ensures maximum operator protection during the discharge phase.
The whole system is controlled by a PLC and designed under the Machinery Directive 2006/42/EC in correspondence with all safety regulations. Upon request, it can be manufactured for applications in ATEX classified zones.

Frame with Big Bag hoist

Used to lift and position Big Bags without using the forklift

Lifting frame

Used to attach and support the Big Bag

Lump Breaker

Used for crushing clumps, chunks, or blocks into smaller, more manageable sizes

Weighting unit

Used to measure unloading and dosing operations

Frame with sockets for forklift connection

Used to lift and position Big Bags without using the forklift

Side massagers

Massage paddles

static

in motion

open

Big Bag Docking System

Manual

closed

Automatic

Suction hopper

It is installed on the Big Bag Discharge Station outlet point and creates a closed system, allowing direct powder transfer by vacuum from the Big Bag into the other machinery

INSTALLATIONS & APPLICATIONS

Integrated Big Bag Unloading System with Vacuum Conveyor for Bin

Big Bag Discharge Station installed on load cells

Big Bag Discharge Station for feeding reactor using Vacuum Conveyors

Big Bag Discharge Station for feeding dissolvers using Vacuum Conveyors

Fixed / Mobile Big Bag Lifting Column with Mobile Docking System

Control Panel

Motorized wheel

This type of AGR-LIFT series Lifting Column is designed and manufactured to lift, support, and handle the Big Bags.
The Lifting Column for Big Bags finds its primary applications in the chemical, pharmaceutical, and food industries, especially in those powder handling processes where there is a need to optimize the production flow and prevent "cross pollution" cases. Upon request, it can be manufactured for installation in dusty environments and ATEX classified zones.
The Column features a simple design consisting of an external stainless steel AISI 304 structure and an internal galvanized carbon steel load-bearing structure with the attached supporting arm.
The Lifting Column for Big Bags is equipped with a Mobile Docking System consisting of two locking handles. Thanks to a clamping mechanism, it ensures complete powder containment while unloading Big Bags. This Big Bag Docking System is available in manual and automatic versions and can also be integrated with the CIP system.
All functions of the Lifting Column (vertical and horizontal movements, in addition to all customizable specifications) are managed automatically by the control panel installed on board. The rotation and lifting systems are regulated by superior, intermediate, and inferior limit switches adjustable according to the specific installation and application process requirements.
All AGR-LIFT series Lifting Columns are fully compliant with cGMP and UNI EN ISO standards. Upon request, the columns can be manufactured for installations in powdery surroundings and/or ATEX classification zones, adhering to all relevant safety requirements.

Mobile Docking System

Docking system

Standard

With CIP System

Mobile Lifting Column for Big Bag Unloading

Mobile Closing System integrated with CIP

Bin Blender Column

Mobile Blender for Bin and Drum

IBC/BIN Tumbler

BLENDING AND MIXING SOLUTIONS FOR BINS AND DRUMS

Bin Blender Column

The Bin Blender Column combines all the Bin Lifting Column functions with tilting, tipping, and mixing capabilities. The Column features a simple design consisting of an external stainless steel AISI 304 structure and an internal galvanized carbon steel load-bearing structure with the attached supporting arm.
This type of AGR-LIFT series Column is mainly used in chemical, pharmaceutical, and food industries, specifically for powder handling operations requiring production flow optimization and preventing any "cross-pollution" cases. Upon request, it could be manufactured for installation in dusty environments and ATEX classified zones.
The lifting system consists of a "worm screw" that forms a single housing attached to the slide through a mounting flange. This system is adjusted using a limit switch box that sets the maximum and minimum limits for arm vertical movements according to specific application and process requirements.

The rotation system consists of a "wheel gear" driven by a direct-acting planetary gearmotor, ensuring optimal power and efficiency.
The Bin Blender Column's arm has a fork-type connection that holds the Bin at a 30° angle for better mixing. These forks are equipped with an automatic Bin locking/unlocking device (patented system).
All functions of the Lifting Column (vertical and horizontal movements, in addition to all customizable specifications) are managed automatically by the PLC installed on board.
The Bin Blender Column, like any other AGR-series Column, is designed and manufactured in compliance with cGMP guidelines and UNI EN ISO safety norms. It can be supplied with a protection system using infrared barriers or a stainless steel cage, where required.

