INTAKE & EMPTYING

TRUSTED BY THE BEST

DINNISSEN PROCESS TECHNOLOGY

INTAKE & EMPTYING

Product intake refers to the initial stage of handling and introducing raw materials or products into a manufacturing or processing system. This step is crucial in industries such as food processing, pharmaceuticals, chemicals, and many others where bulk solids are involved. The efficiency and reliability of product intake impact the overall production process. That's why Dinnissen designed a wide range of smart solutions that deal with these challenges in the best possible way. Whether your raw materials come in small bags, large FIBC's, IBC's, drums or even bulk trucks, we can take care of your entire intake system.

Other languages on www.dinnissen.com

DIMA® Bag Emptying

Systems designed to empty 25-75kg bags manually or fully automatic.

Big Bag Emptying

Solutions designed to empty big bags (FIBCs) efficiently and safely.

IBC Emptying

Systems designed to empty drums, IBC or other types of container.

Hygienic Intake & Emptying

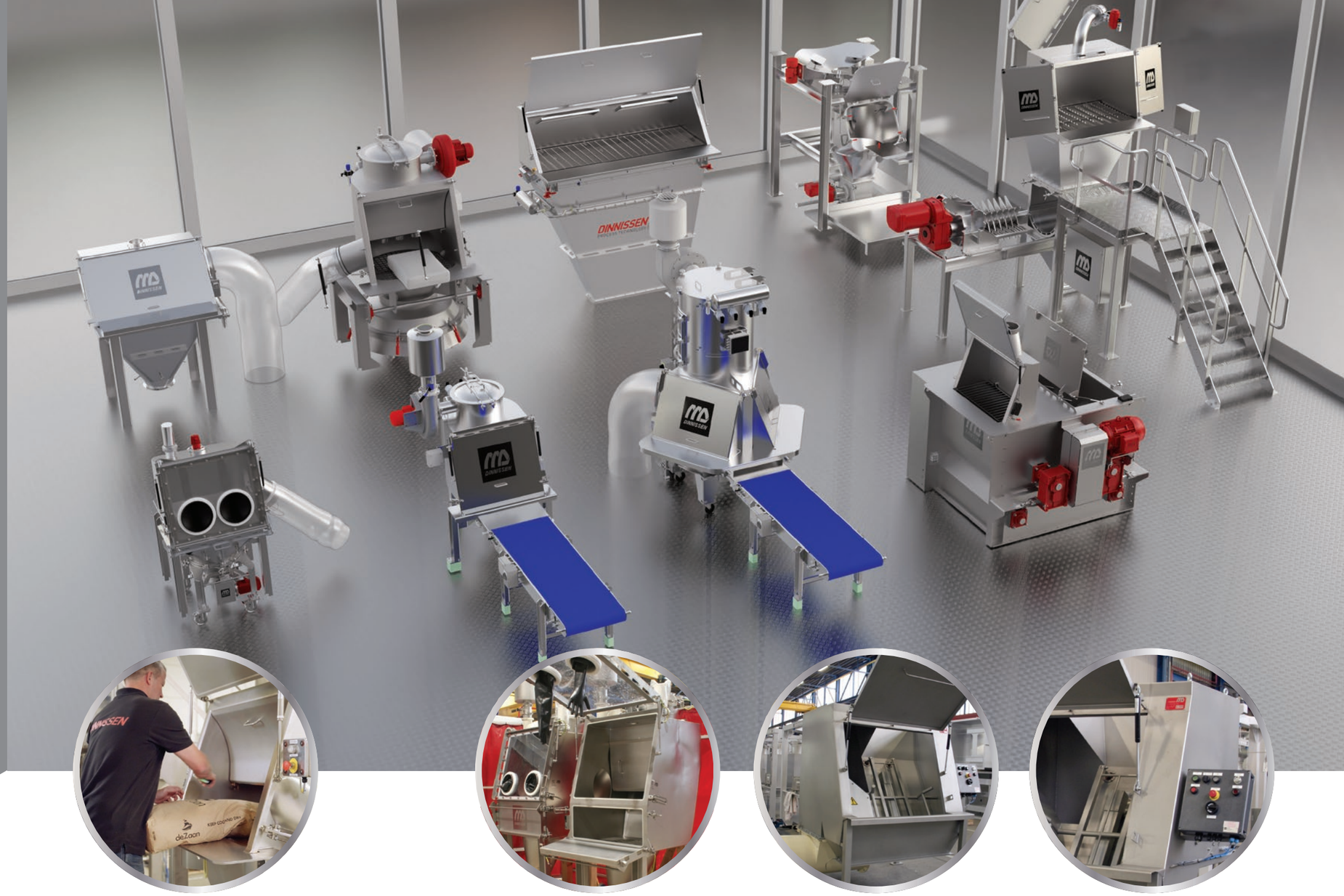
Bag cleaning and sterilization solutions designed for use in high-care zones.

