



**ARM PURIFICATION**  
BY APPLIED ENERGY SYSTEMS

# Gas Purification Solution Guide

A full range of gas flow purification solutions  
for diverse application requirements.

Diverse Gas  
Purification  
Needs, *One  
Proven Partner*

The gas purifier is so much more than just a component. Integral to upholding specific requirements for gas purity, the effectiveness of the gas purifier can make or break the integrity of mission-critical processes. **That's why we are committed to delivering exceptional gas flow purification solutions that meet a full range of application requirements for gas type, flow rate, and pressure.**

Leverage this guide to discover what sets ARM Purification's solutions apart, and identify the purifier that is best-fit for your specifications.

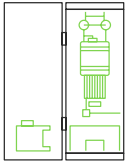


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# The ARM Purification Product Suite

From the smallest vessel to the most complex bulk systems, our purifier solutions reliably uphold mission-critical gas delivery requirements across every application.



## Point-of-Use Purifiers

Low flow rate, highly precise purifiers serving single applications.

Designed for applications that require impurity levels to be 100 pptv or less, our line of point-of-use purifiers accommodates various flow rates across six diverse models.

### Vessel Only

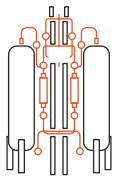
Operate without requiring heat to remove impurities.

### Nova™ Series

Incorporate a heater, temperature indication, and control.

### Pro-Panel™ Series

Offer advanced automation and integration.



## Micro-Bulk Purifiers

Moderate flow rate purifiers offering flexibility at an affordable cost.

Designed for permanently installed gas delivery systems, our line of micro-bulk purifiers allows for customization of critical features to meet the requirements of any system—from micro-bulk gas purifiers, to pressure regulation / filtration, and flow control.

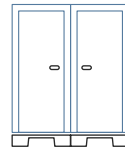
### Vessel Only

Operate without requiring heat to remove impurities.

### Advantage™ Micro Series

Incorporate a heated technology or automated regeneration. Includes the following solutions:

- Heated Getter
- Heated Catalyst
- Dual Vessel



## Bulk Purifiers

Large flow rate purifiers configurable to versatile, bulk applications.

Designed for permanently installed plumbing to complete facilities, our line of bulk purifiers allows for full customization to meet diverse requirements—from bulk gas purifiers, to pressure regulation / filtration, and flow control.

### Advantage™ Bulk Series

Incorporate a heated technology or automated regeneration. Includes the following solutions:

- Heated Getter
- Heated Catalyst
- Dual Vessel

## Why Purify with ARM Purification Technology?

### Track Record of Success

For more than 20 years, our purifiers have been trusted by our customers around the world to uphold the most stringent gas purity standards.

### Application Expertise

Our deep bench of purifier experts is familiar with the application-specific challenges our customers face.

### A Systems-Level View

By pairing our purifier expertise with systems knowledge from our parent company, Applied Energy Systems, we deliver value that is unrivaled by other providers.

### High-Quality Services

From analytical services to refurbishment, regeneration, and disposal, we are committed to serving our customers throughout the lifecycle of their solution.

# Solutions for Every Requirement



## Molecule

Today, we purify more than **65 specific gases** spanning inert, corrosive, fluorinated, and hydride gas categories.



## Flow Rate

Our solutions satisfy the full range of flow rates and pressures, **from less than 0.1 slpm to greater than 5000 nm<sup>3</sup>/hr.**



## Pressure

In addition to our purifiers which handle standard pressure requirements, we work with our customers to develop **solutions for high pressure applications.**



## Purity

We provide technologies to remove a broad range of impurities from 5Ns pure gas and **deliver pure gas that is 9Ns or better.**

Use the table below to identify the ideal ARM Purification solution based on your gas type, impurity to be removed, and level of purity required.

