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 the Process Engineering Division of the GEA Group.

Process Engineering

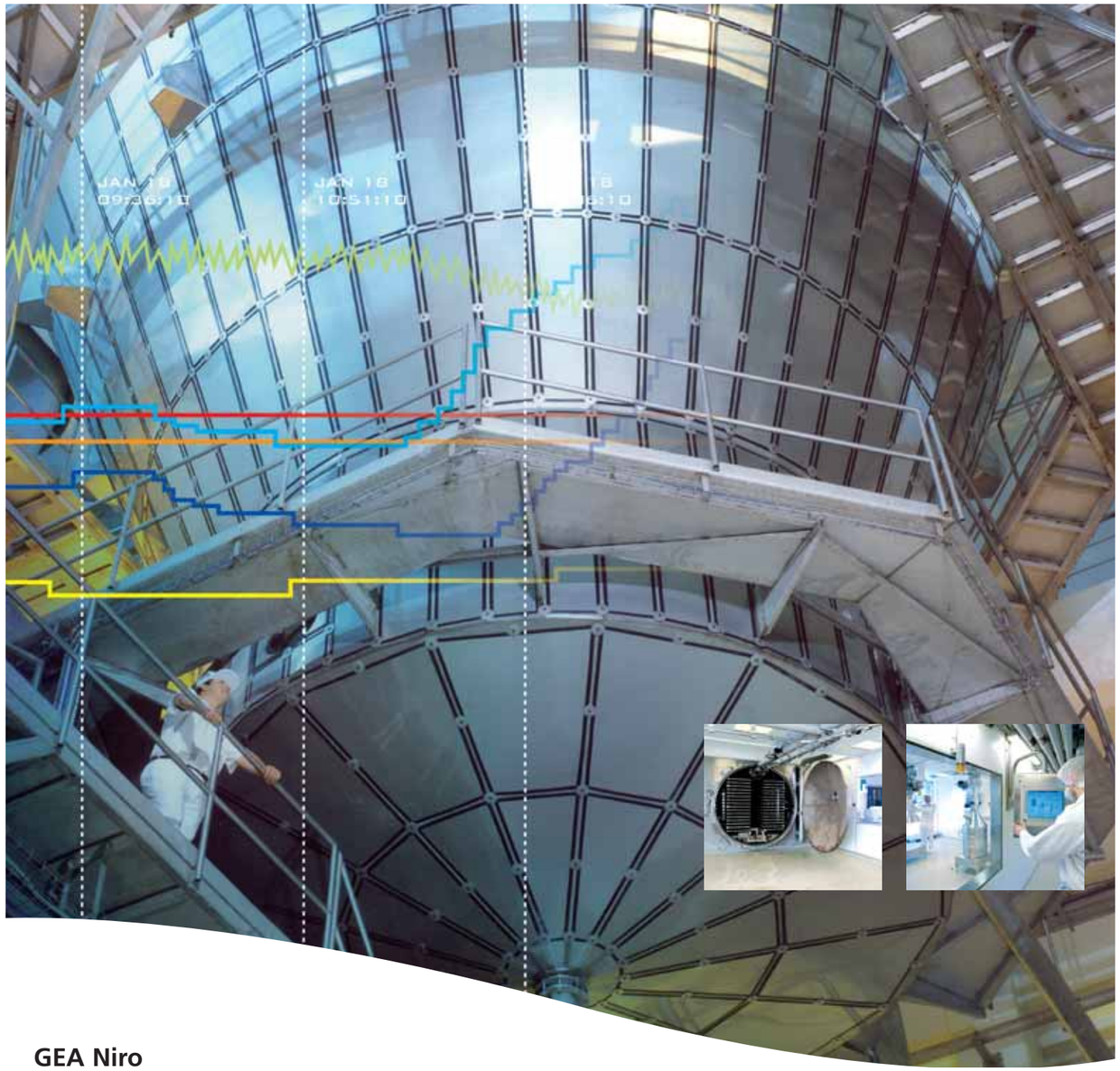
GEA Niro

Gladsaxevej 305, PO Box 45, DK-2860 Soeborg, Denmark
Tel +45 39 54 54 54 Fax +45 39 54 58 00
E-mail: niro@niro.dk Website: www.niro.com

