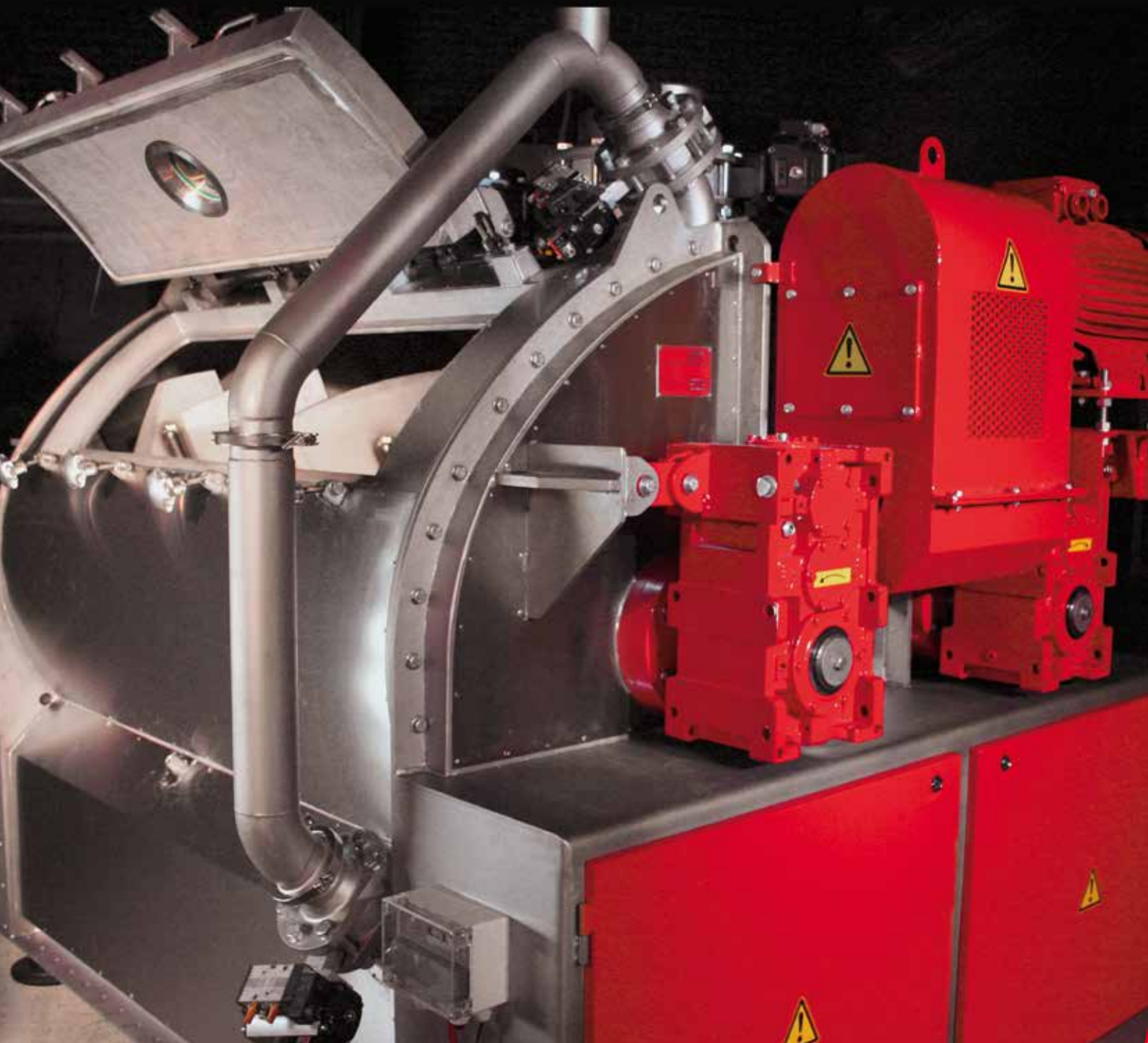


YOUR PROCESS...  
...OUR CARE



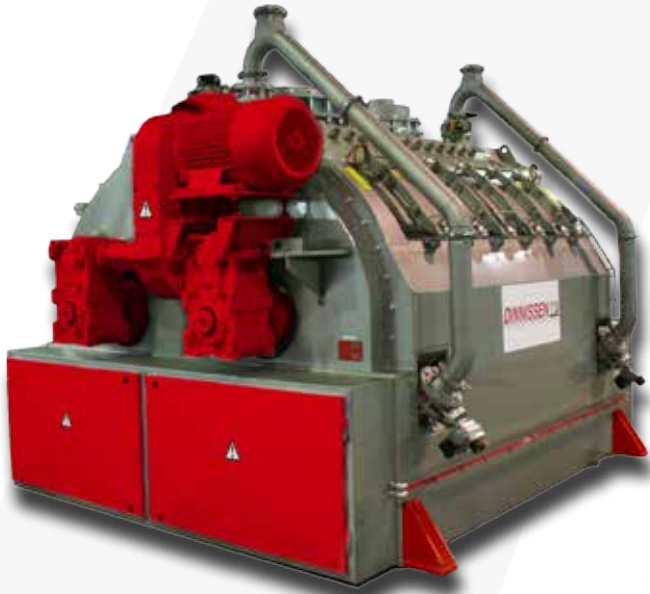
# PEGASUS® VACUUM COATER





# Pegasus<sup>®</sup> Vacuum Coater

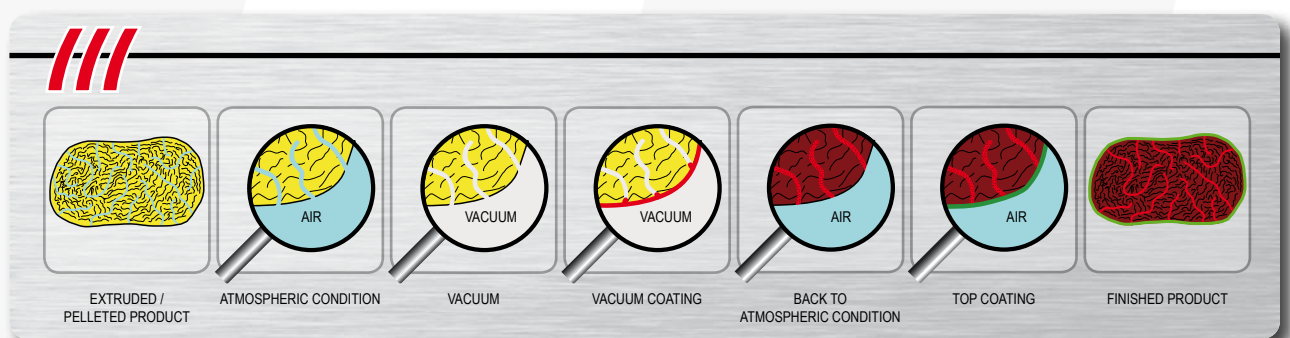
Perfect for pelleted and extruded products



**The Pegasus<sup>®</sup> Vacuum Coater is the ideal tool for companies looking to produce pelleted and extruded products in accordance with the latest standards and criteria. It enables producers in the feed, food, pharma and chemical sectors to create a vacuum environment for their production processes and to successfully deal with a wide variety of demands and challenges.**

## Multifunctional production unit

The Pegasus<sup>®</sup> Vacuum Coater from Dinnissen is a multifunctional production unit built around a double-shaft paddle mixer with sophisticated vacuum functionality. The double-shaft mixer gently suspends the ingredients in the air while the unit can simultaneously create an ultra-vacuum environment down to a level of 50 mbar. The built-in spraying functionality makes it possible to spray a precisely predetermined quantity of liquid onto the powders, pellets or granules. When air is then allowed to enter the mixing unit, the liquids are evenly pressed and distributed into each particle. The user also has the option, after the primary production process has been completed, of applying an additional powder coating or aroma around each particle. The Pegasus<sup>®</sup> Vacuum Coater is also lightning fast and completes the entire production process within only 3 to 4 minutes.

