



ARM PURIFICATION
BY APPLIED ENERGY SYSTEMS

Point-of-Use Purifiers

Gas Purifiers for Low Flow Rate Applications

Low flow rate applications have big implications.

ARM Purification delivers a full suite of point-of-use purifiers that meet your precise requirements and exceed your expectations.

Our point-of-use purifiers are designed for high purity and ultra high purity applications that require impurity levels in process gases to be 100 PPT or less. Learn how they uphold the highest standard of purity for gas delivery systems.

ARM Purification also has frame mounted and bulk systems for larger flow rates.

Our Suite of Point-of-Use Gas Purifiers

Vessel Only Purifiers

Operate without requiring heat to remove impurities.

Nova Series In-Line Purifiers

Incorporate a heater, temperature indication, and control.

At-a-Glance

FEATURES

- Flow rates from 0.2 slpm up to almost < 2,000 slpm*
- 316L stainless steel construction
- Integral Particle Filtration
- Simple installation
- Inlet/outlet fittings
- Sub-micron particle filtration

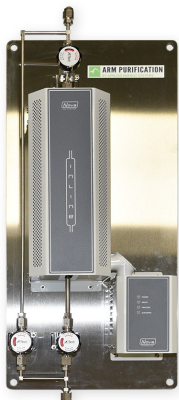
OPTIONS

- Inlet/outlet valves

APPLICATIONS

- Weld gas/purge gas
- Pharmaceutical production
- Semiconductor process equipment
- Analytical equipment
- Annealing cover gas
- Solar and energy

*Bulk Solutions also available



Point-of-Use Purifier Specs

Including standard sizes, dimensions, and pressure rating.

Model Number	Diameter Inches	Length Inches	Standard MVCR Fittings	Maximum Pressure Rating (psig)
100330	1.0	3.30	1/4" (V04)	250
150330	1.5	3.30	1/4" (V04)	250
150450	1.5	4.50	1/4" (V04)	250
150480	1.5	4.80	1/4" (V04)	250
200630	2.0	6.30	1/4" (V04)	250
200880	2.0	8.80	1/4" (V04)	250
251250	2.5	12.50	1/4" (V04)	250
300790	3.0	7.90	1/4" (V04) & 1/2" (V08)	250
301000	3.0	10.00	1/4" (V04) & 1/2" (V08)	200
301250	3.0	12.50	1/4" (V04) & 1/2" (V08)	200
301820	3.0	18.20	1/4" (V04) & 1/2" (V08)	200
401730	4.0	17.30	1/4" (V04) & 1/2" (V08)	200
401760	4.0	17.60	1/4" (V04) & 1/2" (V08)	200
402000	4.0	20.00	1/4" (V04) & 1/2" (V08)	200
602760	6.0	27.60	1/2" (V08) & 3/4" (V12)	150
605100	6.0	51.00	1/2" (V08) & 3/4" (V12)	150

**Additional sizes available upon request*

Series Overview

ARM Purification offers world-class ambient operation purifier technology optimized for a wide range of flow rates. Following are details about each series. For more information, refer to each Series' individual datasheet.

IG Series

The IG series purifiers are engineered to remove impurities from **Inert Gases**, such as Ar, He, Kr, N₂, Ne, and Xe. The IG series is designed for high and ultra high purity applications that require process gas impurity levels of 100 PPT or less.

For more purifiers that remove CH₄ or N₂, explore our NOVA™ Rare Gas Purifiers, and NOVA™ Nitrogen Gas Purifiers.

IG Series Media					
Fill Material	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
IG-101	H ₂ O	< 100 ppt	yes	no	3 ppm H ₂ O
IG-103	H ₂ O, CO ₂ , NMHC, Acids & Bases, Refractory Compounds	< 100 ppt	yes	no	1 ppm H ₂ O
IG-105	H ₂ O, H ₂ , O ₂ , CO, CO ₂ , NMHC	< 100 ppt	yes	yes	1 ppm O ₂
IG-106	H ₂ O, H ₂ , O ₂ , CO, CO ₂ , NMHC, Acids & Bases, Refractory Compounds	< 100 ppt	yes	yes	1 ppm O ₂
IG-108	H ₂ O, H ₂ , O ₂ , CO, CO ₂ , NMHC, Sulfur Compounds	< 100 ppt	yes	yes	1 ppm O ₂
IG-115	NMHC, Refractory Compounds, DMF	< 100 ppt	yes	no	1 ppm NMHC (as Toluene)

RG Series

The RG series purifiers are engineered to remove impurities from **Reactive Gases**, such as D₂, H₂, H₂/Ar, H₂/He, and H₂/N₂. The RG series is designed for high and ultra high purity applications that require process gas impurity levels of 100 PPT or less.

