

Boost your drying capacity

Upgrading your present facility could be the right option



More for less

SIMULATE



If your company needs a new drying plant, of course GEA Niro can supply it. But if all you need is a little more drying capacity—or even a lot—why not consider a plant upgrade instead?

GEA Niro has long experience helping chemical companies upgrade their drying operations in order to meet increased market demand or adapt to new requirements. Often a component change is all that's needed to boost drying capacity significantly. At other times it's necessary to modify the drying process itself. Either way, it's often faster and less expensive than building a new facility from scratch.

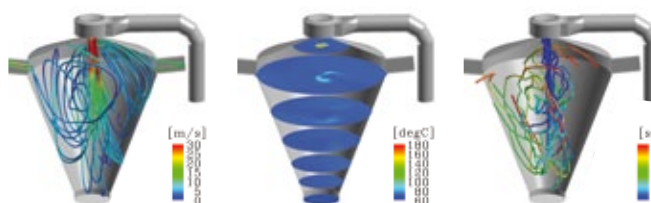
Increasing the capacity of an existing plant makes particularly good sense at times when capital is tight or when new construction isn't an option. It's also an effective way for companies to get the same output from fewer facilities.

Moreover, GEA Niro can help you expand production without a corresponding increase in energy costs. Our heat recovery systems can help contain the increase in energy use that boosting plant capacity normally entails.

Boosting the capacity of a drying plant is a step-by-step process that begins with a site visit in order to identify and analyse your basic operating parameters. Production at both the present and targeted rates is simulated with the help of GEA Niro's specially developed Simcal software programs. By comparing the simulations we're able to identify where bottlenecks are likely to occur at the higher rate and to redesign the process accordingly. If like many chemical manufacturers your facility was originally designed by GEA Niro, the process is easier since we'll already be familiar with your drying process and product.

Specialized tools

Computerized fluid dynamic (CFD) modelling is highly useful in simulating the drying process. GEA Niro's DRYNETICS™ is a proprietary CFD tool that enables us to pinpoint potential process bottlenecks with unprecedented accuracy and to optimize the process flow and components.

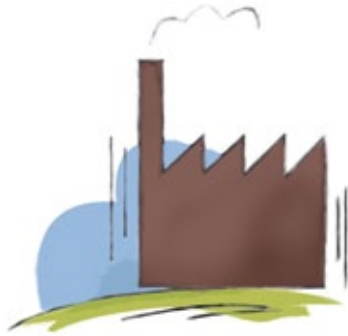


Gas streamlines

Gas temperatures

Particle paths

EVALUATE



The next step is to evaluate whether existing components can be boosted to the specified level or whether new equipment will be needed. While boosting a drying plant's capacity often entails component adjustment or replacement, it's important to remember that even minor changes may have unintended side effects on overall system performance. For example, changing process parameters at one point may create condensation or corrosion somewhere else. GEA Niro has successfully installed and upgraded thousands of drying plants and has the expertise needed to ensure precisely the results you want. Resources include vast experience drying a wide range of products and feeds with different characteristics and drying properties, state-of-the-art test stations and pilot plants, and specialized tools like GEA Niro's DRYNETICS™ CFD tool.

ESCALATE



Once we know what process or component changes are required, the upgrade is described in detail. Specifications are drawn up for the entire project—including any component rebuilds or exchanges that may be needed—and costs and implementation time are carefully calculated. We can also help you evaluate the tradeoffs of different upgrade options, since drying capacity can usually be boosted to different levels, often in stages. Upon approval, GEA Niro's specialists will work with you every step of the way, from analysing your existing facility to installation and performance verification of your newly boosted plant.

Experienced project managers

Boosting your drying capacity requires in-depth process and plant engineering experience, and no one has more of that than GEA Niro, the world's leading experts in industrial drying. Our tried and tested method ensures a smooth and successful upgrade to the specified production capacity.

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- Site inspection visit
 - Processing of collected data
 - Problem analysis
 - Process simulations
 - Product experience from tests
 - CFD modelling
 - Specification of mechanical engineering
 - Manufacturing
 - Installation
 - Commissioning
 - Performance verification
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Experience

GEA Niro has contracted and installed more than 10,000 plants worldwide

GEA Niro is a world leader in industrial drying, with spray drying, spray cooling/congealing, flash drying, freeze drying, granulation and fluid bed processing as core technologies. Having installed more than 10,000 plants around the globe, GEA Niro is known for delivering solutions that meet customers' exact requirements. The GEA Niro companies are part of GEA Process Engineering.



GEA Process Engineering

GEA Niro

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