The Blender Column can have two container connection types:
*- **Fork-type** (automatic or manual using triangle handle bolts)*
*- **Clamp-type***
The Column can be customized to handle Bins of different types (with wheels, stackable, with removable trolley, etc.) and sizes.

Automatic Bin Fixing System

the system activates automatically and provides a robust and secure connection for Bin

The Blender Column's vertical and rotational movements allow for effective Bin lifting, mixing, tilting, tipping, positioning, and discharging operations.

Removable trolley for Bin

DOCKING STATION

The Pharma Bin Docking Station is an innovative material handling solution for safe and controlled unloading of Intermediate Bulk Containers (IBCs) in high-containment applications. Engineered to meet the strict requirements of the pharmaceutical and chemical industries, this discharge station ensures a seamless, dust-free, and accurate transfer of powders from Bins to downstream processes.
The Bins are positioned and installed on the Discharge Station using Bin Lifting or Blender Columns. The system for attaching/connecting the Bin to the Docking Station can be realized in several ways, depending on the level of containment required:
- with an inflatable OEB 3 gasket;
with an active and passive valve system for an OEB 4 level of containment.
The system then works in combination with a vacuum transfer system to convey the material from the Pharma Bin to other equipment, ensuring continuous production flow.

The IBC Discharge Station is manufactured from stainless steel and designed to comply with cGMP, UNI EN ISO, and ATEX requirements. The system could be customized according to the specific production process requirements of each Customer.

The Blender Column can handle both Bin and Drum containers using a special adapter.

INSTALLATIONS & APPLICATIONS

Blending and discharging System from Bin-to-Bin by Mill

Bin Blending Column for Mill loading

Fixed Bin Blender Column with Clamp Connection for Bin connection

Blender Column with Clamp Connection for Bins with removable trolley

Bin Blending Column for Mill loading

Mobile Blender for Bin

The Mobile Mixer for Pharma Bin is designed for mixing and homogenizing dry powders. It is mainly used in the pharmaceutical and chemical industries, where there is the need to blend powders directly inside IBC containers, avoiding additional Mixer loading, unloading, and cleaning operations.

The Bin fixing and connection systems can be customized according to the specific requests of the Customer.

Clamp fixing system

Fork-type Fixing System

The Mobile Blender provides efficient mixing thanks to the 30° Bin inclination

AISI 304 stainless steel arm designed to blend Pharma Bins from 5 liters up to 300 liters, with a maximum capacity of 150 kg

An electric motor can rotate the Bin clockwise and counter-clockwise with speed ranging from 4 to 20 rpm

The Bin Mixer Blender operations are managed by a PLC, allowing the machine to control the safety sensors that detect and secure the working area (with an onboard safety cage or laser scanner) during the Bin mixing/rotation phase. The machine has a highly technological design and structure, allowing easy maintenance and cleaning.

If the Bin Blender is not installed in a working area dedicated exclusively to that machine, it can be equipped with an external structure with an electro-locking system to ensure safe mixing.

The Mobile Bin Blender is manufactured in full compliance with cGMP guidelines and UNI EN ISO safety norms. Upon request, it could be installed in ATEX classified zones and further customized according to the specific production process requirements of each Customer.

The Mobile Drum Blender is designed for mixing and homogenizing dry powders. It is used in all pharmaceutical, chemical, food, plastics, and mineral handling processes where there is the need to mix powders uniformly and directly in drums, avoiding the loading, unloading, and cleaning of the mixer.

The Mobile Mixer provides efficient blending thanks to the 30° Drum inclination with respect to the machine's rotation axis

AISI 304 stainless steel arm designed to mix drums from 2 liters up to 200 liters, with a maximum capacity of 200 kg.

An electric motor can rotate the Bin clockwise and counter-clockwise with speed ranging from 4 to 20 rpm.

