

SPRAYEYE™ nozzle monitoring system

A vision of quality and control



Keep a sharp eye on spray dryer performance

The most common, costly and time-consuming problems during the spray drying process are found at the nozzle. Leaks, blocks, product build-ups and uneven spray dispersal often lead to expensive operational downtime. Even worse is the risk of destructive fires and explosions in unattended systems.

SPRAYEYE™ – operational excellence, safety and control

Now, for the first time ever, you can continuously monitor and optimise the performance of your spray dryers with unprecedented accuracy and control, thanks to the latest innovation from GEA Niro - SPRAYEYE™.

SPRAYEYE™ uses designated cameras to give you a highly detailed, unimpeded real-time view of the spray nozzle inside the critical parts of the drying chamber.

Operators can now check for a wide range of faults before they become a problem and take corrective action only when it's needed. This ensures operational consistency, eliminates unnecessary shut-downs and greatly reduces the risk of dangerous temperature rises – *which means no build-ups, no burning and maximum uptime.*

A crucial part of the optimal process

As a need-to-have investment in your spray drying processes, the SPRAYEYE™ pays for itself in a short amount of time and ensures the best results in the safest conditions.

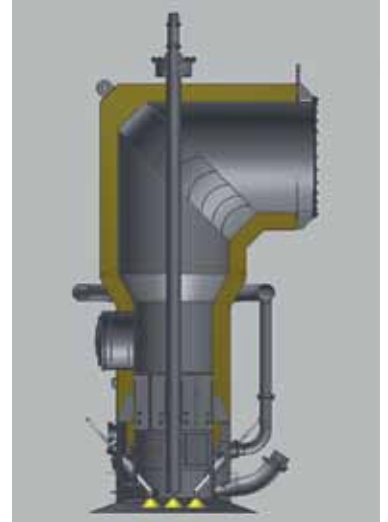
SPRAYEYE™ is intuitive for operators to use and, due to our unique engineering design, is virtually maintenance free. It only requires simple part replacement every three years. The cameras are easy to install in new spray dryers and take only a few days to install onto an existing GEA Niro nozzle dryer*. This can be done during a routine maintenance shut-down.

Covers all angles

SPRAYEYE™ uses two types of camera technologies to cover all angles – visual monitoring for quality control and infrared scanning for absolute safety.

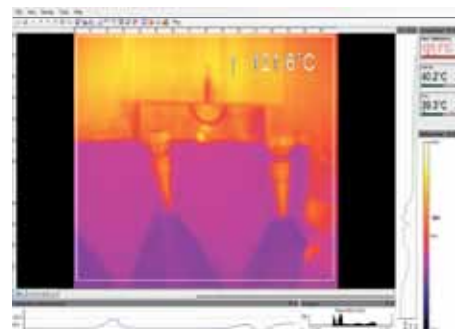
Both have their distinct advantages but are best used in combination for optimum effectiveness, reliability and results.

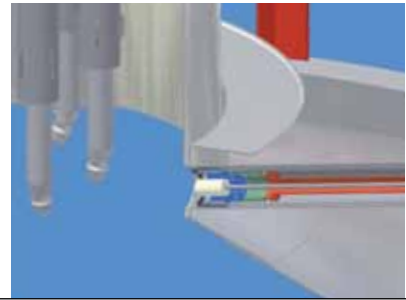
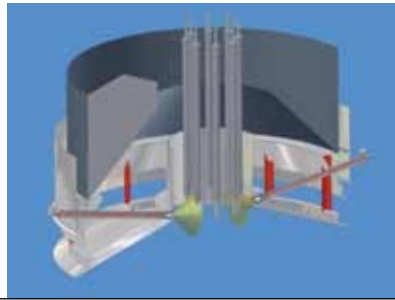
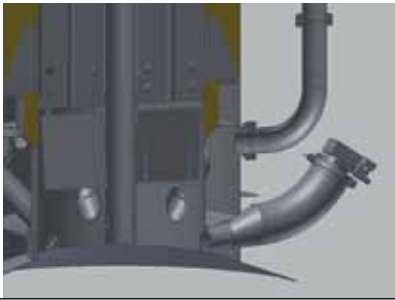
* except for GEA Niro dryers with DAR air dispersers



SPRAYEYE™ gives you an unimpeded real-time view of the nozzles at work.

Infrared scanning technology eliminates the need for an operator to watch the monitor to detect abnormalities.





Visual monitoring for optimal quality

Keeping quality in mind, the SPRAYEYE™ visual cameras deliver a host of benefits for manually monitoring your spray drying chamber:

- Real-time, continuous pictures of the spray zone
- Quick identification of product build-up and inconsistent spray patterns
- Monitoring of start-up and shut-down problems to reduce chamber maintenance
- Instant check of high-pressure shutoff valves for leaks
- Decreased risk of dangerous temperature fluctuations
- PPSU polymer camera housing for image clarity and safety
- Greatly improved overall quality and efficiency

Infrared scanning for uncompromised safety

Most fires are started through unnoticed temperature changes in the drying chamber. The SPRAYEYE™ patent pending infrared scanning technology delivers:

- Faster operational processes with less downtime
- No extra housing costs for the visual cameras
- Full reliability and zero maintenance
- Automated monitoring to free up operators' time
- Pre-warning system to highlight problems before they can be visually observed
- Adequate time for operators to solve a problem before it escalates
- Accurate, reliable surveillance for total safety and control



Food grade protection

With safety, quality and reliability as our main concerns, we've fitted all our camera casings with PPSU food grade protection windows instead of standard glass.

The PPSU polymer windows allow for particularly vivid and clear images, thanks to a sunglasses-like quality that dampens reflections from stainless steel components. Furthermore, the material is not prone to chipping, which allows for greater safety when drying food products.





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 Inc. • 9165 Rumsey Road • Columbia, MD 21045
Tel: 410-997-8700 • Fax: 410-997-5021 • Email: gea.pe.na@geagroup.com
GEA Process Engineering Inc. • 1600 O'Keefe Road • Hudson, WI 54016
Tel: 715-386-9371 • Fax: 715-386-9376 • Email: gea.pe.na@geagroup.com
Web: www.niroinc.com