Pan coating systems

GC SMART

GC SMART

FILM COATING

SUGAR COATING

Glatt®
Glatt. Pioneering services have made us one of the world’s leading suppliers of tablet coating systems.

The name Glatt is synonymous with outstanding competence in coating and fluid bed technology. The unique reputation of the dynamic Glatt Group is based on more than 50 years of experience in plant and process engineering.

Today, the Glatt Group is a world market leader in systems and equipment for manufacturing solid products in the pharmaceutical industry and employs more than 1500 staff in 20 companies around the globe. Glatt coating systems are developed and manufactured at the site in Pratteln, Switzerland.

As a synergetic supplement to coating and granulation systems, we offer our customers a wide range of product handling components and services - all from one supplier.

Glatt systems for coating, drying, granulating and pelletizing are used all over the world in the pharmaceutical, chemical and foodstuffs industries. Glatt is able to offer standard solutions from its equipment range as well as highly customised systems according to individual needs. Glatt systems even handle critical products, coatings or solvents with ease.

Since its foundation, Glatt has consistently furthered the development and global use of coating and fluid bed technology. Glatt has played a key role in the creation of numerous innovations for this technology.

No matter whether you are developing a product using laboratory equipment or producing large batches in a GC Smart, with a Glatt system you benefit from more than 35 years of know-how from a leading manufacturer of pan coating systems. This also includes our comprehensive service, which has become our trademark – and which you can expect from us in the future as well.
Glatt GC Smart

Innovative coater series: perfection at a price you can afford.

The pharmaceutical, chemical and foodstuffs industries are increasingly relying on standardised products to save money. Thanks to their modular design, Glatt products can nonetheless be perfectly adapted to individual requirements.

Glatt's CG Smart coater series is furthering the trend of cost-cutting standardisation. This model certainly does not sacrifice the excellent technical characteristics the company is known for, which is why the GC Smart delivers benefits that are specific to Glatt, such as horizontal air flow through the fully perforated drum, and features a housing design which can be cleaned with ease. Last but not least, the system is extremely simple to maintain thanks to the unique cantilever mounting and the drum's direct drive.

The modular concept also offers a high degree of flexibility for customised adaptations. For instance, the coater is intended for rear wall installation, but can also be integrated just as easily on the front or installed as a free-standing unit.

With the GC Smart, Glatt has succeeded in developing a typical high-quality Glatt coater series which, thanks to the low-cost modular design, is perfectly adapted to today's requirements.

The GC Smart series really does deliver outstanding value for money.

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Principle of the Glatt coating process in the GC Smart

Outstanding GMP design for cleaning

Flexible thanks to modular design

Low-maintenance drum drive without chain or belt

GC Smart highlights
Glatt only uses fully perforated drums – a design which combines maximum spray rates and extremely short process times. The horizontal process air flow minimises turbulence in the nozzle area and therefore also contributes to a perfect coating result. The drum geometry and the Glatt Fischer baffles mix and protect the product at the same time, guaranteeing a very even and exceptionally high-quality coating.

The drum is integrated in the unique GC Smart housing, where all points are extremely easy to access; it is fully welded and the suspended drum is mounted at the rear without any front support to get in the way. GMP at its best.

For very special applications, baffles of various types and sizes can be installed in the drum and - if required - mix faster or with less stress. This means that you can adapt your system perfectly to batch sizes, product characteristics and the process (sugar coating or film coating).

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<td>Fully perforated drum</td>
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<td>Horizontal air flow</td>
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<td>Fully welded housing</td>
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<td>Cantilever mounting – no front support</td>
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As with all Glatt systems, we do all that we can to achieve a perfect quality of supply and exhaust air with the GC Smart. The temperature, cleanliness and volume of supply air should be maintained at a constant level and be reproducible.

We have also made provisions to meet more complex requirements. For this reason, different components are provided in a modular system to meet your specific needs. Examples include frost protection heating, humidifying and dehumidifying, increased heating power and HEPA filters. Virtually anything is possible.

Exhaust air processing ensures safety and protects the environment. Dedusters with automatic dedusting and HEPA filters help to ensure that product dust does not enter the environment. A silencer can reduce the noise level of the fan unit. If organic solvents are used, the current emission regulations must be observed. For these requirements, washers, adsorption systems, combustion or other methods can be used.

**Air processing**

Good air quality is highly valued, but we’re aiming for outstanding air quality.

In the basic version, the air is pre-filtered, warmed up using a heater with face and bypass system and filtered through a fine filter.

Glatt coater according to the fresh air / outlet air principle with supply and exhaust air processing.

Example of supply air processing with the GC Smart.