Gases Purified	Impurity Removed	ARM Purification Class	ARM Purification Product Lines	Operation	Factory Regenerable	Media Category
Ar, He, Kr, Ne, Xe, N <sub>2</sub>	CO, CO <sub>2</sub> , H <sub>2</sub> , H <sub>2</sub> O, NMHC, O <sub>2</sub>	C	Point-of-Use, Micro-Bulk, Bulk	Ambient	Yes	Catalyst
C <sub>2</sub> F <sub>6</sub> , C <sub>3</sub> F <sub>8</sub> , C <sub>4</sub> F <sub>8</sub> , CClF <sub>3</sub> , CCl <sub>2</sub> F <sub>2</sub> , CCl <sub>4</sub> , CF <sub>4</sub> , CHClF <sub>2</sub> , CHF <sub>3</sub> , CH <sub>3</sub> F	CO, CO <sub>2</sub> , H <sub>2</sub> , H <sub>2</sub> O, NMHC, O <sub>2</sub>	F	Point-of-Use, Micro-Bulk, Bulk	Ambient	No	Catalyst
H <sub>2</sub>	CO, CO <sub>2</sub> , H <sub>2</sub> O, N <sub>2</sub> , O <sub>2</sub>	H	Nova, Pro-Panel, Micro-Bulk, Bulk	Heated	No	Getter
NH <sub>3</sub>	CO <sub>2</sub> , H <sub>2</sub> O, O <sub>2</sub>	A	Point-of-Use, Micro-Bulk, Bulk	Ambient	Yes	Getter/Catalyst
N <sub>2</sub> , N <sub>2</sub> /Noble Gas Mixtures	CO, CO <sub>2</sub> , H <sub>2</sub> , H <sub>2</sub> O, THC, O <sub>2</sub>	N	Point-of-Use, Micro-Bulk, Bulk	Heated	No	Getter
CDA, O <sub>2</sub> , CO <sub>2</sub>	CO <sub>2</sub> , H <sub>2</sub> O, O <sub>2</sub>	O	Micro-Bulk, Bulk	Heated	No	Catalyst
CDA, CO <sub>2</sub> , N <sub>2</sub> O, O <sub>2</sub>	CO <sub>2</sub> , H <sub>2</sub> O, NMHC, Amines, NOx	OX	Point-of-Use, Micro-Bulk, Bulk	Ambient	Yes	Adsorber
Ar, He, Kr, Ne, Xe	CO, CO <sub>2</sub> , H <sub>2</sub> , H <sub>2</sub> O, THC, O <sub>2</sub> , N <sub>2</sub>	R	Point-of-Use, Micro-Bulk, Bulk	Heated	No	Getter
BCl <sub>3</sub> , BF <sub>3</sub> , ClF <sub>3</sub> , F <sub>2</sub> , HBr, HCl, HF, NF <sub>3</sub> , SF <sub>4</sub> , SiHCl <sub>3</sub> , WF <sub>6</sub>	H <sub>2</sub> O	T	Point-of-Use, Micro-Bulk	Ambient	No	Adsorber
Hydrocarbons	O <sub>2</sub>	V	Point-of-Use, Nova, Pro-Panel, Micro-Bulk, Bulk	Ambient or Heated	Yes	Catalyst
Ar, CO, H <sub>2</sub> , He, Kr, N <sub>2</sub> , Ne, Xe, D <sub>2</sub> , CDA, O <sub>2</sub> , N <sub>2</sub> O	H <sub>2</sub> O, CO <sub>2</sub> , Organics, Acids, Refractory Compounds, Bases	W	Point-of-Use, Micro-Bulk, Bulk	Ambient	Yes	Adsorber
AsH <sub>3</sub> , B <sub>2</sub> H <sub>6</sub> , CH <sub>4</sub> , D.C.S (SiH <sub>2</sub> Cl <sub>2</sub> ), Ge <sub>2</sub> H <sub>6</sub> , GeH <sub>4</sub> , H <sub>2</sub> Se, NH <sub>3</sub> , PH <sub>3</sub> , SF <sub>6</sub> , SiH <sub>4</sub> , Si <sub>2</sub> H <sub>6</sub> , DMHZ, Hydride/Carrier Gas Mixtures	CO <sub>2</sub> , H <sub>2</sub> O, O <sub>2</sub>	Y	Point-of-Use, Micro-Bulk	Ambient	No	Getter/Catalyst

**Unique specifications?  
We have you covered.**

Don't see your solution in the table above? In addition to our suite of standard point-of-use, micro-bulk, and bulk purifiers, we work with clients that have complex or unique requirements to design custom purification solutions that meet their needs.

# Looking for a Replacement Purifier?

We employ specific technologies that provide equivalent performance to existing SAES and Entegris purifiers. **The table below defines comparable ARM Purification technologies for the various SAES and Entegris media offered.**

ARM Purification Class	SAES	Entegris
C	902	IX
F	902	IX
H	PS3, PS4, PS7	-
A	702	SX
N	PS3, PS4, PS5	-
O	PS6	-
OX	906	NX
R	PS3, PS4, PS5	-
T	302	CX
V	-	-
W	203	OP
Y	502	WX

## Ready to Get Started?

Reach out to ARM Purification today at 719.538.5959 to place your order. You can also use our interactive Product Finder to identify the purifier solution that is best suited to your specific needs by visiting [armpurification.com/finder](http://armpurification.com/finder) today.



BROUGHT TO YOU BY



[www.appliedenergysystems.com](http://www.appliedenergysystems.com)

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