DIMA® MANUAL BAG EMPTYING

DIMA® Manual Bag Emptying systems are designed to efficiently, safely and ergonomically empty bags containing bulk materials. With a large installed base worldwide, our Dima® systems are trusted for their quality and durability.

In the DIMA® MAN series, bags are placed on a grate and cut open manually. The operator shakes the bag to empty it completely and feeds the bag into the bag compacter.

The DIMA® 100 features a semi-automatic emptying system. After placing the bag inside the machine, an operator presses the two-hand controls. This closes the hatch and automatically cuts the bag open from the bottom. Once the bag has been cut, the hatch opens again so that the operator can empty and



Operator opens a bag in a Dima® MAN

Dima® MAN with glovebox

Dima® 100

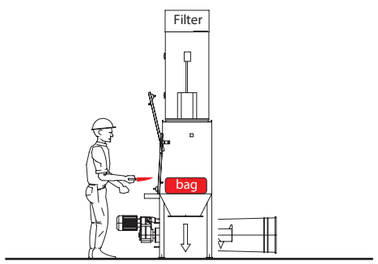
Control panel for the semi-automatic Dima® 100

SYSTEM INTEGRATOR WITH MANUFACTURING SKILLS

DIMA® MAN

Manually operated, manual cutting.

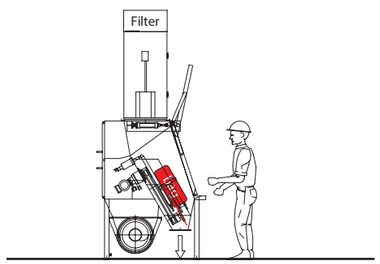
Capacity: up to 100 bags per hour



DIMA® 100

Semi-automatic: manual bag placing, automatic cutting.

Capacity: up to 100 bags per hour



Integration

We can integrate DIMA® MAN Emptying Systems in other machines. This enables producers to manually add small amounts of product into their production processes, improving the flexibility. We can also integrate other machines into DIMA® Emptying Systems, such as breakers, magnets, safety screens and dosing equipment. Furthermore, we can integrate a wide range of solutions for the conveying & handling of the bags and the contents.

Options

- Steel or stainless steel
- Hygienic design
- Dust control
- Lifting tables
- Bag lifters
- ATEX versions
- Tailor made ergonomics
- Fully custom design

DIMA® AUTOMATIC BAG EMPTYING

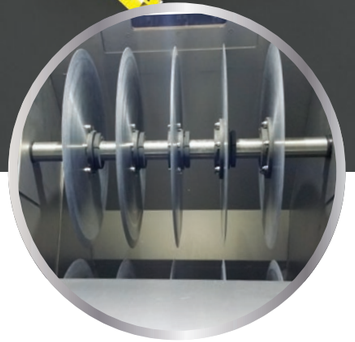
DIMA® Automatic Bag Emptying Systems do the cutting, emptying and separating packaging from the product fully automated. They are designed for high-capacity applications, hygienic process lines or producers that work with hazardous products.

The DIMA® 200 series has a rotating blade to cut open the bag, which is suspended from two hooks. Vibration helps to empty the bags completely, after which the packaging is automatically fed into the bag compacter.

The DIMA® 300, 600 and 1200 series have two or more blades to cut bags. A rotating drum separates the packaging from the contents. Packaging automatically goes towards the bag compacter, while the bag contents are collected in a container, big bag or bulk truck.

Fully automatic DIMA® 200 Bag Emptying System

DIMA® 200



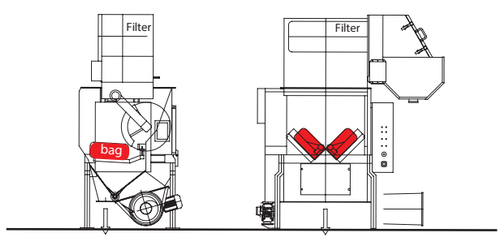
The cutting blades in a DIMA® 1200

DIMA® 1200 with robotic arm

CHECK OUT OUR DIMA® 1200 VIDEO!

