

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.

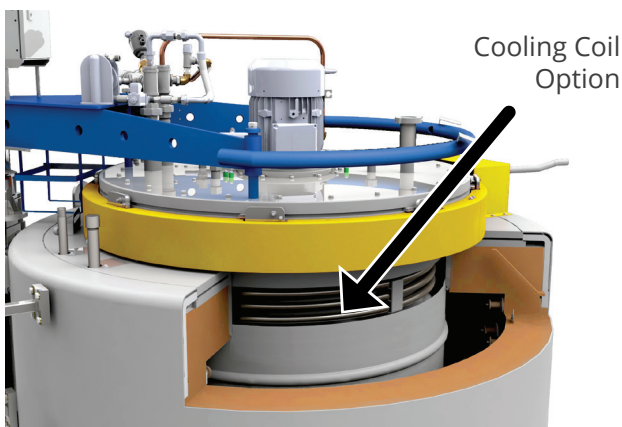
The retort furnace is equipped with an internal recirculation fan and a cooling air blower. A specially designed retort and heating elements guarantee long and reliable service. The hot gas recirculation fan provides fast load heat-up rate and guarantees excellent temperature and nitriding uniformity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

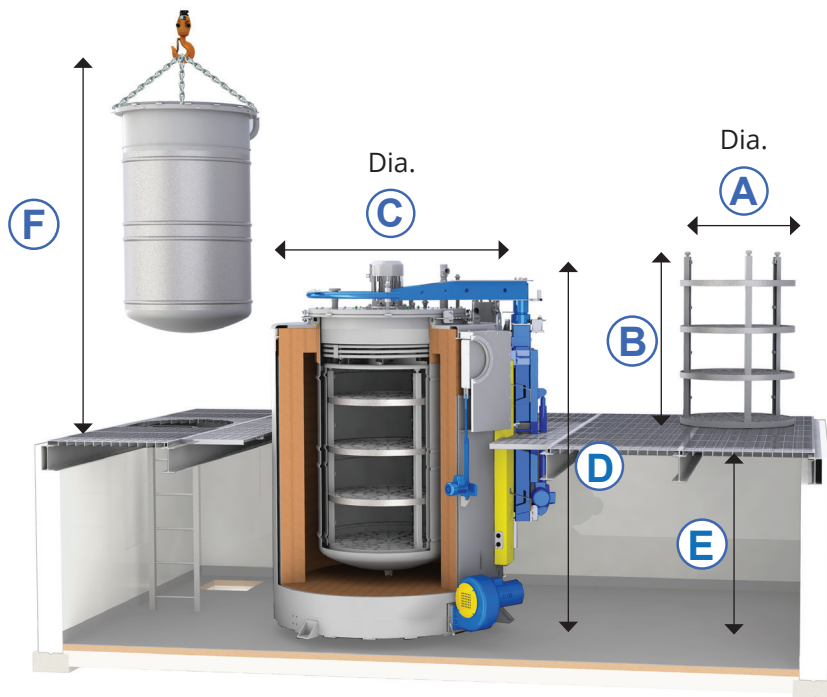
Nitreg®	Potential controlled gas nitriding
Nitreg®-C	Potential controlled nitrocarburizing
Nitreg®-S	Nitriding of stainless steels & nickel-based alloys
Nitreg®-Ti	Nitriding of titanium alloys
ONC®	In-process post-nitriding or post-nitrocarburizing oxidation
Nano-S™	Nitriding of stainless steels with 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	23½"	59"	2200 lbs	58"	116"	59"	128"
NX-620	23½"	78¾"	2600 lbs	58"	136"	79"	148"
NX-815	31½"	59"	3300 lbs	66"	112"	59"	128"
NX-820	31½"	78¾"	3850 lbs	66"	135"	79"	149"
NX-825	31½"	98½"	4400 lbs	66"	155"	98"	168"
NX-1015	39"	59"	4400 lbs	74"	116"	59"	128"
NX-1020	39"	78¾"	5500 lbs	74"	136"	79"	148"
NX-1025	39"	98½"	6600 lbs	74"	156"	98"	168"
NX-1215	47¼"	59"	6600 lbs	86"	116"	59"	128"
NX-1220	47¼"	78¾"	8400 lbs	86"	136"	79"	148"
NX-1225	47¼"	98½"	9900 lbs	86"	156"	98"	168"
NX-1230	47¼"	118"	11,570 lbs	86"	175"	118"	187"
NX-1625	61"	98½"	13,200 lbs	94"	157"	98"	174"
NX-1630	61"	118"	15,400 lbs	94"	185"	118"	190"
NX-1635	61"	137¾"	17,600 lbs	94"	204"	138"	209"
NX-1645	61"	177"	22,000 lbs	94"	244"	177"	249"

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

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