

NITREX

NXL MULTI-BATCH, SEMI-CONTINUOUS SERIES

FOR FERRITIC NITROCARBURIZING AND POST OXIDATION

NXL CONTINUOUS SERIES

This furnace achieves very high part throughput (up to 3,000 lbs [1,360Kg] per hour) with brake rotors with a three metric ton loading capacity. The system can adapt to various material handling systems, but is best coupled to conveyor-fed large racks. No complicated charge cars are needed. Loads can be indexed for processing before the furnace and after the furnace exits the load. Cycle times are the shortest on the market.

ADVANCED FURNACE

As part of a turnkey system, the NXL furnace runs completely automatically and autonomously, with minimal human involvement. All stages of a process, including purging, heating, nitriding, and cooling, are automatically sequenced in a continuous uninterrupted cycle. This setup provides an autonomous, self-adjusting process that contributes to greater process accuracy and consistency in nitriding/nitrocarburizing results—ensuring perfect layer control, from white layer to post-oxidized layer, with consistent quality and color.

NXL FURNACE TURNKEY SYSTEM WITH NITREG® PROCESS CONTROL



NXL MULTI-CHAMBER

- DEPENDABLE
- EFFICIENT
- PROCESS FLEXIBILITY
- HIGH THROUGHPUT



Eco-friendly technology

MAIN FEATURES

- Exceptional temperature uniformity throughout the workload
- Separate heating zones for accurate temperature control
- High convection recirculation fans for quick load heat up
- Inconel 600 (refractory alloy) internals and racking for a long service life
- Turbo-cooling module for shorter cooling times and improved furnace utilization rates
- NITREG® technologies with proven recipes optimized for maximum part quality and performance
- Software module for data archiving and reporting as well as remote diagnostics
- SCADA and Nitrex QMULUS connectivity

OPTIONS AVAILABLE

- Individual part tracking
- Effluent neutralizing
- Ammonia dissociator
- Custom racking
- Charge cars
- Complete automation and part-loading robotics are available.

CANADA/USA

+1 514 335 7191
nitrex@nitrex.com

POLAND

+48 32 296 66 30
nitrex.europe@nitrex.com

CHINA

+86 (0) 10 6257 3050
nitrex.china@nitrex.com

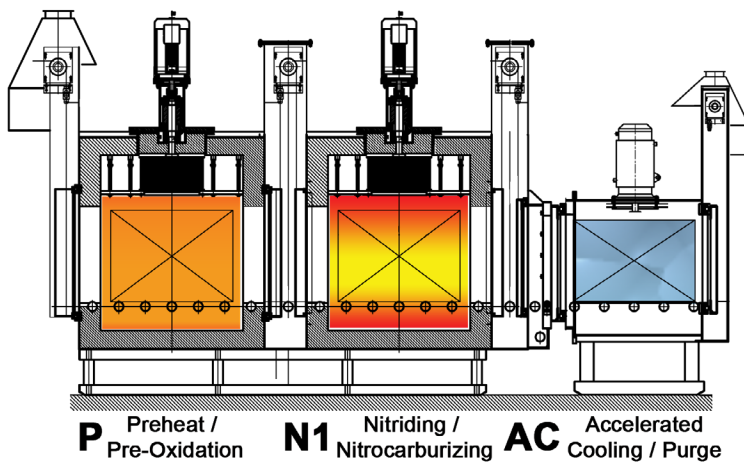
NITREX
nitrex.com

NITREX

NXL CONTINUOUS SERIES

MODULES AND CONFIGURATIONS

The NXL line is made up of connected batch process modules that can be combined in a variety of configurations, including preheat/pre-oxidation, post-nitriding oxidation, fast cooling, and one or more chambers for nitriding/nitrocarburizing. The modular platform design allows the NXL to be integrated into an automated manufacturing cell for maximum furnace throughput and uptime **with processing capacities of up to 1,400 kg per hour (or 3,000 lbs per hour!)**.