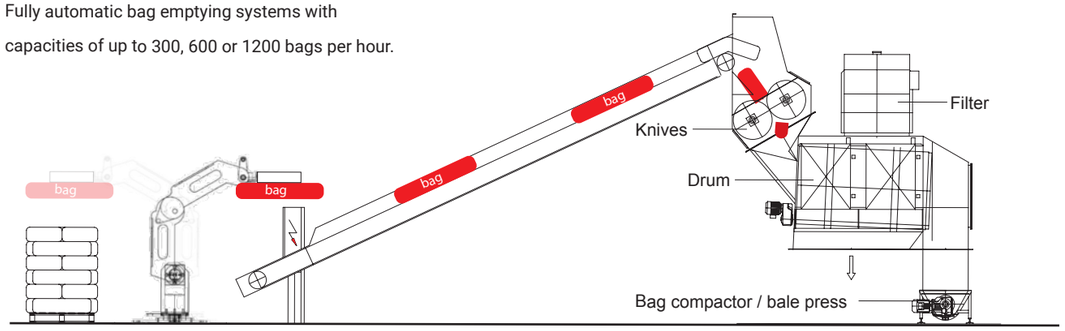
DIMA® 200

Fully automatic bag emptying with a capacity of up to 100 bags per hour.



DIMA® 300, 600 and 1200

Fully automatic bag emptying systems with capacities of up to 300, 600 or 1200 bags per hour.



BIG BAG EMPTYING

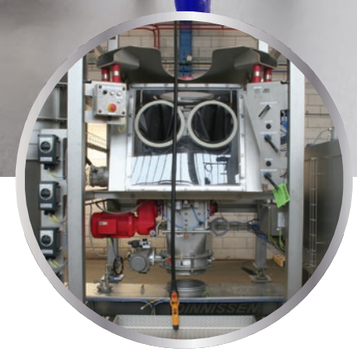
Our big bag emptying solutions are designed to efficiently and safely handle and discharge the contents of large bags, commonly known as flexible intermediate bulk containers (FIBCs) or big bags. The design and complexity varies based on the specific requirements of the industry and the characteristics of the bulk materials being handled. We therefore designed modular emptying system which can be configured with options, such as:

- Hygienic design: stainless steel, easy-to-clean
- Hoisting equipment and frame to suspend the bags
- Dust-free big bag connector system with inflatable cuff
- Vibration system, knockers or bag conditioning system
- High-Care emptying systems
- Integrated breaker, magnet and/or sifter
- Mobile emptying systems
- Atex compliant design
- ...

Big Bag Emptying Station

Big Bag Conditioning System

Dust-free Big Bag Connector System



Big Bag Emptying Station for hazardous products, with integrated breaker

CHECK OUT OUR
BIG BAG CONDITIONER VIDEO!

How Big Bag Emptying Systems work

The big bag is placed (using a forklift or integrated hoist) on a frame specifically designed for stabilizing the big bag during emptying. The big bag can now be connected to the filler pipe underneath the frame, using a cuff that is inflated to minimize dust emission. Once the big bag is properly attached to the filling pipe, an employee can loosen the rope at the bottom of the big bag. This ensures that the dust enters the filling pipe safely and efficiently, after which it can continue its path in the production process. The empty big bag is now hoisted or lifted down, so that a new full big bag can be placed and emptied.

High-Care Big Bag Emptying

Our High-Care Big Bag Emptying Solutions are designed to be integrated into cleanroom environments. This enables producers to maintain a controlled and sterile atmosphere. This is essential in industries where product purity, quality, and safety are of utmost importance. As preferred supplier for some of the best producers in the world, we are very experienced when it comes to designing high-care emptying systems with focus on food safety.

Custom Big Bag Emptying solutions

The modular emptying system is designed to handle a wide range of applications. In some cases however, a customized design is needed. Thanks to our in-house engineering, production and testing we can build the most efficient solutions for any application. Working together with our customers, we have built many fully customized systems that have been in use for many decades. Contact our experts to find out if you need a customized solution.

DRUM/BARREL/ IBC EMPTYING

There are many different types of container in use in the world of bulk solids packaging, from small IBCs to bulk trucks. Dinnissen offers several solutions for producers that need to empty drums, barrels, IBCs or other types of container. From relatively simple barrel tipping systems to completely automated processes for the emptying, cleaning and transport of drums containing toxic materials, our range of emptying solutions is wide. Whether you need a manually operated emptying station or a fully automated product intake systems with integrated microdosing for your processing line, Dinnissen can handle your challenge.

