



MDX NITROGEN PURIFIER SYSTEM

Manufacturing Forward





Mikropor began its journey in 1987 with a passion to create “Tomorrow’s Technology” and has become one of the leading manufacturers of atmospheric air filtration solutions and compressed air treatment systems for a variety of industries.

By closely following the latest developments in technology, Mikropor’s “Best in Class” products and solutions are appreciated by customers in more than 140 countries.

The company’s sustainable growth has been provided by its passion for innovation and commitment to quality, as well as its dedication to technology. Mikropor is an environmentally conscious company that values people, while developing products that extend the needs and expectations of customers.

With this mission, Mikropor continues to become one of the most recognized brands in the world by expanding its global penetration in the field of technological filtration and contributes to a healthier planet.

www.mikropor.com

MDX NITROGEN PURIFIER SYSTEM

Most PSA Nitrogen Generator users require the highest levels of Nitrogen purity by the most cost-effective means possible.

Mikropor's brand new MDX Nitrogen Purifier System offers an extremely economic way to increase Nitrogen purity levels beyond 99.5% or 99.9% all the way up to 99.999% purity.

The MDX range increases Nitrogen purities by utilizing a specially designed catalyst with a large surface area. As a result of the reaction on the catalyst surface, the residual oxygen content is reduced to maximum 10 ppm level.

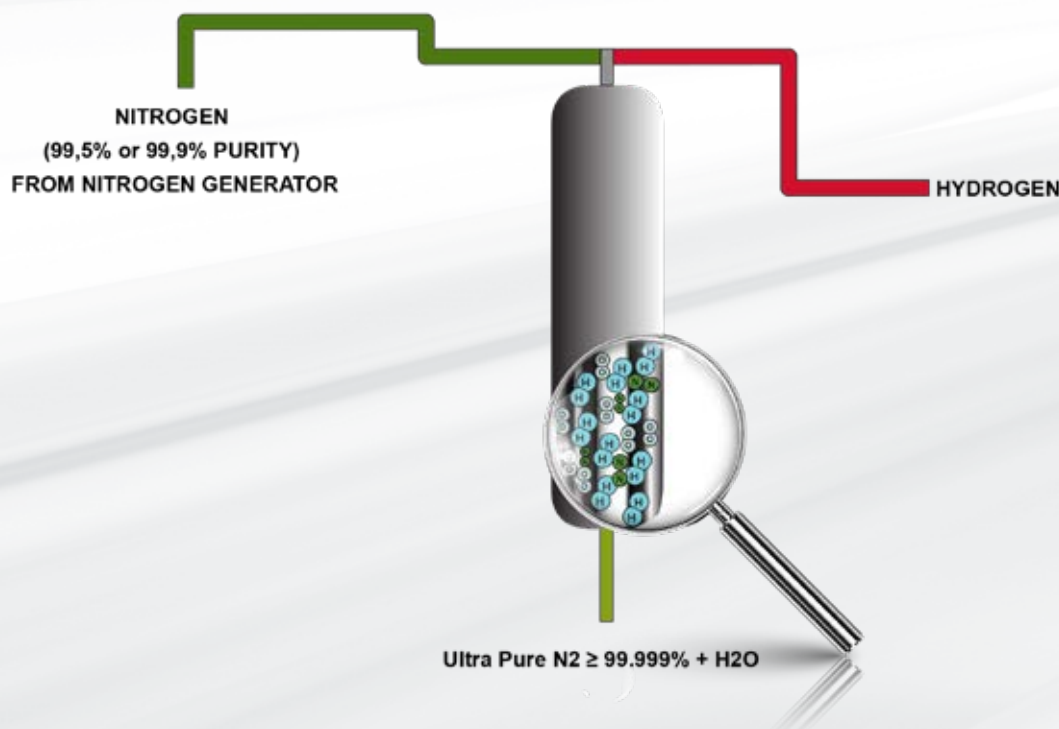
Mikropor's MDX Nitrogen Purifiers, combined with Mikropor's MNG Nitrogen Generators, utilise a small amount of Hydrogen gas during the reaction process to achieve high levels of Nitrogen purity by avoiding compressed air loss.

The MDX System, in conjunction with MNG Nitrogen Generators, will significantly reduce power consumption and still achieve the highest possible levels of Nitrogen purity.

Working Principle

In comparison to the current applications, Nitrogen produced from a nitrogen generator at 99.5% or 99.9% purity level can be converted to 99.999% by Mikropor's compact design Nitrogen Purifier System which also provides high savings in nitrogen production costs.

The system uses a catalytic reaction, whereby residual Oxygen from the MNG generator is removed from the PSA Nitrogen Generator output by utilising a reaction between the remaining Oxygen and Hydrogen gas to produce a purity of 99.999% Nitrogen. The only by-product of this catalytic reaction is water.