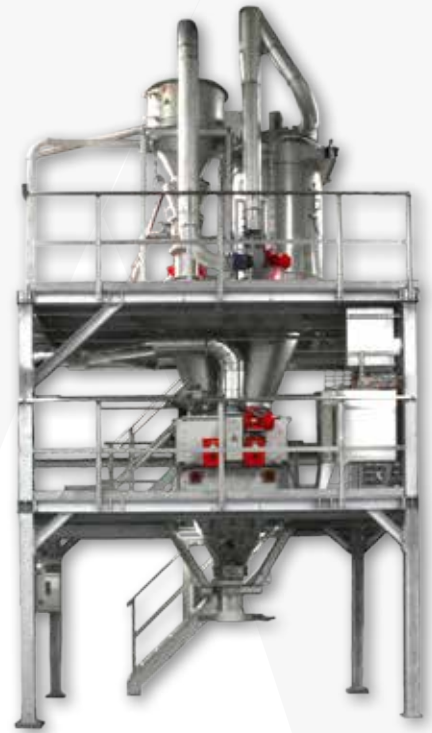


*Over 60 years of experience*

*Over 60 years of experience in bulk handling and solids processing for the food, feed, pharma and chemical industries.*

### Utmost precision deep into the particle

When working with ingredients that are essential to product functionality, it's often important to ensure accurate dosage and concentration levels. The Pegasus® Vacuum Coater was developed specifically to add essential ingredients, such as natural aromas, oils, vitamins, minerals and enzymes, extremely precisely to pelleted and extruded products. The vacuum coater makes it possible to add precisely the right amount of powder or liquid to each particle and to then distribute the powder or liquid evenly throughout the entire particle. The coefficient of variation realized in this regard is very low, namely 2% to 3%. The end result is an extremely homogeneous product mixture.



### Quickly add or inject several layers onto and into particles

The Pegasus® Vacuum Coater makes it possible to mix batches of solids as well as liquids very quickly and extremely homogeneously, regardless of whether the ingredients are added in extremely low percentages (0.01%) or extremely high percentages (220%). By switching the vacuum functionality on and off, it's also possible to ensure that the solids or liquids added penetrate more or less deeply into the particle. You can also quickly and efficiently add or inject several layers onto and into pelleted and extruded products, thereby ensuring that your end product is extremely homogeneous and complies with even the most rigorous specifications.



*Your products tested beforehand*

*Your products and/or processes tested beforehand on our machines, guaranteeing optimum results.*



### **Optimum protection and use of your expensive ingredients**

Of course, you wish to get the most from your expensive ingredients and to ensure that as little as possible is lost or degraded. The Pegasus® Vacuum Coater allows you to add functional but heat-sensitive ingredients after other ingredients have been heated if necessary, thereby ensuring optimum functionality. As a final step in the production process, you can also add a protective or even decorative coating around each particle. This prevents particles from breaking, crumbling, or being degraded and also minimizes breakage in transport and/or storage systems. It also ensures that each particle retains its desired original shape and look.



### *In-house development and manufacturing*

*Our products and custom-made solutions are developed, tested, manufactured and installed by our own people, providing you the best possible assurance in terms of quality and delivery time.*



#### Vacuum Coater features:

- Addition of components (0.01% to 220% based on fill weight) into and onto the product
- Batch volumes of 10 to 3000 litres
- Optimum homogeneity
- Optimization of extruded output
- Increased stability, bulk density and current power for improved quality of pellets and extruded product
- Easy and simple switching between recipes for maximum flexibility
- Less environmental waste
- No contamination ultra-hygienic design
- Suitable for fragile and extruded products