IBC emptying and dosing system

IBC emptying station

Barrel emptying system

Barrel emptying system

MORE THAN 75 YEARS OF EXPERIENCE IN YOUR INDUSTRY

Modular design

The great advantage of Dinnissen Emptying Systems is our customization. We identify the needs and requirements and create a system based on them. Our in-house engineering and production enable us to design systems to fit nearly every filling challenge. Every Dinnissen solution is built to last, to perform efficiently and to have great operator ergonomics.

Hygienic filling systems

Producers that need to be absolutely sure about food safety and product quality can rely on Dinnissen systems. We have an excellent track record in sectors where producers have to deal with strict hygiene requirements. Furthermore, Dinnissen applies full traceability in it's production processes. This enables us to provide material certificates for every part of the machines we build.

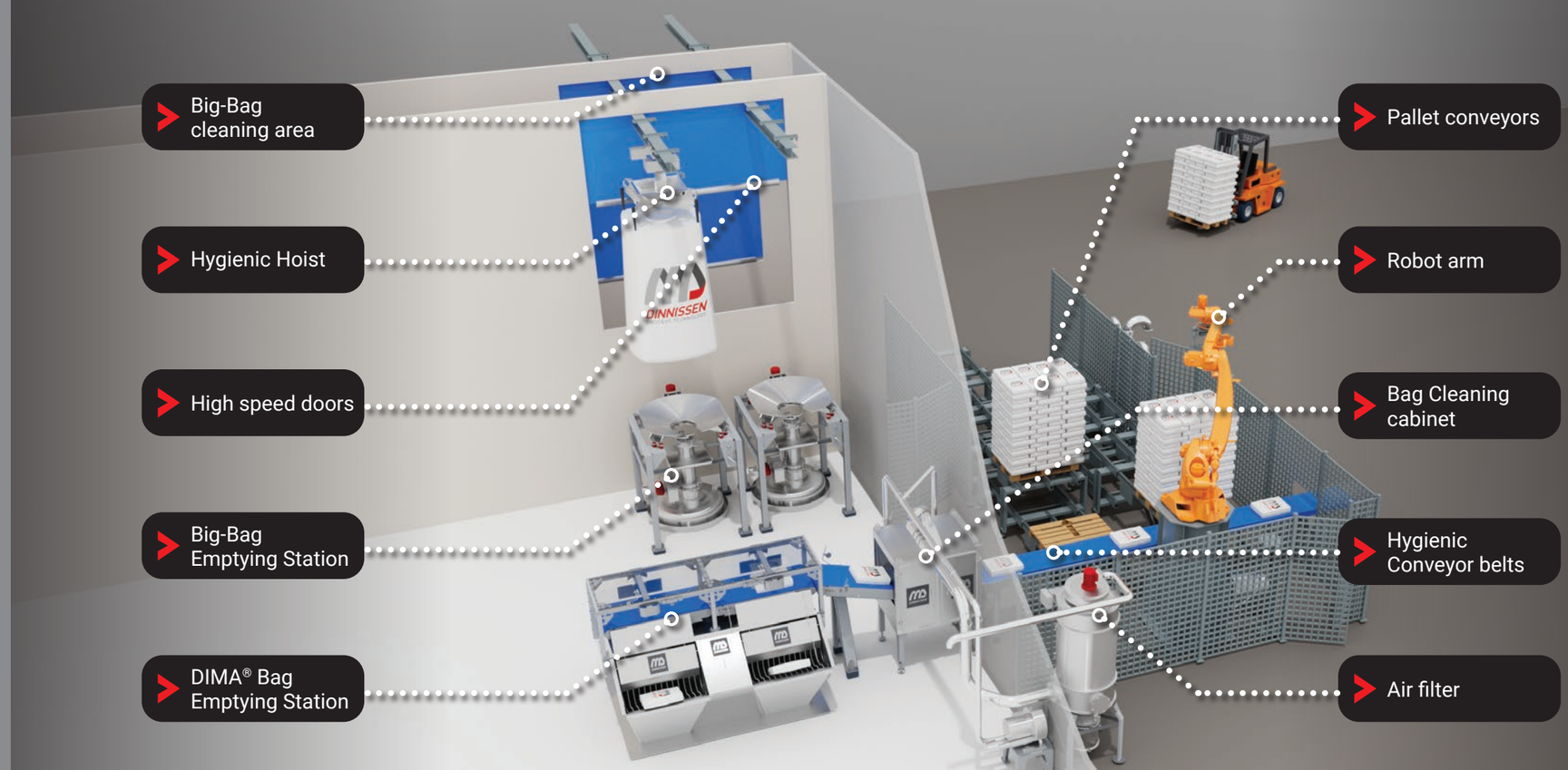
Options

- Custom design
- Feedervalve for accurate dosing
- Weighing system
- Hygienic design
- Container docking systems
- Container transport systems
- ...