MDX NITROGEN PURIFIER SYSTEM

The total cost of hydrogen required for the reaction is very low and provides significant long-term savings. High purity nitrogen can in fact be produced by utilizing lower capacity air compressors and downstream equipments throughout this newly developed nitrogen purification process.

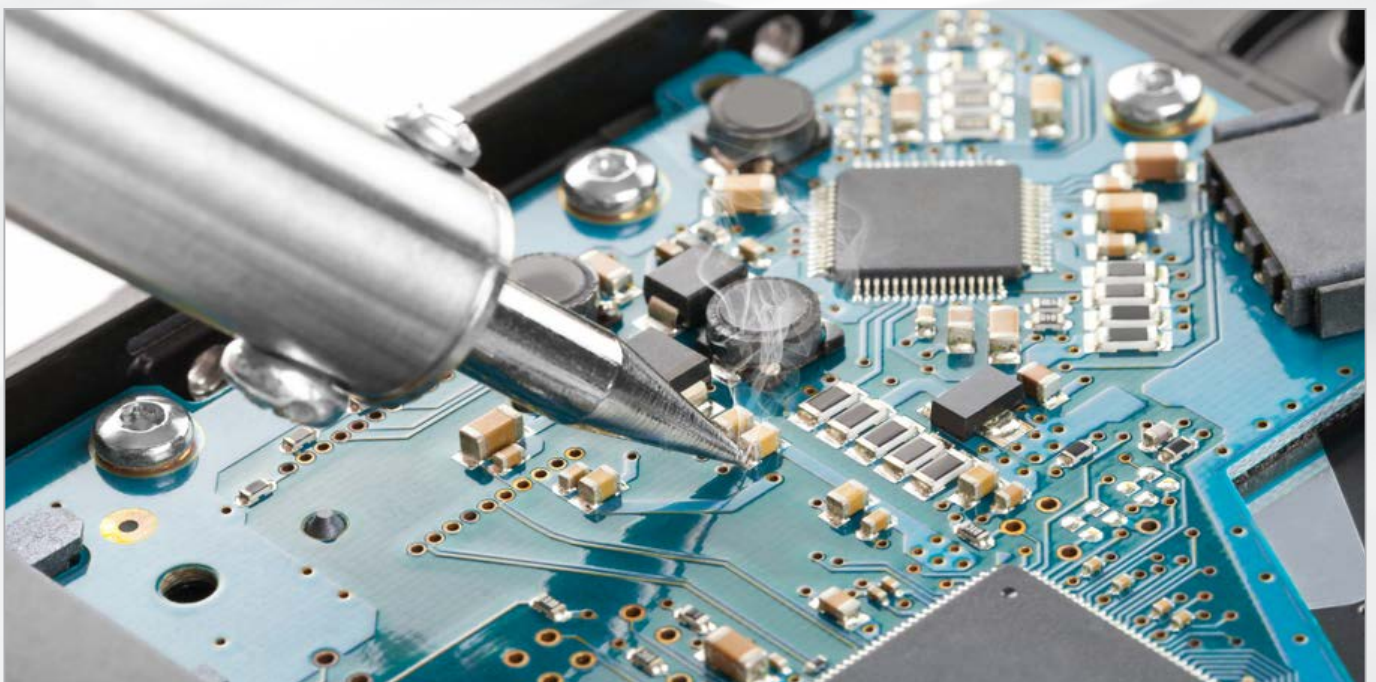
The reaction increases the Nitrogen temperature. That is why Mikropor's MDX Nitrogen Purifier System has been integrated into a High Temperature Air Dryer combining two products into a single unit to give a complete solution.



INVESTMENT AND OPERATING COST COMPARISON

SYSTEM	COMPRESOR + DRYER + MNG + DEOXO	COMPRESOR + DRYER + MNG
Required Compressor Power (kW)	37,0	90,0
Compressor Cost (EURO)	13970,0	33850,0
Dryer Model Number	MKE-375	MKE-930
Dryer Cost (EURO)	2162,0	3861,0
Nitrogen Generator Model	MNG-1110	MNG-5560
MNG Nitrogen Generator Cost (EURO)	39200,0	111700,0
Deoxo Unit Model Number	MDX-1230	-
Deoxo Unit Cost (EURO)	67252,0	-
Total Investment Cost	122.584 EUR	149.411 EUR
Total Investment Cost Saving	26.827 EUR	

Annual N2 Production Cost	53.832 EUR	55.188 EUR
Investment Pay Back Period (year) (Compared to liquid)	0,7	0,8
Investment Pay Back Period (year) (Compared to manifold)	0,3	0,4



MDX NITROGEN PURIFIER SYSTEM



mikropor

I. OSB Oğuz Caddesi No: 5, 06935, Ankara-Turkey

+90 312 267 0700 ✉ mikropor@mikropor.com

🌐 📺 mikropor

www.mikropor.com