

Case Study



Excellent granules for perfect pellets -

DIOSNA mixer granulator and fluid bed processor for CMO use

The rising demand on OSD products within the pharmaceutical sector presents fresh opportunities for production expansion to OSD manufacturers. In response, a CMO has inaugurated a state-of-the-art facility, equipped with an advanced granulation line that incorporates high-shear mixer (HSM) and fluid-bed dryer (FBD) technologies from DIOSNA.

The granulation line is equipped with DIOSNA's high-shear mixer P 1250 and the fluid-bed dryer CAP 600. This sophisticated system is complemented by a spheronizer from Gabler, another member of cooperion, and an extruder.

Material flow

The mixer is loaded with powders via vacuum transfer. Excipients as well as the APIs are directly transferred into the mixer via a handheld lance. Binders are pumped into the mixer via a height adjustable spray nozzle. After wet granulation in the HSM, the resulting granules are conveyed to the extruder, where they are processed into uniform spaghetti-like extrudates. These extrudates are then transferred to the spheronizer for shaping, and finally dried in the CAP.

Main features

- Full integration into customer's monitoring system (SCADA)
- High capacity vacuum loading system, including two filters on the lid and an extra powerful vacuum pump.
- Two built in binder pumps, for high and low viscosity binders.
- Industrial PC with two touch screens, one on the ground floor and another at platform level.
- Through the wall installation, without a technical area behind the machine
- Mixer and dryer delivered in parts, reassembled inside the room
- Only one WIP Station for both DIOSNA machines (P1250 + CAP 600) and granulation line (CCS 1250)

Fact Box

Customer:	CMO
Country:	Germany
Year:	2024
Delivered system and services:	high-shear mixergranulator and fluid bed processor, On-site personnel services, Assembly Supervision, Start-up, calibration & training, SAT - Site Acceptance
Size:	P 1250+CAP 600
Client's success factors:	Excellent pellets, automatic operation, complete granulation line



Fluid bed processor *Cap600* and High-shear mixer granulator *P1250*