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<td>Modular air processing system for a multitude of options</td>
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<td>Solvent recovery possible</td>
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The heart of a GC Smart is the spraying system. Decades of experience in developing spraying systems have given us the edge in further developing atomisation technology with the revolutionary GCSD spray nozzle. We also attach a great deal of importance to a key factor which is not mentioned in textbooks but can influence the spraying result like no other: nozzle reliability and therefore reproducibility of the spray characteristics.

We made a conscious decision to only use a small number of parts in the Glatt GCSD nozzle. These are extremely robust and can be completely dismantled and reassembled in an extremely short time by hand and without the need for tools.

Of course, Glatt nozzles can be used for aqueous, organic or sugar solutions. Here we use binary substance systems and, if necessary, high-pressure systems.

The liquid conveying systems are also selected to suit the spray solution. Depending on the application, peristaltic spraying pumps or rotary piston pumps are used. In the basic version (film coating), we use a central supply line and the patented Glatt liquid manifold. Multi-head pumps with individual nozzle supply can be used as an alternative.

Sophisticated coating with the unique Glatt GCSD spray nozzles.

The nozzle arm can be extended and swivelled away leaving the drum fully accessible.

The patented ABC nozzle caps ensure that the coating material goes exactly where it should: on the product, not on the nozzle caps.
Spraying system

Individual procedure for unique products.

Different technical conditions have to be met for film coating and sugar coating, for example. The GC Smart delivers equally outstanding results for both processes. The spray devices, which can be changed quickly and easily, can be positioned in a wide adjustment range which is ideal for the tablet bed.

The design of the GC Smart enables quick and easy film coating and sugar coating.

Simplified handling – a clear advantage for the user. The cGMP-compliant design enables both perfect access to all nozzle system components and fast and thorough cleaning. Another useful detail is that the nozzle arm can not only be completely removed from the machine, but also swivelled away entirely from the coater opening. The result is outstanding accessibility and simple handling.

And if you are dealing with slightly smaller orders, batch sizes of up to just 30% of the nominal volume can be implemented with ease.

GC Smart highlights

- Nozzle arm can be removed and swivelled away
- 100% – 30% batch volume
Intelligent details make a real difference.

Front charging

Front charging with a chute can be carried out manually as well as with the corresponding lifting devices. Even extremely heavy containers can be lifted and emptied in front of the system easily and conveniently thanks to the handling equipment which we developed ourselves. We are also happy to draw up individual solutions.

Multifunctional door

The clever door-in-door concept enables access to the inside of the drum during the process. The position of the spray nozzles can be accurately adjusted by turning the spray arm. The spray arm with nozzles and the entire front door can be completely removed and swivelled away from the opening at the front of the drum. This means that nothing gets in the way of the discharge process and the nozzles are perfectly accessible for servicing.
In the past, you had to choose between simple, low-cost discharge devices with considerably restricted handling (which were large, heavy, difficult to install and often did not empty entirely) or highly complex and therefore expensive solutions.

The patented SmartScoop® is simple to install and empties your drum right down to the last tablet in an extremely short time. And on request, a slim container is also available with the additional discharge hopper for even more precise discharging.
The demands placed on state-of-the-art control systems are high – process steps need to be configured individually and critical parameters monitored automatically. Manual, semi- and fully automated processes have to be handled in equal measure. All data and sequences of relevance to processes must be documented and managed reliably.

Often, the control system has to be integrated into an existing network, sometimes with third-party systems. In order to satisfy individual customer requirements, we develop the control systems for our systems in-house – after all, no one knows a Glatt system better than our professionals!

Highly-qualified Glatt specialists use state-of-the-art technology to develop, plan and build all the hardware and software for the control systems, guaranteeing you maximum flexibility and reliability. Examples of our competence in this area include integration into existing control systems, process visualisation and / or explosion-proof controls.

**Detailed documentation for validation, qualification and calibration is available on request.**
In general, many different products are manufactured in a coating system. Each time the product is changed, a considerable amount of cleaning is required, which in the case of an all-manual version often has implications for personal safety. This is why cleaning has become a major cost and quality factor.

Glatt WIP systems are ones you can be proud of. Everything is clean!

In a nutshell, they are the best way of ensuring an efficient Glatt cleaning system.

Glatt cleaning systems ensure fast and intensive cleaning of the entire coating system and deliver outstanding results. The cleaning process can also run automatically and therefore be defined and reproduced.

The Glatt cleaning rack is tailored to the requirements of the coater’s cleaning system. Of course, the rack satisfies all GMP requirements in terms of materials, surface quality and so on. This means, for example, that all welding seams feature orbital welding and the surface roughness of the pipes is less than 0.8 μm.

The drum and internal housing of the coater provide the best conditions for easy and efficient cleaning. All seams are fully welded, there are no gaps or silicone joints, corners and edges are minimised and the drum is suspended at the rear (cantilever principle) without any front support to get in the way. In a nutshell, they are the best way of ensuring an efficient Glatt cleaning system.

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