The Drum Mixing System operations are managed by a PLC, allowing the machine to control the safety sensors that detect and secure the working area (with an onboard safety cage or laser scanner) during the Drum mixing/rotation phase. The machine has a highly technological design and structure, allowing easy maintenance and cleaning.

Tilting

The Mobile Drum Blender is manufactured in full compliance with cGMP guidelines and UNI EN ISO safety norms. Upon request, it could be installed in ATEX classified zones and further customized according to the specific production process requirements of each Customer.

IBC/Bin Tumbler

The Bin Tumbler Mixer is designed for mixing and homogenizing dry powders and is primarily used in the pharmaceutical and chemical industries in all those powder handling processes in which there is the need to blend powders homogeneously directly inside the Bin without additional mixer loading, unloading, and cleaning operations.
The IBC Tumbler ensures efficient mixing thanks to its double 15° inclination with respect to the machine's rotation axis and the rotation of the Bin both clockwise and counterclockwise.
The Tumble Blender has an electro-mechanical Bin locking system to ensure the horizontal platform position during the Bin loading/unloading and at the end of each processing cycle.

The IBC Bin Tumbler is operated by a PLC system, allowing the machine to control the safety sensors that detect and secure the working area (with an onboard safety cage or laser scanner) during the container mixing/rotation phase.
The Tumbler can be designed for through-the-wall installation to save space in the processing area, ensure stability, and comply with current GMP standards.
The wide range of AGIERRE Mixing Systems shows the great versatility of our products within the pharmaceutical industry for handling Pharma Bins or other containers of any size and shape with a maximum capacity of 2000 kg.

Automatic closing system with controlled force springs and pressure pads for Bins up to 2000 kg

Mixing and homogenization are guaranteed by the double inclination of 15°

The motor rotates the Bin both clockwise and counterclockwise at a variable speed from 4 rpm to 20 rpm.

The IBC Bin Blender Tumbler has a high-tech design structure that makes its cleaning and maintenance easier. The machine consists of the following elements:

- *Supporting structure: made of carbon steel profiles fixed to the floor with anchor bolts.*

  Lifting platform: composed of an AISI 304 arm connected to sliding guides moved by the screw-nut system driven by an electric motor.

- *Outer casing: consisting of a stainless steel AISI 304 plate shaped to cover the Tumbler's supporting structure.*

  Gear motor unit: comprising an electric motor coupled with a reduction gear for the Bin rotation function.

- *Control panel.*

EMPTYING SOLUTIONS FOR BAGS AND DRUMS

Emptying System for Bags and Drums

The Bag Dump Station represents the ideal solution for emptying powdered or granular products from sacks in completely dust-free environments. Its basic version consists of a grid mounted on a collection hopper supported by four legs (wheeled or static). The system could be customized by adding a Glove Box with a door and filters, a front shelf, a mobile external roller table, an integrated CIP system, a lump breaker, and loading cells.

The Bag Emptying System can be manufactured using different material types with a high degree of finish in versions with or without filters. It can be managed by a control panel with the pneumatic operating system or by the PLC according to the specific application.

The Bag Break Station is designed to minimize the internal stagnation of the product and can be customized with different solutions to serve a variety of applications.