HIGH-CARE ZONES

High-care zones are physically segregated zones in which air quality is monitored and controlled. Bag or containers can be cleaned and disinfected before entering these zones, typically using UV light or ionized air. This ensures that no contamination of raw materials can occur once the packaging is opened and minimizes contamination in your entire processing line.

We design our high-care solutions and equipment to fully comply with the strictest hygienic regulations and guidelines. Our track record speaks for itself, we can proudly say that we are trusted by the best producers in the worlds of food, dairy and chemicals.



Big-Bag Emptying Stations in a high-care area

DIMA® Bag Emptying Stations in a high-care area

Hygienic conveyor belts

High-Care Big-Bag transport system

CHECK OUT OUR HIGH-CARE VIDEO!

Low, medium and high-care

By segregating production areas into low, medium, and high-care zones, food producers can implement appropriate hygiene controls tailored to the specific risks associated with each zone. This helps minimize the risk of product contamination and ensures the production of safe and high-quality food products.

Hygienic design

All of our high-care solutions have a hygienic design. We minimise the use of closed profiles, hollow bodies, bolted connections, plate to plate attachments and horizontal surfaces. This minimizes product accumulation, making it both more hygienic and faster to clean. Components and machine parts are designed for maximum accessibility for cleaning, inspection and maintenance.

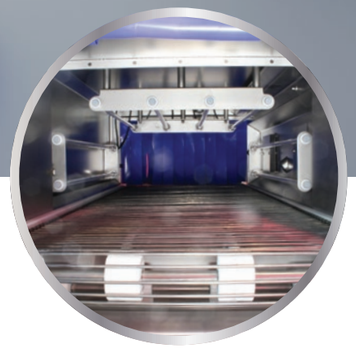
Food safety

Our designs are built using traceable stainless steel, and based on the EHEDG regulations to comply with HACCP and GMP quality assurance procedures. They are also available in explosion-proof versions in accordance with Atex guidelines. Furthermore, an end-of-line control sieve and/or metal detector can be equipped, as well as a sampling system.

CLEANING & STERILIZING

Cleaning and sterilization during the product intake phase is crucial to maintain food safety and quality. Some common methods to accomplish this are chemical cleaning, steam cleaning, pressure washing, ultraviolet (UV) sterilization, gamma irradiation or ozone treatment. Each of these methods has its advantages and limitations, and the choice depends on factors such as the type of packaging material, the level of contamination, and regulatory requirements. Proper cleaning and sterilization procedures are essential to ensure the safety and quality of bulk food packaging.

This UV Treatment System prevents contamination during your intake process



Inside the UV Treatment System

This Bag Cleaning Cabinet disinfects bags using ozone

Inside the Bag Cleaning Cabinet

MORE THAN 75 YEARS OF EXPERIENCE IN YOUR INDUSTRY

UV treatment

Ultraviolet (UV) light can be used to sterilize bags by disrupting the DNA of microorganisms, preventing their replication. It offers an effective and environmentally friendly solution for disinfection and sterilization bags. Our UV treatment solutions achieve optimal disinfection efficacy and ensure product safety and quality.

Ozone treatment

Ozone can be used to disinfect bags before they enter a high-care area. It can also be used for air purification. By generating ozone, airborne contaminants such as bacteria, viruses, and odors can be neutralized, thus maintaining a clean and sterile environment.

Tailor-made solutions

Our tailor-made solutions can be designed to address the unique requirements and challenges of a particular food production process. This customization ensures that the solution is precisely tailored to meet the specific hygienic regulations and standards governing the industry, minimizing the risk of non-compliance and ensuring regulatory compliance.

INTAKE & EMPTYING

- ✓ In-house engineering, production and installation
- ✓ Extensive service and testing facilities
- ✓ EG 1935/2004, ATEX-, GMP-, CE-, HACCP- en EHEDG
- ✓ ISO 9001, 14001, 27001 and 45001 certified
- ✓ Over 75 years of experience

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