DIOSNA. Production Scale Processing Plants

CCS Granulating Line
Mixing, Granulating and Drying in Combination.
Granulating with the experts.

DIOSNA machines are used and highly appreciated by almost all leading pharmaceutical companies worldwide. Our large installed customer base is the result of unrivalled efficiency and reliability of the DIOSNA design. DIOSNA systems stand for efficient pharmaceutical production of constant high quality.

More than 125 years of experience have led to a wealth of process expertise, DIOSNA understands and provides support for your process.

DIOSNA offers the principal elements of modern solids production plant - the mixer-granulator and fluid bed dryer - from one source. In our CCS concept these two pieces of equipment are coupled together. This allows optimal arrangement of the production area, and the most effective interfacing. Ancillary equipment can be integrated as required.
Worldwide Know-how

Innovative systems which work.

- **Efficiency**: reproducible processes and automated programmes with low set-up times
- **Safety**: 12 bar pressure-shock proof design, using proven safety concepts
- **Cleanability**: comprehensive cleaning concepts from WIP to CIP
- **Through-the-wall-concept**: strict separation of production and technical area
- **Containment**: special solutions for highly active substances
- **Future-proof**: Top-Spray-/ Bottom-Spray-/ Tangential-Spray-processes in the fluid bed dryer
- **Qualification**: pharma standards according to GAMP 5
- **Quality control**: Integration of PAT
- **Reliability**: Don’t worry, it’s a DIOSNA!

Machines to meet your quality standards.

Wet granulation with subsequent drying is a reliable and efficient method for the production of tablet granules. It is suitable for most products.

However formulation requirements of the final product can sometimes make spray granulation in the fluid bed necessary. In this case the plant is prepared or modified correspondingly.

We will help to define the most suitable granulating process and ideal process parameters for your special application. From the clinical sample to the production batch.
A complete service from one source

Single sourcing pays.

Mixers and dryers are matched. The installation can be optimised and maximum efficiency of the production process is guaranteed. Either vertical or horizontal product flow can be provided. Both pieces of equipment are operated from a common operator interface. Nevertheless, each machine remains independent and can be run without the other at any time. Not only does the combination of the plant components allow for a completely closed product transfer and the utilization of common cleaning devices but also provides simple and effective controls for the operating and maintenance personnel.

Sometimes less is more. DIOSNA does not have the ambition to build all peripheral components by ourselves. Instead we work with a network of certified partners who share our philosophy of high quality and functionality and who maintain a leading role in their field of activity. This strategy provides our customers with integrated systems without the risk of weak links in the process chain.

Effective process controls.

The control system is an important element of the plant. DIOSNA develops the hardware and software on the basis of industry-standard systems - for quick support around the world.

Moreover, the intuitive operator guidance and recipe management interface provides operator-friendly operation.

The software used complies to 21 CFR Part 11 and offers comprehensive acquisition and documentation of batch data.
DIOSNA P
Mixer-Granulator

DIOSNA is a pioneer in mixing technology. Continuous development has resulted in the most successful mixer-granulator worldwide. The interaction of bowl shape, chopper and mixing tool geometry makes the machine suitable for a very wide range of applications and guarantees the greatest machine flexibility.

Our design can fulfil any requirements: powder and binder feeding systems and integrated wet mills complete the programme.

DIOSNA CAP
Fluid Bed Processor

The CAP Fluid Bed Processor dries the granules effectively - directly after granulation. The closed system product transfer is achieved pneumatically using vacuum assistance from the dryer.

While drying the required residual moisture level of the granule is set. A special air distributor plate provides helical air movement within the chamber allowing better energy utilisation - resulting in faster drying and very gentle product handling.

The fluid bed processor can be configured as required to coat or granulate particles with Top-, Bottom- or Tangential-Spray.
* product and process dependent
*2 basic design incl. mills and vacuum discharge
*3 saturated steam
*4 cooling water 6/12°C

Data refer to the basic design. Further plant sizes on request. We reserve the right to change technical data and design.