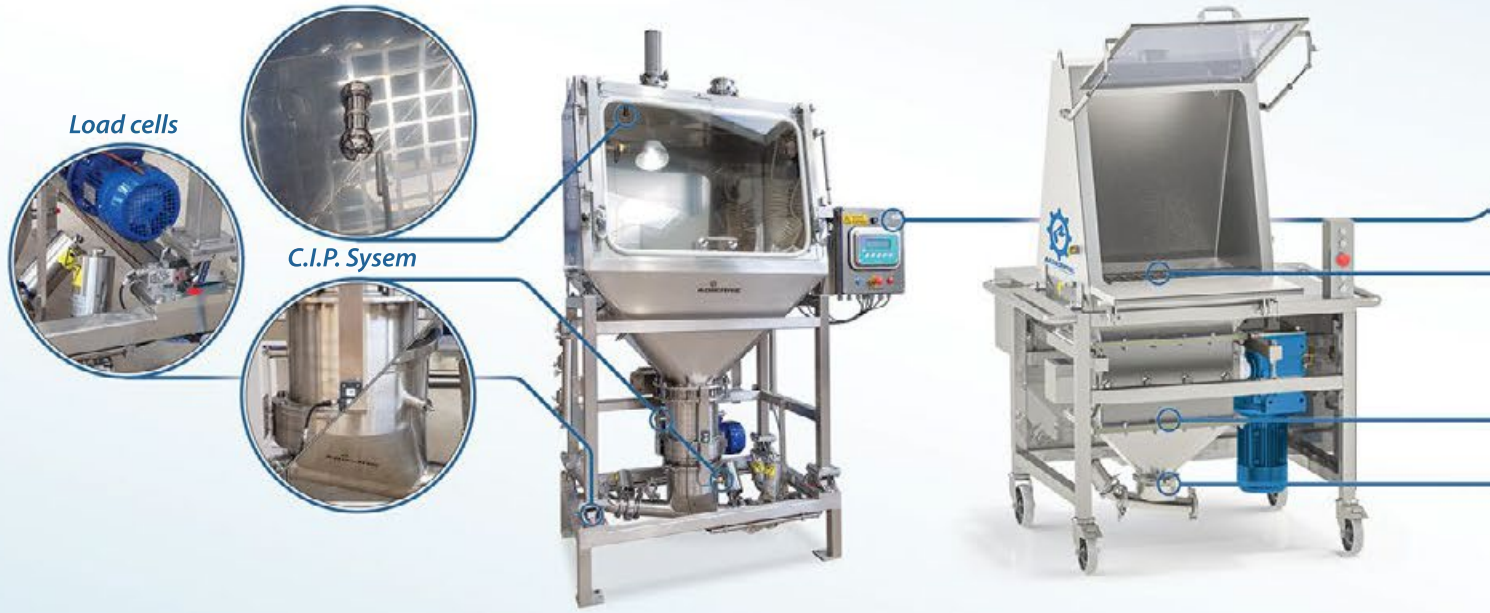
Glove Box system: *The Bag Emptying Station can be customized with a dumping hood consisting of an openable glass door with two gloves and an inflated gasket with security sensors. This system isolates the product from any external exposure, allowing the operator to manipulate the bag inside the dust hood safely. Door opening and closing operations are always managed via the control panel.*

Glove Box system: *The Bag Emptying Station can be customized with a dumping hood consisting of an openable glass door with two gloves and an inflated gasket with security sensors. This system isolates the product from any external exposure, allowing the operator to manipulate the bag inside the dust hood safely. Door opening and closing operations are always managed via the control panel.*

Ventilation system: *The upper chamber can be connected to a general extraction system or can be used without ventilation by only employing the installed filters.*

Filtration system: *The working chamber is equipped with a filtration system selected according to the required containment level (polyester or HEPA filters).*

Continuous liner system: *It can be installed on the side of the upper chamber and used for the safe removal of waste or the introduction of instruments into the chamber. Inside there is a hinged door or a cap to guarantee the closure of such connection when the system is not being used.*



After discharging the bag, the product passes either through a valve or a lump breaker (depending on application type) installed on the hopper discharge point. Then it is sucked through an aspiration hopper connecting Bag Dump Station with Vacuum Transfer System.
Drum Emptying System: the machine can be designed for drum unloading thanks to an automatic drum-tilting mechanism with an inflatable seal ensuring an OEB4 containment level.

Lump Breaker

*The **AGR-BREAKER** model Lump Breaker is used for crushing lumps that may form in materials during the powder handling and transfer processes.*
The Lump Breaker Machine is particularly suitable for hygroscopic or packing materials and, thanks to its versatility, can be applied in all industries.
The Lump Crusher stands out for its self-cleaning design with minimal overall dimensions. It can also be installed within the existing equipment, including Big Bag Discharge Stations, Big Bag Docking Systems, and under the Glove Box System. The crushed powder output can then be conveyed using a Vacuum Transfer System.
The Lump Breaker consists of a stainless steel central body with a circular cross-section housing the shaft with the knives for crushing the product and a contrasting grid.
Two flanges are connected to the central body of the machine: an upper one for the intake of the raw product and a lower one for the discharge of the crushed product.
The breaking of the lumps takes place by rotating special knives inside a contrasting grid whose motion is driven by a geared motor.
For safety reasons, the AGR-BREAKER is equipped with inductive sensors, permitting the machine to start only when the assembly configuration is correct.
The Lump Breaking System is manufactured under the Machinery Directive 2006/42/EC and, upon request, can comply with ATEX classified zone requirements.

