

# NANOCHEM<sup>®</sup>

## NANOCHEM<sup>®</sup> Gas Purifiers for use with TNSC MOCVD Reactors

The NANOCHEM<sup>®</sup> WK-Series (White Knight<sup>™</sup>) gas purifiers are commonly used with MOCVD Reactors. They offer high lifetimes and high impurity removal efficiency in an economical design with a compact footprint. The WK-Series is available in several sizes for point-of-use applications to bulk gas purification.

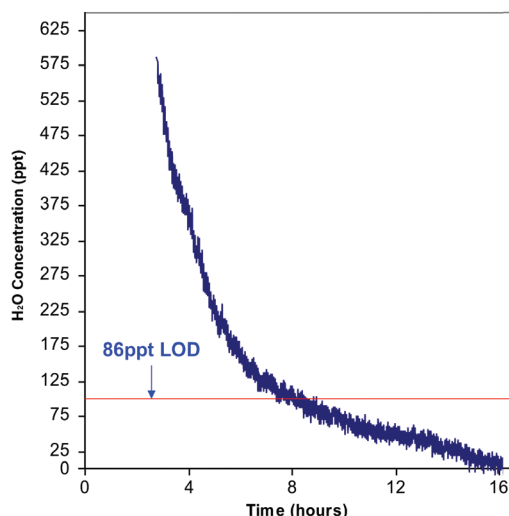
### Commonly used NANOCHEM<sup>®</sup> gas purifiers for MOCVD applications\* Hydrogen and Nitrogen

Part #	Description
UEQ10600549016	Model WK-5000P-INX-PLUS-MN with Isolation Valves

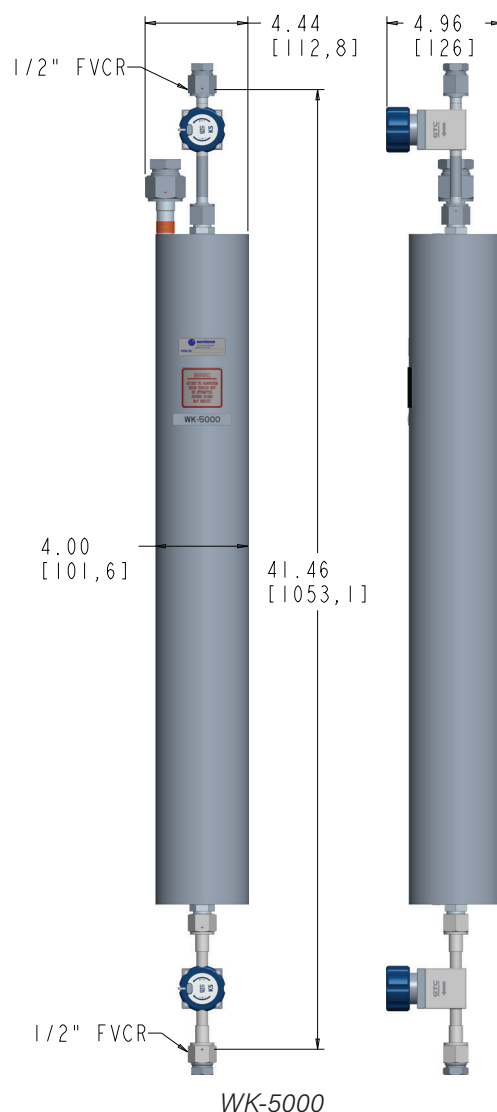
PURIFICATION MEDIUM	PURIFICATION MEDIUM DESCRIPTION	IMPURITIES REMOVED	EFFICIENCY
INX-Plus <sup>™</sup>	Reactive agents on an inorganic support	H <sub>2</sub> O, O <sub>2</sub> , CO, CO <sub>2</sub> C <sub>6</sub> H <sub>6</sub> C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub> Ethylbenzene m,p-Xylene o-Xylene Refractories** THC except CH <sub>4</sub> Halocarbons except CF <sub>4</sub>	<100 ppt, LDL <156 ppq LDL <93 ppq LDL <96 ppq LDL <79 ppq LDL <112 ppq LDL <134 ppq LDL <1 ppt <1 ppt

### H<sub>2</sub>O Removal by NANOCHEM<sup>®</sup> INX-Plus<sup>™</sup> 360 mL Purifier

APIMS measurements indicated removal of H<sub>2</sub>O to <86 ppt (Detection Limit of APIMS) at challenges as high as 1 ppm