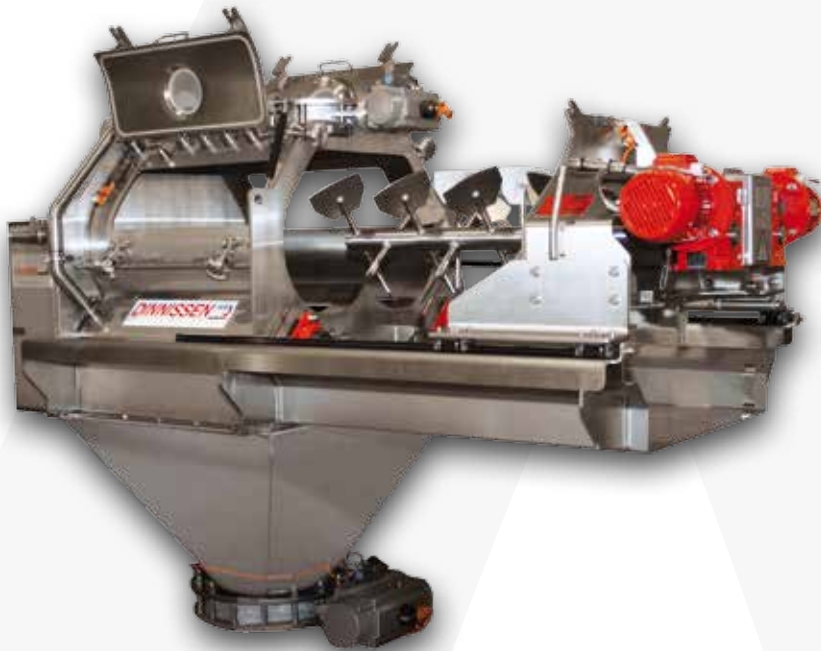
#### Low-temperature drying

The Pegasus® Vacuum Coater can also be fitted with a low-temperature drying functionality that is particularly suitable for heat-sensitive ingredients. The drying functionality is based on the phenomenon that the boiling point of liquids is lowered within a vacuum environment. As a result, the Pegasus® Vacuum Coater can remove moisture from products at low temperatures. The ability to dry products at low temperatures is the perfect solution when working with products that present an explosion hazard or ignition hazard as well as food products for which it is essential to ensure that the ingredients retain their original taste, colour and functionality. The drying functionality built into the Pegasus® Vacuum Coater can be combined with the other functionalities of the Pegasus® Vacuum Coater in a single process step.



*We take care of your entire process*

*Product intake, transport & handling, feeding, weighing, mixing & processing, milling, sifting and packaging: your entire process chain is in good hands at Dinnissen.*



#### Batch volumes

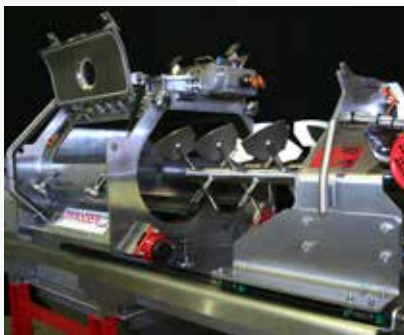
- PG-10 VC Lab..... 10 litres
- PG-40 VC Lab..... 40 litres
- PG-60 VC Lab..... 60 litres
- PG-100 VC..... 100 litres
- PG-200 VC..... 200 litres
- PG-450 VC..... 450 litres
- PG-750 VC..... 750 litres
- PG-1000 VC..... 1000 litres
- PG-1350 VC..... 1350 litres
- PG-2000 VC..... 2000 litres
- PG-3000 VC..... 3000 litres

#### Ultra-hygienic

The Pegasus® Vacuum Coater has a very compact design and is fitted with oversize inspection hatches, making quick and thorough cleaning very easy. As a result, it's also possible to easily and quickly switch from one production recipe to another while complying with the strictest hygienic requirements, even if the production capacity per recipe fluctuates very strongly. The Pegasus® Vacuum Coater is available with easily removable mixing shafts and automatic cleaning systems. For production processes that need to comply with extremely strict requirements when it comes to preventing contamination with harmful microorganisms, Dinnissen also offers a range of extra hygienic functionalities for the vacuum coater, including hot-air treatment and CIP cleaning.