Round Lump Breaker Applications

Square Lump Breaker

The Square Lump Breaker is a heavy-duty AGR-BREAKER model designed to handle materials requiring a higher crushing force. It features a reinforced square-shaped inlet opening, allowing for a larger intake of lumpy or compacted materials. The robust construction and expanded inlet dimensions enable this model to process denser and harder lumps or clumps that may form during powder handling.

PHARMA BINS-IBC CONTAINERS

Pharma Bins – IBC Containers

Pharma Bins, also known as **IBC Containers** or **IPC Bins**, are specialized containers designed for handling, storing, transferring, and mixing pharmaceutical powders and granules. These Bins are available in several shapes, including square, round, conical, and cylindrical forms, to match different needs.
The Pharma Bin can be equipped with a wheeled frame for easy mobility. Alternatively, it can be designed without wheels, allowing for installation on a separate wheeled cart for convenient movement. AGIERRE offers customized Bins

Pneumatic Vibrator with Suction Cup for easier product unloading

Pharma Bin (version with removable trolley)

Bottom Valve with clamp connection

Mirror polished internal finish

AGIERRE strictly controls the degree of external and internal surface finish (roughness) of all of its products with the help of a roughness tester.

Customized Pharma Bin installed on a mobile cart

Pharma Bin/IBC Container equipped with antistatic wheels and split valve

specifically designed to meet the production process requirements of each Customer.
Pharma Bins are engineered to meet the strict requirements of the pharmaceutical and chemical industry, ensuring product safety and compliance with regulatory standards. Their stainless steel construction and streamlined shape ensure easy cleaning and maintenance, making them ideal for applications that demand the highest levels of cleanliness and hygiene, consistent with cGMP regulations.

Tri-Clamp Closing for Lid with Safety Pin

Pharma Bin with wheels

Side Sockets for Connection with Bin Blender Column

Lid with the installation filter pre-arrangement

All produced machinery undergoes control procedures including the quality verification of the construction materials (e. g. stainless steel 304, 316, 316L, etc.) using XRF Alloy Analyzer (Gun)

Pharma Bin with side connection sockets for use on the Bin Blender Column

Stackable Pharma Bins for material storage, blending, and transportation

Customizable Bins

BIN in cGMP execution

Size
- from 100 to 2.500 litres.

Finish
- Internal : mirror polished Ra < 0,1µ with the removal of weldings;
- External : satin-finished Ra < 0,8µ with the removal of weldings;

Materials
- Stainless Steel (AISI 316L) for the internal surfaces.
- Stainless Steel (AISI 304) for the external surfaces.

Standard Connection of the discharge point
- Clamp connection

Accessories
- TC connection on the discharge point.
- Pneumatic Vibrator to make easier the discharge of powder.

Telescopic BIN

This type of stainless steel Pharma Bin has a telescopic frame with wheels, allowing easy mobility and flexibility. The telescopic structure consists of a metal pole that slide into each other. Using a control panel, the operator can extend or retract the sections, raising or lowering the Pharma Bin. The telescopic feature provides efficient Bin loading, unloading, and positioning for different processes.

Telescopic Bin

PNEUMATIC VIBRATORS

Pneumatic Vibrator

*AGIERRE's **Linear Pneumatic Piston Vibrators** are designed to optimize material discharge efficiency and facilitate smooth product unloading in various industrial processes.*
***Pneumatic Air Vibrators** are essential for preventing powder blockages in Hoppers, Pharma Bins, Containers, Reactors, Mixers, Fluid Bed Dryers, Dosing Systems, Pneumatic Conveying Systems, and other applications where constant and consistent material flow is crucial.*

Functionality and Operation

Pneumatic Vibrators utilize a linear vibration principle. Compressed air creates a rapid back-and-forth movement of a piston within a cylinder by applying and releasing pressure to and from internal chambers. This creates a linear vibratory motion that is transmitted to the equipment, eliminating clogging and facilitating the uninterrupted flow of powder materials.