BNA 877/GB - 0209 CBC

Process control and automation

GEA Niro Process Control



GEA Niro

Process control and automation

For over 75 years, GEA Niro has supplied process plants and equipment to the dairy, food, chemical and pharmaceutical industries. We specialize in solutions for processing that involve evaporation, feed pre-treatment, powder handling and drying to produce powders, liquid concentrates, and agglomerated and granular solids. Control and automation is always a vital part of this type of processing and with decades of experience in the field, GEA Niro has developed well proven control and automation systems that provide safe, flexible operations with full transparency.

GEA Niro offers a wide selection of automation services ranging from instrumentation to complete automation solutions. Our focus on crucial factors such as production efficiency, flexibility and traceability. Attention paid to maintenance and plant performance during all phases of a project—from initial design development to installation and future expansion—ensures reliable, smooth-running operations always compliant with industry norms and standards.

In a constantly changing production environment, GEA Niro carefully selects the newest technologies that support the evolving needs of our customers—technologies that enable seamless integration of our solutions into existing platforms and systems and also afford maximum product flexibility. Along with our training service, customized support, remote and local maintenance, our aim is to provide automation solutions that remain sustainable long after project implementation.

GEA Niro Process Control Department provides solutions driven by our customers' needs. Our knowledgeable and experienced project teams deliver automation solutions on time, within budget and in any location. By selecting GEA Niro as your partner you combine the best of process engineering with the latest automation technology.

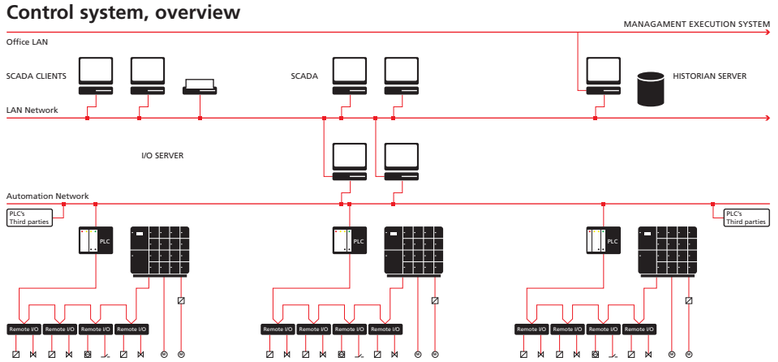
Our scope of supply includes:

- PLC and SCADA programming and development
- Manufacturing execution systems (MES)
- Instrumentation and industrial networking
- Data logging and reporting
- Electrical design
- Hardware and instruments
- Risk assessment and failure-mode effect analysis (FMEA)

Our projects comply with internationally recognized norms and standards such as:

- Machinery Directive
- Low Voltage Directive (EN60204-1)
- Atex Directive
- EMC Directive
- S88 Batch Control and S95
- FDA 21 CFR part 11
- Qualified acc. to GAMP (V model)
- Functional Safety acc. to EN 61508

Control system, overview



NiroWare™

A control system must give operators full transparency throughout the entire plant to ensure homogeneous and reliable production at all times. To achieve this, NiroWare™ historian logging, tracking, tracing and reporting software is an integrated part of our control system. Product tracing and tracking is more important today than ever, and the configurable system enables successful tracking of product batches.

While the SCADA human-machine interface allows operators to view the state of any part of the plant equipment, alarms automatically detect abnormal conditions in plant equipment allowing operators to intervene and keep things running smoothly.

As the source for all your process and automation needs, the NiroWare™ Control System offers you security and confidence thanks to its well-tested tailor-made function blocks and basis in standard software. NiroWare™ Control Systems ensure a high reliability and minimum of engineering in order to suit the Niro processes.