TYPICAL CONFIGURATIONS

PN1-TC (shown)

includes the following three capabilities:

- 1 Preheat/Pre-oxidation
- 1 Nitriding/Nitrocarburizing
- 1 Turbo Cooling/Purge

PN2-TC

Adds one more Nitriding/Nitrocarburizing chamber for deeper white layer needs (Four chambers total)

PN1-OXN-TC

Adds the Post Oxidation capability (four chambers total) and includes:

- 1 Preheat/Pre-oxidation chamber
- 1 Nitriding/Nitrocarburizing
- 1 Nitriding/Nitrocarburizing/ Post-oxidation
- 1 Turbo Cooling/Purge chamber

SPECIFICATIONS

NXL	Working Space (W x H x L)	Load Capacity (max)
NXL-9912	36" x 36" x 48" / 900 x 900 x 1,200 mm	3,300 lbs / 1,500 kg
NXL-9918	36" x 36" x 71" / 900 x 900 x 1,800 mm	5,000 lbs / 2,250 kg
NXL-121218	47" x 47" x 71" / 1200 x 1200 x 1800 mm	7,700 lbs / 3,500 kg

NXL CONTINUOUS SERIES

- DEPENDABLE
- EFFICIENT
- PROCESS FLEXIBILITY
- HIGH THROUGHPUT



Eco-friendly technology

BENEFITS

- Modular, flow-through design provides 20–40% energy savings compared to large batch furnaces
- Dedicated chambers assure tight control of white layer and exact control of oxide layer and colors
- Automated handling of each load, including staging and post-processing unloading via robots with individual part tracking
- Clean, environmentally-friendly, and sustainable processes—reduced consumption of process gases and energy savings from shorter process times
- True nitriding/nitrocarburizing process control—compliant with AMS 2759/10 and AMS 2759/12 standards

CANADA/USA

+1 514 335 7191
nitrex@nitrex.com

POLAND

+48 32 296 66 30
nitrex.europe@nitrex.com

CHINA

+86 (0) 10 6257 3050
nitrex.china@nitrex.com

NITREX
nitrex.com

NITREX

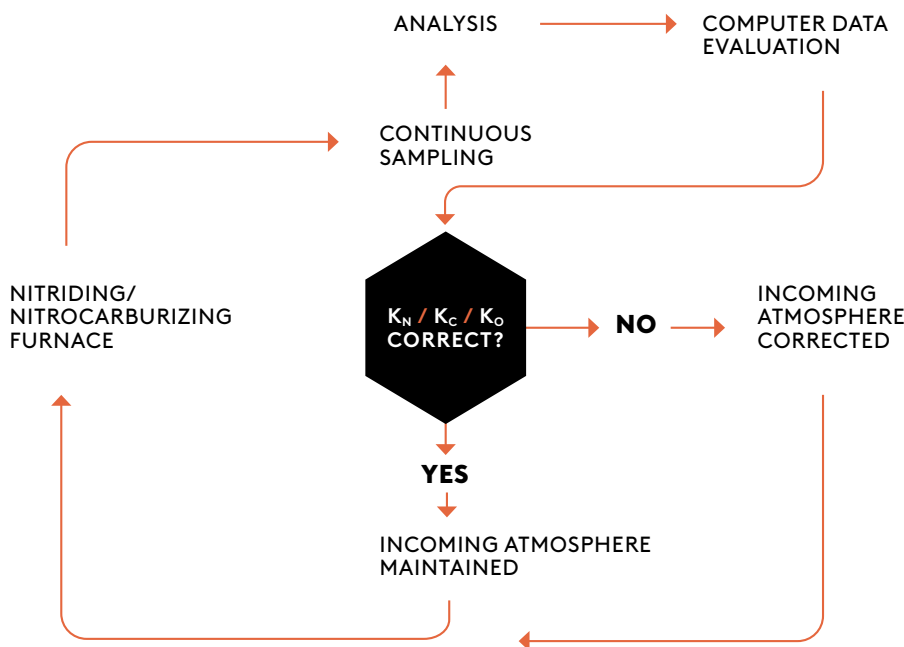
EXPERT CONTROL SOFTWARE & NITREG® FAMILY OF TECHNOLOGIES

The NITREG® family of technologies applies individually customized processes to different applications and materials for optimum results. The process is carried out in a closed-loop circuit, which enables the control system to respond automatically to the changes in nitriding conditions that occur during the process cycle.