Adjustable Vibration Frequency

The vibration intensity is easily regulated by setting the inlet air pressure between 1 and 6 barg, providing precise control of the process for optimal performance in different applications.

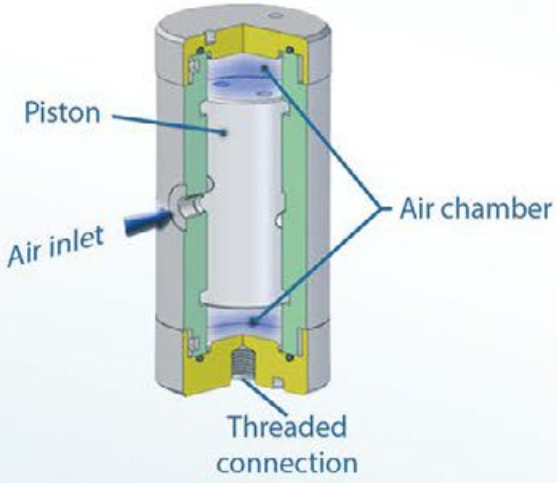
ATEX Compliance

Approved to ATEX 1/21 G/D certifications, these Pneumatic Vibrators meet strict safety standards for use in potentially explosive and hazardous environments.

Versatile Attachment Options

- *Flange Connection;*
- *Tri-Clamp Connection;*
- *Suction Cup Mount.*

AGIERRE's Pneumatic Vibrators are manufactured from aluminum and AISI 440C stainless steel ompliant. They have unique and innovative designs free from the traditional closing stoppers with screws. Their electrolytic nickel-plated external finish has increased durability and



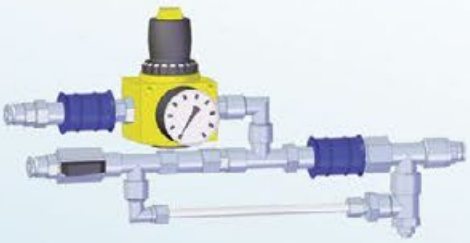
INSTALLATIONS & APPLICATIONS

Pneumatic Vibrator

In a commitment to simplify installation and enhance flexibility, AGIERRE has introduced an innovative suction cup attachment. This fast and easy connection allows tight mounting on metal, plastic, and cardboard surfaces. The suction cup design is particularly advantageous when the vibrator needs to be moved to multiple points on the same machine or several machines in different areas.
The suction cup attachment is engineered to support the vibrator's force while providing quick and secure mounting to the machine's surface. It consists of a vulcanized suction cup, available in black rubber or silicone. The suction cup is reinforced with a stainless steel support to ensure durability and strength to sustain the vibrator's operation.

***Vacuum Mount Pneumatic Vibrators** are equipped with an **Air Control System** that performs two critical functions:*
- it creates a vacuum in the suction cup, allowing the secure attachment to the surface;
- it activates and precisely regulates the vibration power.

Air Control



PNEUMATIC LINEAR VIBRATORS TECHNICAL VALUES AND CONSUMPTION			
Model	Frequency Ripples/min	Force (N)	Air Consuption l/min
	6 Bar	6 Bar	6 Bar
MRT 25 - 25X	5500	425	240
MRT 35 - 35X	5000	810	270
MRT 45 - 45X	4750	1420	390
MRT 15/O - 15/OT	6700	60.37	32
MRT 22/O - 22/OT	4000	191.20	70
MRT 30/O - 30/OT	3700	341.15	143
MRT 45/O - 45/OT	2500	705.61	195
MRT 60/O - 60/OT	2100	2123.52	200
MRT 45/OTM	2500	705.61	195
MRT 60/OTM	2100	2123.52	200

BUTTERFLY ROTARY VALVES

Butterfly & Rotary Valves

AGIERRE produces a wide range of sanitary valves for handling the flow of powders, granules, and tablets, mainly in the chemical, pharmaceutical, and food industries. They are essentially made of two stainless steel AISI 316L semi-bodies connected with a clamp or screw.

