



LEADING THE WAY IN THE
Process & Packaging
Engineering Services for
the Food & Beverage
Market

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InLine
Engineers

A GRAY COMPANY



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InLine Engineers

A GRAY COMPANY

Founded in 1996, InLine Engineers provides engineering and project management services for the development and execution of capital projects relating to processing, packaging, and facility improvements in the food and beverage industry. InLine Engineers is headquartered in Louisville, Kentucky with additional offices in Atlanta and Cincinnati. We perform work throughout North America.

Our world-class, high-volume production expertise is in baking, frozen foods, meat production, cheese, dairy, savory snacks, and beverages, as well as distilled spirits. InLine Engineers employs subject matter experts in various areas, including bulk handling, processing, packaging, and sanitary design, including FDA food safety compliance. We also provide turnkey equipment solutions.

The team of engineering and project management professionals, many with Professional Engineer (PE) and/or Project Management Professional (PMP) certification, is committed to helping our food and beverage manufacturing customers meet their production engineering and food technology objectives.

AT THE CORE

We put safety and quality of life first.

01.

We are customer and relationship driven.

02.

We treat others the way we want to be treated.

03.



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Just the facts

NEOTECH
AQUA SOLUTIONS, INC.

UNIT OPERATIONS

- Bulk ingredient handling
- Handling combustible dust
- Mixing, blending
- Thermal processing
- Pasteurization
- Grinding, forming, linking
- Trimming, skinning, slicing
- Various cooking methods
- Retorts
- Baking, frying
- Cooling, freezing
- Aseptic filling
- Precision dosing
- Bottling
- Form, fill, seal
- Pouch filling, bag-in-box
- Canning
- Accumulation
- Cartoning
- Case packing
- Check weighing, metal detection
- Palletizing
- Hygienic zoning
- Liquid storage and distribution
- Custom sanitary skids, design and build

INLINE SERVICES

CONCEPT/FEASIBILITY STUDIES

PRELIMINARY ENGINEERING

- Scope of work summary
- Process flow diagrams
- Layouts
- Equipment list
- Process/packaging utility requirements
- Scale of magnitude capital estimate
- Level 1 schedule – major milestones

DETAILED ENGINEERING

- Mass flow balance
- Define recipe/ingredient needs
- Equipment specifications
- Equipment vendor selection assistance
- Process piping design
- 30-60-90% design reviews
- Value engineering
- Detailed P&IDs and BOMs
- Final line layouts and drawing packages
- 3D modeling
- Installation bid packages

- Installation contractor qualification/selection
- Procurement assistance
- FAT-develop criteria and participate
- Finalize processing and packaging budget
- Detailed equipment installation schedule
- Overall line integration

LINE INSTALLATION OVERSIGHT

- Ensure compliance to specifications
- Handle contractor RFIs

START UP AND COMMISSIONING

- ICO/ACO check outs
- SAT-develop criteria and participate
- Validate line performance
- Manage training plan

PROJECT CLOSE OUT

- Edit as-built drawings
- Develop SOPs
- Transfer equipment and programming documentation

OTHER SERVICES

- Process evaluation and improvement
- Third party peer review
- Multi-year capital planning
- Food safety certification assistance
- Simulations
- 3D scanning

Who we are

Our sectors

Baked snacks	Confectionary
Bars	Distilled spirits
Beverages	Dressings/sauces
Bread and bagels	Frozen foods
Canned goods	Jams/jellies
Candy/confectionary	Meat alternatives
CBD oil extraction	Meat processing
Cereal	Pet food
Cheese production	Syrups and flavorings
Coffee	Vegetable processing