#### Ultra dust-tight exclusion valves for optimum safety and hygiene

All Dinnissen vacuum coaters are fitted with dust-tight exclusion valves that have a so-called labyrinth type seal developed exclusively by Dinnissen. This design ensures that no product residue can remain behind within the seal. Dinnissen can also provide built-in sensors which ensure that the exclusion valves are 100% dust-tight. These sensors ensure that the production process cannot be started if even the slightest leak is detected. The end result is optimum quality, safety and homogeneity of your product.



### *Integrated approach to dealing with complex challenges*

*When dealing with complex challenges, we start by putting together a project team of our most experienced specialists. By working together as a team from day one, we can solve even the most difficult challenges.*

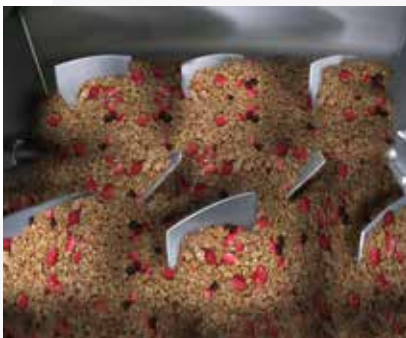
### Maximum flexibility in your production process

The Pegasus® Unit is also a very flexible production tool. This sophisticated control and management program enables the user to quickly and easily adjust production parameters such as the vacuum functionality, the injection of ingredients, the drying functionality, mixing time and mixing intensity etc. This makes it possible to use the Pegasus® Vacuum Coater within a single production line for producing a wide range of products and to quickly and easily switch from one recipe to another, even when only small production quantities are involved. Several process functionalities can also be combined in a single process step, providing additional benefits in terms of quickly and thoroughly cleaning the entire unit. The ease and speed with which the Pegasus® Vacuum Coater can be thoroughly and completely cleaned also makes it a simple matter to switch to a new recipe while complying with all relevant hygienic standards.