Efficiency of INX-Plus purifier for H<sub>2</sub>O removal at challenge of 1 ppm  
APIMS (Atmospheric Pressure Ionization Mass Spectrometry)



**MATHESON**  
The Gas Professionals

## Ammonia

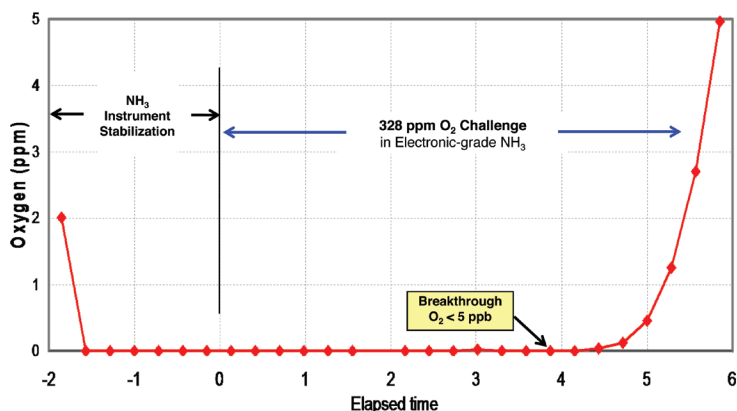
Part #	Description
UEQ10600450010	Model WK-2500F-IN2GO-MN with Isolation Valves

PURIFICATION MEDIUM	PURIFICATION MEDIUM DESCRIPTION	IMPURITIES REMOVED	EFFICIENCY
In2Go™	Reactive agents on an inorganic support	H <sub>2</sub> O CO <sub>2</sub> O <sub>2</sub> GeH <sub>4</sub> H <sub>2</sub> S SiH <sub>4</sub> TEOS	<45 ppb, LDL <11 ppb, LDL <5 ppb, LDL <1 ppb, LDL <45 ppb, LDL <1 ppb, LDL <40 ppb, LDL

## O<sub>2</sub> Removal in Ammonia by NANOCHEM® IN2GO™

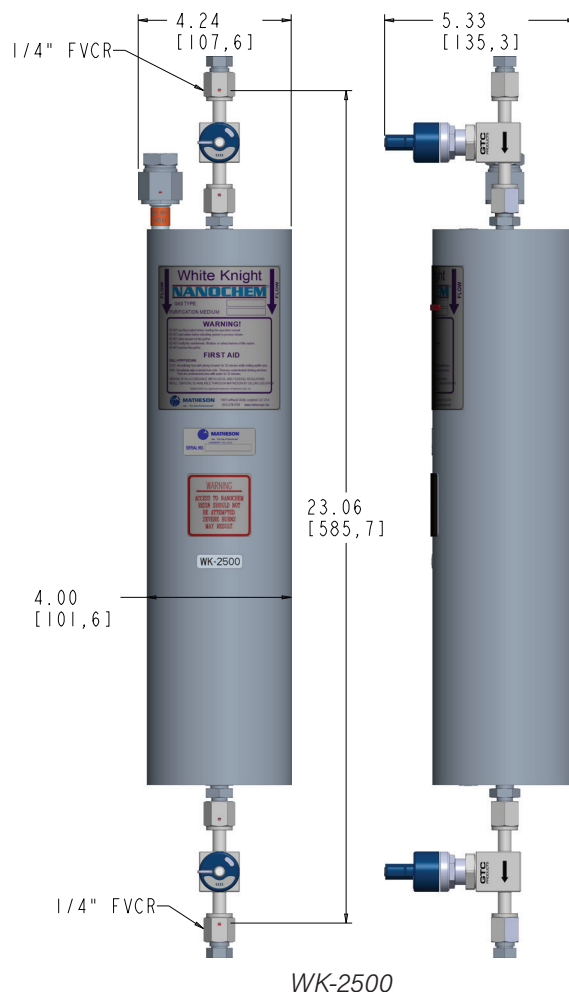
In2Go™ also offers high lifetimes and high efficiencies for the removal of oxygen in ammonia.

Oxygen Capacity Test in NH<sub>3</sub>



### Options

- Bypass Modules – allow disconnection of purifier without interrupting process gas flow
- Poppet Valves
- Canister Refills
- Installation and Conditioning of Purifiers



NOTE: 0.003 µm particle filter standard on all models.

\*MATHESON offers a full line of NANOCHEM® gas purifiers and purification media for various size MOCVD reactors.

Specifications are subject to change. Please check [www.mathesongas.com](http://www.mathesongas.com) for most current information.

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