## **NXK COMPACT SERIES**

### **COMPACT TURNKEY SYSTEM**

The multipurpose NXK series of nitriding/nitrocarburizing systems is an economical and dependable choice for use in small scale processing as well as for general laboratory/testing purposes.

In comparison to our large-scale industrial line of NX models, these systems have a compact construction that makes efficient use of restricted floor space in a plant or shop. Available in five sizes, the furnace comes equipped with a control system and auxiliary equipment. The turnkey system is mounted on a platform for secure transport by forklift and for more practical and efficient installation. Every system is fully assembled, factory tested and certified, making on-site installation and startup quick and effortless.



## **NXK COMPACT SERIES**

- → PRACTICAL
- → DEPENDABLE
- → EFFICIENT
- → ECONOMICAL



Eco-friendly technology

#### **MAIN FEATURES**

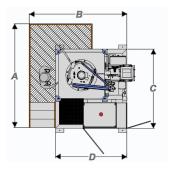
- Light ceramic fiber insulation for fast and efficient heating as well as cooling
- → Kanthal heating elements
- Retort and all parts in contact with nitriding/nitrocarburizing atmosphere made of refractory alloy
- Recirculation turbine for uniform temperature/atmosphere distribution
- → Automatic cover lifting system
- Control system for monitoring and controlling process parameters and furnace operations
- Integrated emissions control (neutralizer)
- → Automatic emergency procedures
- Complete with process control software & NITREG® technology

### **BENEFITS**

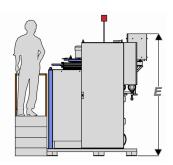
- Preconfigured & factory-tested
- Fully calibrated
- → Pre-tested for metallurgical results
- Minimal space requirements
- → Plug & Play
- → Short startup period
- → Low operating costs
- Easily moved into the heat treat facility with the help of a forklift

# **NXK COMPACT SERIES**

TOP VIEW



SIDE VIEW



## **NXK COMPACT SERIES**

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#### **OPTIONS AVAILABLE**

- → Custom racking
- → Operator platform
- → AMS 2759/12 compliance optional

### **SPECIFICATIONS**

NXK SERIES	NXK-409	NXK-412	NXK-609	NXK-612	NXK-812	NXK-815
Working Space	Ø 400 x 900 mm H Ø 15¾" x 35½" H	Ø 400 x 1,200 mm H Ø 15¾" x 47¼" H	Ø 600 x 900 mm H Ø 23½" x 35½" H	Ø 600 x 1,200mm H Ø 23½" x 47¼" H	Ø 800 x 1,200mm H Ø 31½" x 47¼"	Ø 800 x 1,500mm H Ø 31½" x 59"
Load Capacity max.	300 kg / 660 lbs	400 kg / 880 lbs	600 kg / 1,300 lbs	800 kg / 1,700 lbs	1,200 kg / 2,600 lbs	1,500 kg / 3,300 lbs
Max. Temperature	650 °C / 1,200 °F	650 °C / 1,200 °F	650 °C / 1,200 °F	650 °C / 1,200 °F	650 °C / 1,200 °F	650 °C / 1,200 °F
Dimensions (footprint)						
System – Length	1,880 mm / 74"	1,880 mm / 74"	2,080 mm / 82"	2,080 mm / 82"	2,280 mm / 90"	2,280 mm / 90"
System – Width	1,700 mm / 67"	1,700 mm / 67"	1,900 mm / 75"	1,900 mm / 75"	2,100 mm / 83"	2,100 mm / 83"
System – Height	2,300 mm / 91"	2,600 mm / 102"	2,300 mm / 91"	2,600 mm / 102"	2,600 mm / 102"	3,300 mm / 130"
Platform – Length	2,460 mm / 97"	2,460 mm / 97"	2,660 mm / 105"	2,660 mm / 105"	2,860 mm / 113"	2,860 mm / 113"
Platform – Width	2,325 mm / 92"	2,325 mm / 92"	2,525 mm / 99"	2,525 mm / 99"	2,725 mm / 107"	2,725 mm / 107"
Min. Height Clearance (floor to crane hook)	3,200 mm / 126"	3,800 mm / 150"	3,200 mm / 126"	3,800 mm / 150"	3,800 mm / 150"	4,700 mm / 185"

<sup>\*</sup> For non-standard sizes, please contact Nitrex for details. Nitrex reserves the right to make changes without notice.

**CHINA** 

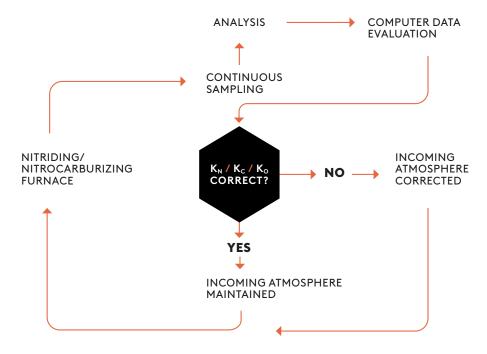
# **EXPERT CONTROL SOFTWARE** & NITREG® FAMILY OF TECHNOLOGIES

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  $K_{_{\rm N}}$ ,  $K_{_{\rm C}}$  and  $K_{_{\rm O}}$ .

### **CLOSED-LOOP PROCESS CONTROL**

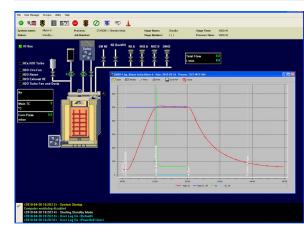
This closed-loop process control enables the system to respond automatically to the changes in nitriding/ nitrocarburizing conditions that occur during the process cycle.



**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

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**CHINA** 

## **AUXILIARY EQUIPMENT**

## **EVERYTHING FOR YOUR NITREX SYSTEM**

A Nitrex system is not complete without the right auxiliary equipment to support, enhance, and optimize the nitriding/nitrocarburizing process and operational efficiency.

All equipment is properly sized and vetted to ensure maximum performance from your Nitrex system.

# **AUXILIARY EQUIPMENT**

designed to enhance the functionality of a Nitrex nitriding system and ensure optimum performance



Eco-friendly solutions

#### **RACKING**

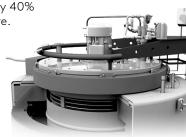
Easy-to-assemble Inconel baskets and trays constructed for safe and easy loading.





#### **ACCELERATED COOLING**

Internal accelerated cooling system to reduce cooling time by 40% or more.



#### **AMMONIA DISSOCIATOR**

Economical and safe supply of dissociated ammonia.



#### **EFFLUENT NEUTRALIZER**

Eliminates residual ammonia and/or other pollutant gases from nitriding/nitrocarburizing system exhaust.



#### WATER COOLING

Recirculates clean cooling water to prolong the longevity of furnace elements.

