

## ECONOMICAL PROCESSING

Highly recommended for gas nitriding / nitrocarburizing furnaces, the Nitrex INS line of neutralizers is designed to reduce residual ammonia and/or other pollutants in the exhaust gas.



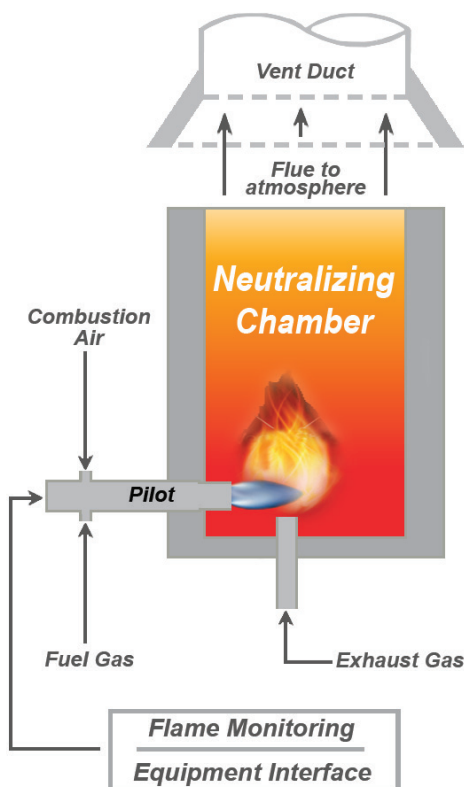
## FEATURES

- Economic solution
- Low operating costs
- Low emissions
- Connectivity to furnace controls

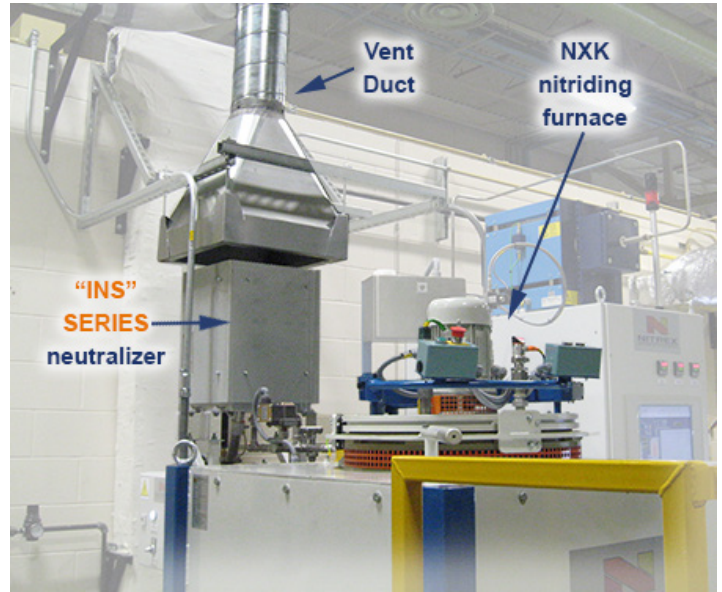
## DESIGN

The pollution control equipment is comprised of a neutralization chamber, pilot burner, fuel gas train, and control system.

The control system is equipped with a flame monitoring device that automatically triggers an alarm signal whenever the flame is extinguished and relays it to the control system of the furnace.



INS NEUTRALIZER SCHEMATIC



INS Neutralizer installed on a Nitrex NXK series furnace

## OPERATION

The equipment operates on the principle of chemical conversion of ammonia (or other pollutant gases) through oxidation in a high-temperature flame.

## WIDE RANGE OF APPLICATIONS

The INS neutralizers are generally installed on Nitrex equipment, but are also successfully used for retrofitting practically any other type and make of furnace or application that uses ammonia gas.

Besides nitriding, nitrocarburizing and related heat treating processes, other industries can benefit from these units by neutralizing the effluent gases they emit.

## DIFFERENT SIZES FOR DIFFERENT FLOWS

The standard INS series neutralizers are available in four sizes (tied to nominal effluent atmosphere flows): 11, 32, 64, and 106 cfh (5, 15, 30, and 50 l/min).

The equipment can handle a wide range of atmospheres of diverse chemical compositions. For example, in a nitriding furnace, this would mean from lean (low ammonia) mixtures to 100%  $\text{NH}_3$  at nominal flows of up to 106 cfh (50 l/min).

## MODELS & SPECIFICATIONS\* - ENGLISH (IMPERIAL)

OPERATING CHARACTERISTICS	UNITS	INS-5	INS-15	INS-30	INS-50
Maximum process gas flow	cfh	11	32	64	106
Maximum thermal output	btu/hr	13,600	29,000	41,000	58,000
Fuel gas rated input	btu/hr	10,200	17,000	17,000	17,000
Maximum air draw	cfh	159	320	448	618
Maximum temperature	°F	1700			
Control voltage/frequency	VAC/Hz	110/220 - 50/60			
Dimensions (H x L x W)	inches	25x10x10	30x13x13	38x16.5x16.5	43x18.5x18.5

## MODELS & SPECIFICATIONS\* - METRIC

OPERATING CHARACTERISTICS	UNITS	INS-5	INS-15	INS-30	INS-50
Maximum process gas flow	lpm	5	15	30	50
Maximum thermal output	kW	4	8.5	12	17
Fuel gas rated input	kW	3	5	5	5
Maximum air draw	m <sup>3</sup> /h	4.5	9.1	12.7	17.5
Maximum temperature	°C	930			
Control voltage/frequency	VAC/Hz	110/220 - 50/60			
Dimensions (H x L x W)	mm	630x250x250	760x330x330	970x420x420	1100x470x470

## COMPLETE PACKAGE

### IN-SERIES - FOR HIGHER FLOWS AND / OR TIGHTER EMISSION CONTROL



**Green Solutions**

Nitrex proposes the **"IN" Series High Efficiency** exhaust gas neutralizer for higher process gas flows and /or more stringent control of pollutant effluent gases.

Contact us for more information

\* Data for information purposes and subject to change.

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