Sanitary Valve Types:

Butterfly Valve: designed to accurately control the material flow or isolate specific sections within a pipeline or system.

· Rotary Valve: designed to continuously feed and dose the product into other machines or a pipeline.

Sanitary Valve Configurations:

- WRC model: it has a welded connection on the superior and inferior parts (bins, hoppers, containers) to reduce the number of connections and contamination areas. The inferior part has a flange clamp for easy connection with the other systems.

- WRW model: it has a welded connection on the superior and inferior parts. WRTC model: it connects to the Ferrule Tri-Clamp on the superior part and a welded connection on the inferior part.

The following models have the flange clamp connection on the superior and inferior parts for easy attachment to the other systems.

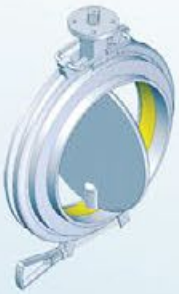
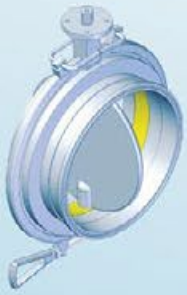
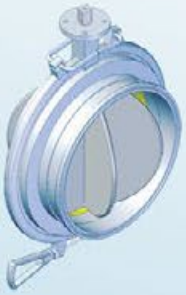
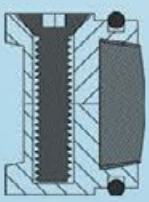
- CC model: the two semi-bodies are connected with a screw.

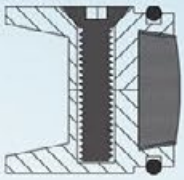
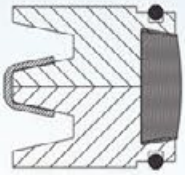
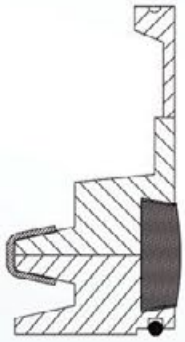
- CRC model: the two semi-bodies are connected with a clamp. CRTC model: the two semi-bodies are connected with a clamp and have a Ferrule Tri Clamp on the superior part.

Gaskets

The valves can be equipped with different types of seals, carefully selected to match the specific production requirements of each customer, which guarantees safe and precise material flow control, mitigating the risk of contamination and maintaining product integrity.
The gaskets can be manufactured in:

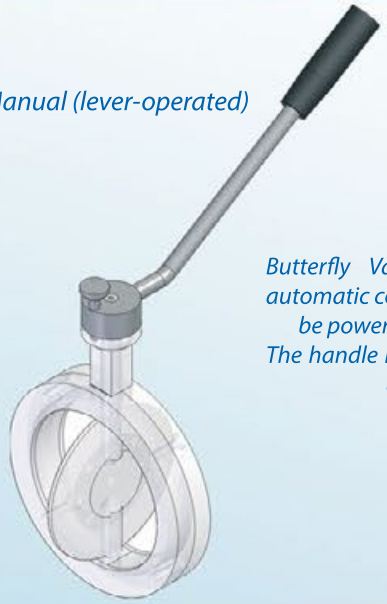
- EPDM - Viton (FKM) - Kaflon (FFKM) - Teflon (PTFE)

Configurations	AGR Butterfly Valves	AGR Rotary Valves
 WRC		
 WRTC		
 SW		

Configurations	AGR Butterfly Valves	AGR Rotary Valves
 CC		
 CRC		
 CRTC		

Manual and Pneumatic Control

Manual (lever-operated)



Butterfly Valves support both manual and automatic control versions, while Rotovalves can be powered only by a pneumatic actuator. The handle is made from stainless steel AISI 304 and has a bakelite shaft.

