Powder engineering

From formulation to solution

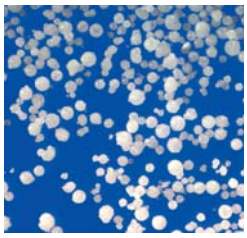
GEA Process Engineering
GEA Niro

bringing powder to life™

Engineering the product

Granules

Agglomerates



Powders

GEA Niro tailors the drying process for the particulate size, structure, moisture content and other properties needed for your application. We call it powder engineering.

At first glance, drying seems like a simple, if necessary step in the production of many industrial chemicals. On closer inspection, however, it can be seen as one of the keys to unlocking the door to better, safer, cheaper, and even "greener" products.

No one knows more about the role of industrial drying in engineering high-performance powders than GEA Niro. With data gleaned from 75 years of experience, plus a reference list of some 10,000 plants, it won't take us long to engineer the properties you want into your product, or the processes needed to produce them.

A drier powder? An easier flowing granulate? An agglomerate with fewer fines? Or maybe just a more competitive process. There's no quicker way to get from formulation to solution than by consulting the powder engineers at GEA Niro.

And by solution, we don't just mean a recommended flow or suggestion to use a spray, flash or fluid-bed dryer—though we're the world's leading supplier of such equipment. We're talking powder. GEA Niro operates over 75 pilot plants worldwide for application testing, and our test engineers and process technologists represent the largest pool of specialized talent ever assembled.

GEA Niro's test facilities and analytical laboratories allow you to establish the feasibility of using GEA Niro equipment, optimise process conditions and provide samples for market analysis. We offer the industry's most advanced analytical capabilities, including GEA Niro's proprietary design method DRYNETICS™, which – when required – encompasses drying kinetics measurements and computational fluid dynamics (CFD) simulation. GEA Niro's analytical capabilities give you a deeper understanding of your product drying and enables you to move smoothly from development to profitable production.

Structuring the project

Now picture yourself in China or India. You've been working virtually with a team of GEA Niro engineers in Europe and Brazil, and have a computer simulation of the process flow. Tests at a pilot plant in Japan look convincing. It's time to scale up.

This is the point at which organizational skill beats engineering talent. No matter how good the science, what you need now is structure.

GEA Niro has time-tested procedures for taking projects smoothly all the way to completion. Every step is spelled out, every valve documented, every process qualified. And it's all coordinated for you by an organization that implements hundreds of drying projects a year—a growing number of them in developing parts of the world.

GEA Niro is also experienced at structuring financial packages. Our in-house project financing team can help you set up a complex financing scheme or a simple leasing contract. And our legal department can assist with drawing up confidentiality agreements and ensuring that our equipment will not infringe third party rights.

Finally, GEA Niro can help you address two of the industry's most pressing challenges: safety and environmental compliance. Our expertise in explosion-control design is unequaled—an invaluable aid whether you're looking at ATEX, other European safety directives or local regulations. What's more, we're a leading supplier of emission control systems for chemical plants.

GEA Niro is equally at home engineering powders of a few microns or plants covering thousands of square meters.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Extending the relationship

The average chemical drying plant is three months on the drawing board, half a year under construction and 30 years in operation, often on a nearly continuous basis. A reminder: What you really want isn't just a drier capable of producing x tons of powder an hour, but a partner who can keep your plant running like new.

See yourself (or your successors) a few years from now, when customer requirements or market conditions have changed. Or look farther down the road, to a tougher regulatory environment. When it's time for an upgrade GEA Niro will be right by your side, helping you optimize product quality, energy efficiency, operational safety and environmental protection. We offer the most in-depth support of any supplier in the drying industry—programs designed to keep our solutions, and your drying process, as timeless as possible. Put it this way: we want you to stay in the relationship because you feel attracted, not locked in.

Above all, we believe service is a local business. With GEA Niro, you never have to go far for assistance or overcome time or language barriers. We're there, wherever chemicals are processed. And not just with representatives, but with our own staff, stocks of spare parts, service engineers and training specialists.

For more information about GEA Niro and our capabilities, services and equipment for chemical makers, please see www.niro.com.

GEA Niro will keep your drying plant up and running and up to date.

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

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