Our customers

AAK	Keurig Dr Pepper
Baldwin-Richardson Foods	Kroger
Bay Valley Foods	Layn
Beam Suntory	Lucy's
Bel Cheese	Lyons
Bermudez	Maker's Mark
Brown-Forman	Mars Wrigley
Caruso	Marzetti
Cerealto Siro	Monin
Chelten House	More Than A Bakery
Clemens Food Group	Morgan Foods
Coca-Cola	Nonni's
CraftMark	Ralcorp
Dawn Foods	Richmond Baking
Draconis Extraction Technologies	Rockline Industries
Einstein	Schwan's Foods
Ellison Bakery	Scooter's Coffee
Ferrara	Shearer's
Folgers	Smucker's
Grande Cheese	Snyder's-Lance
Iatric	Taja
JBS	TreeHouse Foods
Jack Daniel's	Welch's
Johnsonville	Westminster
JTM	Wild Fork Foods
Just Born	Wild Turkey
Keebler	Williams Cheese
Kellogg's	Wornick Foods

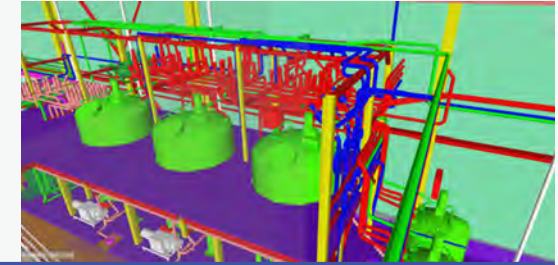


Project Examples

Project No. 1



Project No. 2



Project: Provided engineering, design, and construction management resources, as well as execution of deliverables for flex-line processing of primal protein cuts into retail SKUs.

Notable project features include:

- Multiple processes, including skinning, trimming, injection, slicing, and grinding
- Thermal form primary packaging in tray and vacuum pack formats
- Case forming, packing, and palletizing operations
- Size: \$6.25MM
- Seven-month project duration

Services:

- Preliminary engineering
- Conceptual engineering
- Final engineering, installation oversight
- Contractor Bid & Award
- Construction
- Startup Support

Project: Engineering was provided to support design, procurement, installation, and startup of two liquid bottling lines to be installed within a greenfield syrups and flavorings manufacturing facility.

Notable project features include:

- Multiple processes, including mixing, blending, thermal processing, and CIP
- Six bottle sizes: 160 BPM
- Filling, case forming, packing, and palletizing operations
- Size: \$17MM (one line)
- 16-month project duration

Services:

- Preliminary engineering
- Detailed engineering
- Conceptual engineering
- Final engineering
- Contractor bid and award
- Installation construction support
- Startup and commissioning support

Project Examples

Project No. 3



Project No. 4



Project: Converted warehouse space to Innovation Pilot Plant for mixing intermediate and finished beverages for recipe development, testing, and production of a variety of finished beverages and intermediate ingredients.

Notable project features include:

- Heated and cooled mixing vessels designed for flammable and non-flammable liquid ingredients
- Dry ingredient handling and dissolution systems
- High-shear mixing equipment for difficult to dissolve ingredients
- Pasteurizer
- Homogenizer
- Carbonator
- Container rinsing
- Filling equipment
- Labeler
- Container conveyors
- Tunnel pasteurizer and coolers
- CIP systems

- Proprietary specialty equipment

Services:

- Scope definition and establishment of all project requirements
- Development of a project quality manual to document quality requirements
- Weekly team meetings with all stakeholders
- Stage gate design reviews
- Drawing reviews
- Vendor management and coordination
- Develop FAT and SAT protocols and manage those among the vendors
- Developed startup and commissioning procedures
- Managed startup
- Validated the processes and equipment
- Training and operational assistance
- Provided turnover documentation and as-built drawings

Project: Provided brownfield work in a vacant facility in addition to a process building expansion with scope for three complete lines.

Notable project features include:

- New bulk ingredient system for sugar, enriched flour, wheat flour, vegetable oil, potable hot water, and corn syrup designed for five production lines
- New mixing, dough sheeting, direct gas fired/convection ovens
- Cooling conveyor systems
- Fully automated packaging and palletizing systems
- New HVAC systems, hygienic zoning, washrooms, cold storage, and utility distribution to equipment
- Project size: \$100MM
- 24-month project duration

Services:

- Equipment specifications for new equipment purchases
- Developing FAT requirements
- Site acceptance test (SAT) criteria
- Layout design
- Mechanical and electrical installation bid packages
- Installation support and line start-up and commissioning services
- Managed all field changes
- Provided as-built drawings for the project