Automated (operated by a pneumatic actuator)

AGIERRE Solutions

__AGIERRE__ manufactures industrial equipment for pharmaceutical, chemical, and food industries designed for handling powder and granular materials.
Since its foundation in 1975, the company has developed turnkey and customized solutions that have been perfectly integrated into numerous production lines in hundreds of plants worldwide, including big multinational firms.
__AGIERRE__ systems cover a wide range of powder handling operations, including:

- *Filling*
- *Discharging*
- *Containment*
- *Blending*
- *Weighing*
- *Dosing*
- *Conveying*

The company stands out for the versatility of its products, capable of handling various container types, including Bins, Sacks, Hoppers, Drums, and Big Bags filled with powder. All equipment is modular, ensuring seamless integration into existing processes.
__AGIERRE__ is well known for its solutions, customized to match each Customer's needs depending on the application and environmental requirements while always upholding excellent quality and complying with strict regulations and safety standards.
While expanding its presence worldwide, the company has established a global network of regional partners, sole agents, and distributors across Europe, South and North America, the Middle East, and the Caucasus. This localized support ensures outstanding customer service anywhere in the world.
Supported by a team of specialized technical experts, __AGIERRE__ guarantees its customers constant assistance in selecting, developing, and supporting the project best suited to their needs.

VTS-Vacuum Transfer System

The VTS Vacuum Transfer System is the best solution to handle the powders and gralules into reactors, and in all packaging machines. The VTS is equipped of a filtration unit (Stainless Steel, Titanium, Hastelloy, Bag, and Pleated Filters) and a CIP system. The powder transfer can be made by batch or dense-phase everything managed by a pneumatic or PLC control console.

Mobile and fixed Lifting Systems

AGIERRE provides several solutions of lifting system to lift Bin/IBC, BigBags, VTS-Vacuum Transfer Systems, Drums. These lifting systems can be fixed and mobile according to the customer needs and production processes. The Lifting column can customized accoring to the diffent size and shape of Bin, BigBags, Drums and Conveyor. The lifting Columns can be managed by a pneumatic or PLC control panel. The System can be Atex compliant too, upon request.

Blending System

AGIERRE provides several mobile and fixed Blending Solutions for different shape and size of Bins/IBCs. The Bin Blender is used to mix powders with differents caracteristics guaranting the perfect mixing thanks to specific mixing speed, design of machine and the angle of mixing. It can be customized according to the specific customer needs and is apt to mix Bin/IBC until 2000 litres. After mixing phase the Blender can be matched with an handling system for the filling of another Bin or a receiving equipments evrything managed by a PLC System. The Blender can be supplied in Atex version too.

Powder Handling Excellence

BigBags Filling and Discharging Systems

AGIERRE proposes various solutions for powders filling and discharging from/to process equipments into/from BigBags with inflatable seal connection (Docking Systems) to ensure the dust proof. This System can be also equipped of the continous Liner System for a cGMP compliant packaging solutions with high containment level guaranting the operator and product protection. Whole process is managed by a PLC control panels. These Systems can be customized to any size of receiving BigBags to be filled of or discharged in. The System can be Atex compliant too, upon request.

Drums/Sacks Discharging Systems

AGIERRE offers solutions for powders discharing systems from Drums and sakcs. The operator opens the sack inside the glove box chamber and the product falls down by a grid. The Gove box can be equipped by a tilting system in case the receiving powders is inside drums. On the outlet connection can be connect a VTS which convey the powders inside the receiving machine. The Glove Box can have a load cells for powders dosing. The system can be equipped of a CIP system and a containment OEB4 system with inflatable seals to guarantee the seal of whole system. Whole process is managed by a PLC control panel. The System can be Atex compliant too, upon request.

Drums/Bags Filling Systems

AGIERRE proposes various solutions for powders filling and dosing from/to process equipments into/from Drums or Bags with inflatable seal connection (Docking Systems) to ensure the dust proof. This System can be also equipped of the continous Liner System or inflatable seals for a cGMP compliant packaging solutions with high containment level guaranting the operator and product protection. The filling is performed by a powders dosing process managed by load cells. Whole process is managed by a PLC control panels. These Systems can be customized to any size of receiving Drum and Bags to be filled of or discharged in. The System can be Atex compliant too, upon request.

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