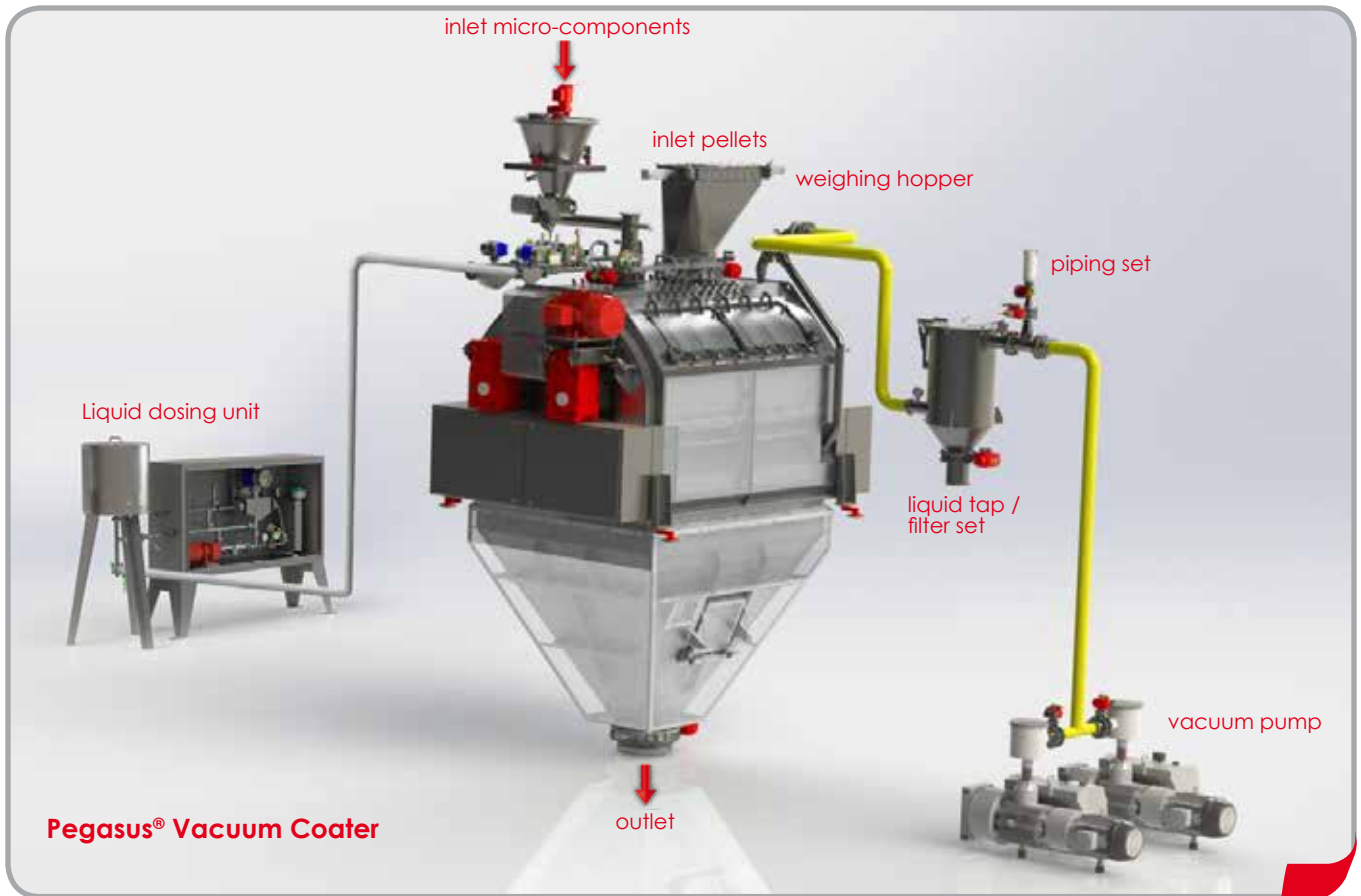
### Intelligent production processes via Process Automation

Dinnissen can automate your entire production process to provide you with an optimum and self-regulating process. To do so, we first prepare a functional description of all your requirements and wishes, using the knowledge acquired during our years of experience in your specific sector. Dinnissen can provide the PLC controls for machines and transport systems in the field and link these controls with process management, variable speed drives and master control centers in your operational network. Dinnissen can also organize the collection, forwarding, processing and visualization of measurement and control data from your production process via SCADA systems. This enables you to visualize your measurement data in operator & control rooms and to manage your production processes effectively and efficiently. The SCADA systems provided by Dinnissen simplify the preparation of reports and the implementation of alarm systems. It goes without saying that the automation projects implemented by Dinnissen are compatible with the communication protocols of all common ERP systems, including SAP and Oracle, so that linkage and integration should never be an issue. We support the users of our automated systems with remote control functionality so that they can monitor and manage their production processes from a distance. The remote control functionality is provided as a service to ensure that we can help you as quickly and effectively as possible and reduce downtime and production losses to an absolute minimum.



*Service and warranty near you all over the world*

*A global network of reliable dealers and agents guarantees you fast and accessible service wherever you are.*



**Total process with: feeding, pneumatic conveying, mixing, and coating.**

## Seven forces of Dinnissen

- More than 60 years of experience
- Your products and/or processes tested beforehand on our machines
- In-house development and manufacturing
- We take care of your entire process
- Integrated approach for dealing with complex challenges
- Service and warranty all over the world in your vicinity
- In-house service department helps prevent problems and resolves them quickly and efficiently

YOUR PROCESS...  
...OUR CARE



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