

**The NX Turnkey Nitriding/Nitrocarburizing System** features a selection of medium to very large heavy-duty NX pit furnaces, a Nitrex control system, process controller with specialized software and potential-controlled nitriding technology known as NITREG® and its derivatives.

## ADVANCED FURNACE DESIGN

The NX furnace is designed to operate in a totally automatic fashion as part of a Nitrex turnkey nitriding system. All phases of the process such as purging, heating, nitriding, and cooling are accomplished in one uninterrupted cycle.

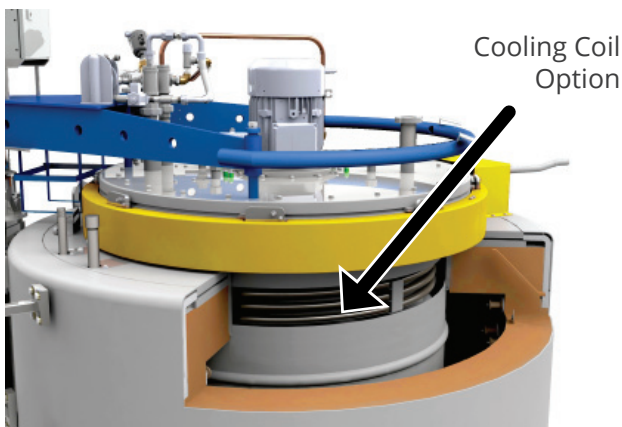
The retort furnace is equipped with an internal recirculation fan and a cooling air blower. A specially designed retort and heating elements guarantee long and reliable service. The hot gas recirculation fan provides fast load heat-up rate and guarantees excellent temperature and nitriding uniformity necessary for good repeatability.

### The furnace's main features are:

- Separate heating zones for accurate temperature control.
- Light ceramic fiber insulation for fast and efficient heating as well as cooling
- Kanthal A-1 heating elements
- Retort made of refractory alloy
- Silicone cover seal for gas tight retort
- Furnace locking ring (with actuator for larger furnace sizes)
- Actuated cover lifting device
- Easy servicing and maintenance

## COOLING OPTION

An accelerated cooling system is available that can substantially **reduce cooling time compared to conventional cooling**. This results in a shorter total process time and an improved utilization rate of the furnace.



## PROCESS CONTROL

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

The Nitrex process controller continuously receives data from the furnace atmosphere sensors and adjusts the process parameters in order to maintain the preset value of the nitriding potential.

The control software also includes a powerful process builder menu along with troubleshooting, emergency and calibration menus to aid the user in maintaining and operating the nitriding installation.

## PROCESS TECHNOLOGY

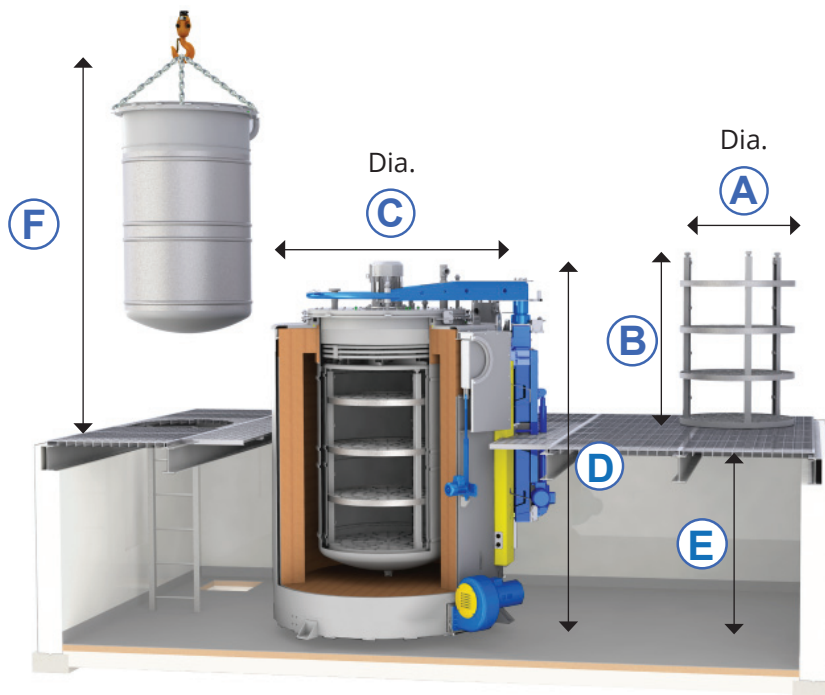
The NITREG® family of technologies offers individually customized processes for different applications and materials with desired and repeatable results.

Nitreg®	Potential controlled gas nitriding
Nitreg®-C	Potential controlled nitrocarburizing
Nitreg®-S	Nitriding of stainless steels & nickel-based alloys
Nitreg®-Ti	Nitriding of titanium alloys
ONC®	In-process post-nitriding or post-nitrocarburizing oxidation
Nano-S™	Nitriding of stainless steels with no loss of corrosion resistance

## Standard models\*

Model	Rack Size		Load Capacity	Furnace Diameter	Furnace Height	Required Pit Depth	Min. Height Clearance
	Diameter	Height					
	(A)	(B)		(C)	(D)	(E)	(F)
NX-615	600 mm	1500 mm	1000 kg	1473 mm	2946 mm	1500 mm	3251 mm
NX-620	600 mm	2000 mm	1200 kg	1473 mm	3454 mm	2000 mm	3759 mm
NX-815	800 mm	1500 mm	1500 kg	1676 mm	2845mm	1500 mm	3259 mm
NX-820	800 mm	2000 mm	1750 kg	1676 mm	3437 mm	2000 mm	3781 mm
NX-825	800 mm	2500 mm	2000 kg	1676 mm	3931 mm	2500 mm	4262 mm
NX-1015	1000 mm	1500 mm	2000 kg	1880 mm	2952 mm	1500 mm	3262 mm
NX-1020	1000 mm	2000 mm	2500 kg	1880 mm	3452 mm	2000 mm	3762 mm
NX-1025	1000 mm	2500 mm	3000 kg	1880 mm	3952 mm	2500 mm	4262 mm
NX-1215	1200 mm	1500 mm	3000 kg	2184 mm	2952 mm	1500 mm	3262 mm
NX-1220	1200 mm	2000 mm	3800 kg	2184 mm	3452 mm	2000 mm	3762 mm
NX-1225	1200 mm	2500 mm	4500 kg	2184 mm	3952 mm	2500 mm	4262 mm
NX-1230	1200 mm	3000 mm	5250 kg	2184 mm	4452 mm	3000 mm	4762 mm
NX-1625	1550 mm	2500 mm	6000 kg	2388 mm	3979 mm	2500 mm	4432 mm
NX-1630	1550 mm	3000 mm	7000 kg	2388 mm	4688 mm	3000 mm	4817 mm
NX-1635	1550 mm	3500 mm	8000 kg	2388 mm	5188 mm	3500 mm	5317 mm
NX-1645	1550 mm	4500 mm	10,000 kg	2388 mm	6188 mm	4500 mm	6317 mm

\* For non-standard sizes, please contact Nitrex for details



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