The control system continuously samples and analyzes the furnace atmosphere, and based on the data extracted, it adjusts the process parameters in order to maintain the preset value of the K_N , K_C and K_O .

CLOSED-LOOP PROCESS CONTROL

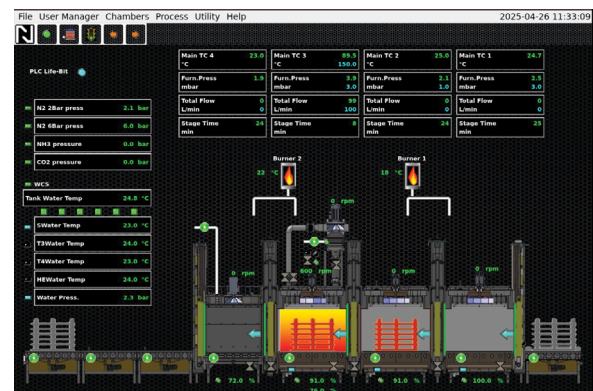
This closed-loop process control enables the system to respond automatically to the changes in nitriding/nitrocarburizing conditions that occur during the process cycle.



NITREG® TECHNOLOGY
offers customized
processes for a variety
of applications & materials
with optimum results.

INTUITIVE USER INTERFACE

The user interface contains data points on the furnace, on processes, jobs, and stages, displaying variables such as temperature, flows, power output, nitriding potential, as well as the actual status of the nitriding process and system equipment.



- Intuitive control interface contains all information on the furnace
- Over 30 signal sensing points are continuously displayed on the control screen
- The control software includes troubleshooting, emergency and calibration menus

CANADA/USA
+1 514 335 7191
nitrex@nitrex.com

POLAND
+48 32 296 66 30
nitrex.europe@nitrex.com

CHINA
+86 (0) 10 6257 3050
nitrex.china@nitrex.com

NITREX
nitrex.com

NITREX

OPTIMIZED SOLUTIONS FOR PEAK PERFORMANCE

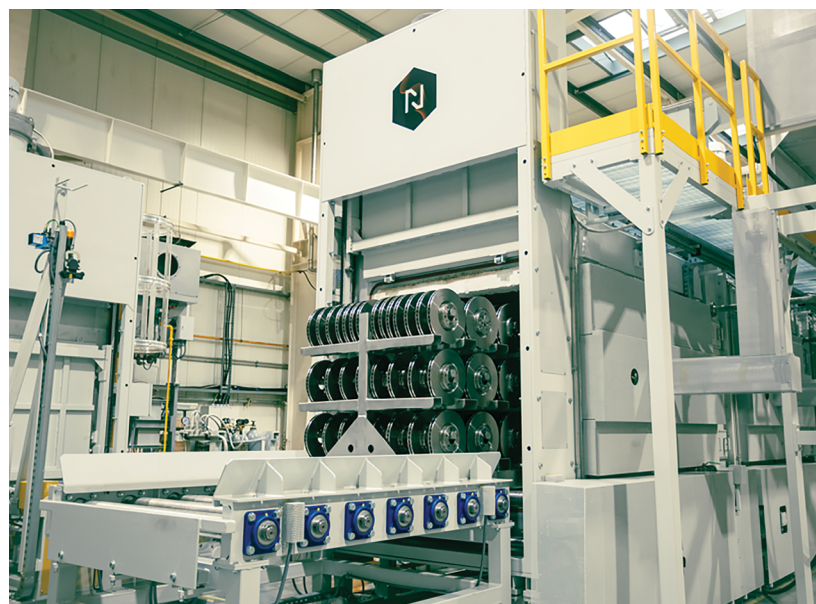
Enhance your heat treatment capabilities with advanced solutions designed for efficiency, precision, and reliability. From process control to operational support, each component plays a vital role in ensuring consistent quality and maximum productivity.

INNOVATIVE SOLUTIONS FOR SUPERIOR PERFORMANCE

Our systems enhance efficiency, reliability, and process control for consistent, high-quality results.



Eco-friendly solutions



CANADA/USA

+1 514 335 7191
nitrex@nitrex.com

POLAND

+48 32 296 66 30
nitrex.europe@nitrex.com

CHINA

+86 (0) 10 6257 3050
nitrex.china@nitrex.com

NITREX
nitrex.com