

Process technology for pharmaceutical processes

From Raw Material to Solid dosage forms



Assured on the Safe Side.



The production of high-quality pharmaceuticals is your daily challenge. You are responsible for quality, and you expect the same from your partners supplying the necessary process technology to you. Units and plants that meet your requirements perfectly are the key to GMP and safe validation.

Your high standards are an obligation to us.

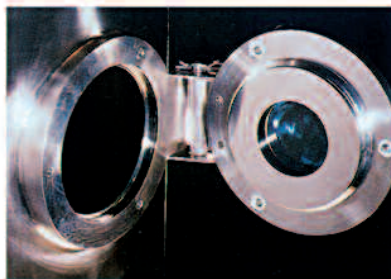
The process technology you employ must enable you to meet or surpass the standards set.

The Allgaier concept is based on a close interlock of the individual steps of process technology. As a result, we can give continuous support from the project-stage of a solid plant up to operation, resulting in high product safety. This concept allows you to realise a totally closed plant system. One production unit could, for instance, comprise the following process-technological steps:

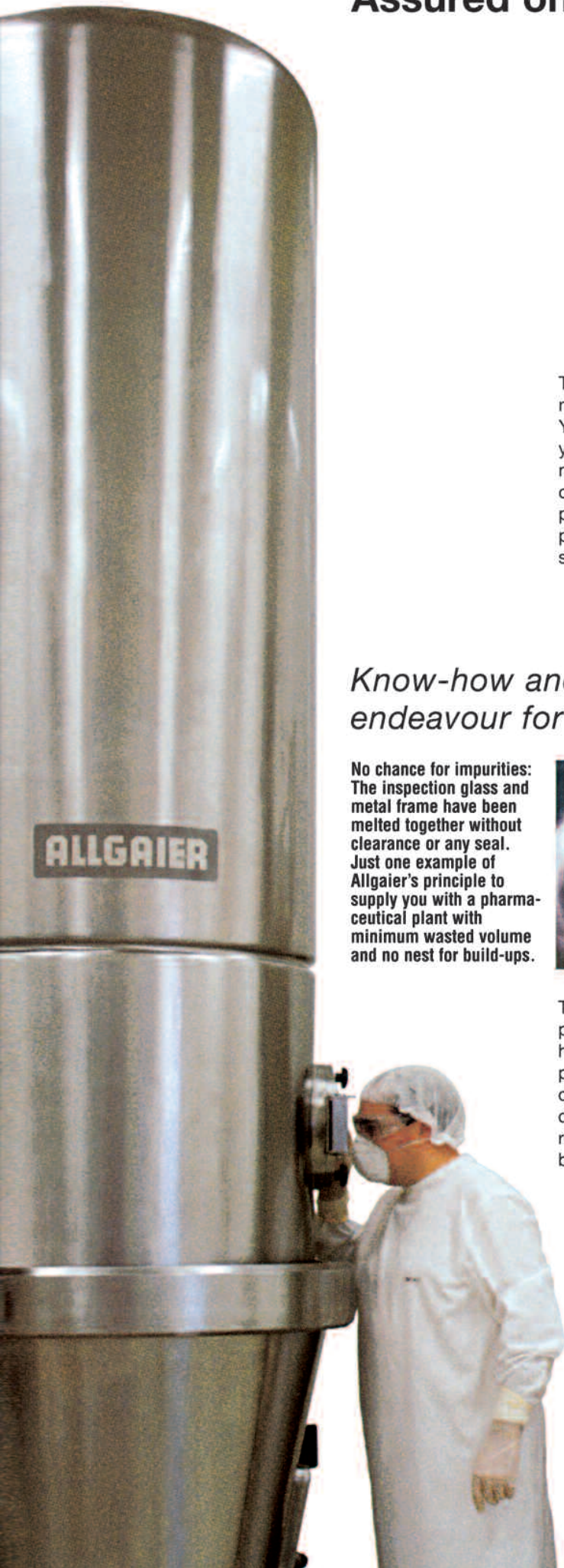
- Dust-free handling of the powdery raw material
- Mixing/wet granulation
- Egalisation
- Careful drying in a fluid bed and, if necessary, a secondary granulating stage or coating
- Discharging in a closed system.

Know-how and a common endeavour for perfection.

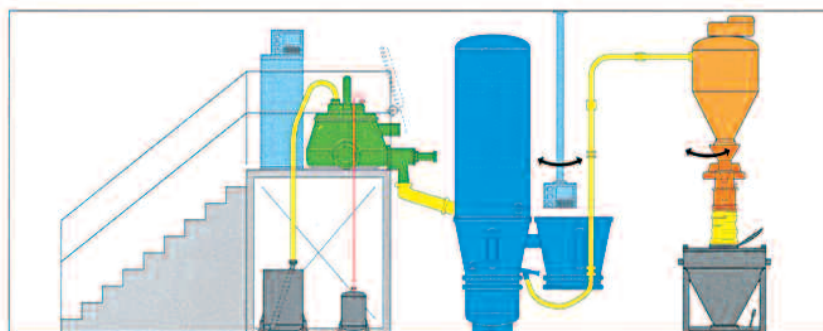
No chance for impurities: The inspection glass and metal frame have been melted together without clearance or any seal. Just one example of Allgaier's principle to supply you with a pharmaceutical plant with minimum wasted volume and no nest for build-ups.



The underlying assets of Allgaier's process technology are the careful handling of your raw materials, the protection of both the active ingredients and the staff due to a strict closed system and a quality that is reliably reproducible from batch to batch or in a continuous process.



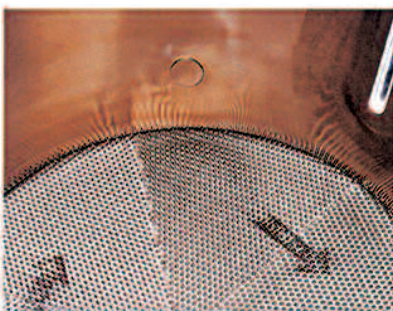
Perfection down to Every Detail.



The fluid bed batch plant is the core of many solida processes. The modular design of an Allgaier plant offers substantial advantages.

The heart of solida production.

The product discharging from the fluid bed batch plant is controllable and is designed as a closed system. A pneumatic conveying system transports it directly, or by a gravity system into a container or drum. The careful movement of the product through a tangentially arranged air distributor plate is significant for Allgaier plants. A smooth heat transfer, without air pockets permit lower inlet temperatures whilst maintaining the temperature of the product. This is extremely important for temperaturesensitive products. Energy requirements are reduced which also lowers the cost of manufacture.



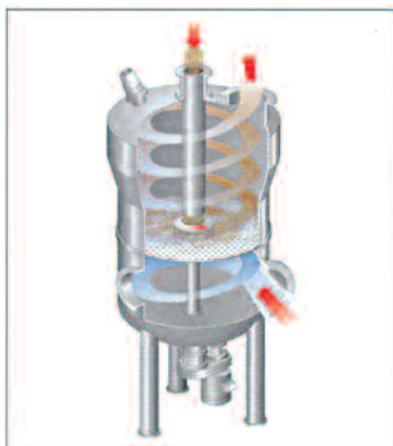
The newly developed air distributor plate facilitates a directed flow that guarantees a tangential and defined product motion. Thus even small particles are kept within the fluidized bed instead of being carried out to the filter as happens in other systems. The flow bases are easily replaceable and therefore can be rapidly adapted to new conditions such as a change of product.



The stainless steel filter cartridges in the filter housing guarantee the flow level of dust particles in the exhaust gas.

Dryers for the manufacture of active ingredients.

In addition to the solid manufacturing plants, Allgaier offer safe and continuous production units for active ingredients, e.g. for the transformation of liquids into powders.



Dispersion dryer for producing e.g. Silymarin



Fluid bed dryer for the production of raw material such as milk powder, lactose and citric acid.

Our services include testing of processes for customers and beyond that, product development and process optimisation.

Optimal Screening Systems for Pharmaceuticals.

The screening of pharmaceutical additives and active ingredients places special demands on the plant operator and manufacturer. Allgaier has developed screening machines which not only correctly fractionize to precise grain sizes, even for highly demanding screening tasks, but also are safe regarding operation, cleaning, flexibility, and maintenance.



For highly demanding screening tasks of finest materials: The Allgaier tumbler screening machine TSM.

The tumbler screening machine tackles the fractioning of goods within tight grain limits easily under difficult operating conditions as it is adjusted exactly to your requirements. The lowfrequency screening motion protects your bulk material and reduces the wear to a minimum.



For protection (scalping) screening and simple fractioning: the Allgaier vibratory screening machine Vibrall.

This machine gives you good control over protection (scalping) and control screening as well as simple fractionings. Easy to clean and problem-free maintenance.



No screening problems for ultra-fine meshes: ultrasonics.

Our high-tech ultrasonic system works successfully for fine meshes or goods that are difficult to screen. Retro-fittable into almost all of Allgaier's screening systems, it can be supplied for special pharmaceutical specifications and, in addition, be used for screening systems cleanable by CIP.



From the Component to the Complete System.



Our knowledge and experience support you in solving tasks involving mechanical process technology. Whether the bulk material is dry, wet, coarse or fine, whether you want to

sieve, size, dry, granulate, instantise or coat it, we design each single apparatus exactly to your requirements. We develop, plan and build entire

plants and complete systems. Whether plants are for continuous or batch production, we realise the best solution for your needs, both economically and technologically.



In Allgaier plants, the production and technical areas are separated from each other to guarantee total cleanness and safety of the pharmaceutical product. All drive units, utility feed-ins and peripheral units are installed in the technical area, safely separated from the production area. Thus contamination through the technical units is ruled out. This sharp division not only increases product safety but also reduces work and costs of operation, cleaning and maintenance.

Allgaier Process Technology GmbH

Ulmer Straße 75
73066 Uhingen
Germany
Phone: +49 7161 301-175
Fax: +49 7161 34268
process-technology@allgaier.de
www.allgaier.de

Adolf-Safft-Straße 10
73037 Göppingen
Germany
Phone: +49 7161 301-100
Fax: +49 7161 301-5035
trockner@allgaier.de
www.allgaier.de

Manufacturing companies:

Mogensen GmbH & Co. KG

Kronskamp 126
22880 Wedel
Germany
Phone: +49 4103 8042-0
Fax: +49 4103 8042-40
info@mogensen.de
www.mogensen.de

Fredrik Mogensen AB

Sveavägen 26
544 21 Hjo
Sweden
Phone: +46 503 3234-0
Fax: +46 503 13878
info@mogensen.se
www.mogensen.se

Allgaier Mogensen S.A.U.

C/ Téllez, 24 - Oficina 4A
28007 Madrid
Spain
Phone: +34 91 5776277
Fax: +34 91 5757495
info@almo.es
www.almo.es