RG Series Media					
Fill Material	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
RG-201	H ₂ O	< 100 ppt	yes	no	3 ppm H ₂ O
RG-203	H ₂ O, CO ₂ , NMHC, Acids & Bases, Refractory Compounds	< 100 ppt	yes	no	1 ppm H ₂ O
RG-205	H ₂ O, O ₂ , CO, CO ₂ , NMHC	< 100 ppt	yes	yes	1 ppm O ₂
RG-206	H ₂ O, O ₂ , CO, CO ₂ , NMHC, Acids & Bases, Refractory Compounds	< 100 ppt	yes	yes	1 ppm O ₂
RG-208	H ₂ O, O ₂ , CO, CO ₂ , NMHC, Sulfur Compounds	< 100 ppt	yes	yes	1 ppm O ₂
RG-215	NMHC, Refractory Compounds, DMF	< 100 ppt	yes	no	1 ppm NMHC (as Toluene)

AG Series

The AG series purifiers are engineered to remove impurities from **Acid and Corrosive Gases**, such as BCl_3 , BF_3 , B_2H_6 , Cl_2 , CClH_3 , CHClF_2 , GeCl_4 , GeH_4 , HBr , HCl , HF , H_2S , H_2Se , NF_3 , SiCl_4 , SiF_4 , SiHCl_3 , SiH_2Cl_2 , and SO_2 . The AG series is designed for high and ultra high purity applications that require process gas impurity levels of 1 PPB or less. Contact factory for complete list of gases.

AG Series Media						
Fill Material	Gas Purified	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
AG-301	Any Acid Gas	H_2O	1 < ppb	no	no	1 ppm H_2O
AG-303	HBr	H_2O	1 < ppb	no	no	1 ppm H_2O

HG Series

The HG series purifiers are engineered to remove impurities from **Hydride Gases**, such as AsH_3 , B_2H_6 , DCS, DMHZ, GeH_4 , GeH_4/H_2 , Ge_2H_6 , H_2Se , $\text{H}_2\text{Se}/\text{H}_2$, NH_3 , PH_3 , SiH_2 , SiH_4 , Si_2H_6 , and SiH_4/H_2 . The HG series is designed for high and ultra high purity applications that require process gas impurity levels of 1 PPB or less. Contact factory for complete list of gases.

HG Series Media						
Fill Material	Gas Purified	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
HG-501	Hydrides	H_2O , O_2 , CO_2	< 1 ppb	no	yes	1 ppm O_2
HG-502	Ammonia	H_2O , O_2 , CO_2 , NMHC	< 1 ppb	yes	yes	1 ppm O_2
HG-508	Hydrides	H_2O	< 1 ppb	no	no	3 ppm H_2O

OG Series

The OG series purifiers are engineered to remove impurities from **Oxygen and Oxygenated Gases**, such as CDA, O₂, NO and N₂O. The OG series is designed for high and ultra high purity applications that require process gas impurity levels of 100 PPT or less.

OG Series Media					
Fill Material	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
OG-601	H ₂ O	< 100 ppt	yes	no	3 ppm H ₂ O
OG-602	H ₂ O, CO ₂ , NMHC, Acids & Bases, Refractory Compounds	< 100 ppt	yes	no	1 ppm H ₂ O
OG-605	Acids & Bases, Refractory Compounds	< 1 ppb	no	no	1 ppm Toluene
OG-606	H ₂ O, CO ₂ , NMHC	< 100 ppt	yes	no	3 ppm H ₂ O
OG-615	NMHC, Refractory Compounds, DMF	< 100 ppt	yes	no	1 ppm NMHC (as Toluene)

CO2 Series

The CO₂ series purifiers are engineered to remove impurities from **Carbon Dioxide Gas**. The CO₂ series is designed for high and ultra high purity applications that require process gas impurity levels of 100 PPT or less.

CO2 Series Media					
Fill Material	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
CO2-701	H ₂ O	< 100 ppt	yes	no	3 ppm H ₂ O
CO2-703	H ₂ O, O ₂ , CO, H ₂ , NMHC, Acids & Bases, Refractory Compounds	< 100 ppt	yes	yes	1 ppm O ₂
CO2-715	NMHC, Refractory Compounds, DMF	< 100 ppt	yes	no	1 ppm NMHC (as Toluene)

CO Series

The CO series purifiers are engineered to remove impurities from **Carbon Monoxide Gas (CO)**. The CO series is designed for high and ultra high purity applications that require process gas impurity levels of 100 PPT or less.

CO Series Media					
Fill Material	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
CO-801	H ₂ O, O ₂ , CO ₂	< 1 ppb	no	no	1 ppm H ₂ O

FG Series

The FG series purifiers are engineered to remove impurities from **Fluorocarbon Gases**, such as CCl₄, CClF₃, CCl₂F₂, CF₄, C₂F₆, C₃F₈, C₄F₈, CHF₃, and CH₃F. The FG series is designed for high and ultra high purity applications that require process gas impurity levels of 100 PPT or less. Contact factory for complete list of gases.

FG Series Media					
Fill Material	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
FG-903	H ₂ O	< 100 ppt	no	no	3 ppm H ₂ O
FG-908	H ₂ O, H ₂ , O ₂ , CO, CO ₂ , NMHC, Sulfur Compounds	< 100 ppt	no	yes	1 ppm O ₂

HCG Series

The HCG series purifiers are engineered to remove impurities from **Hydrocarbon Gases**, such as CH₄, C₂H₂, C₂H₄, C₂H₆, and C₃H₈. The HCG series is designed for high and ultra high purity applications that require process gas impurity levels of 100 PPT or less, except for HG-1106 which has levels of < 1 PPT.

For a purifier that removes N₂ from methane, explore our NOVA™ Methane Purifier.

HCG Series Media					
Fill Material	Impurities Removed	Outlet Purity	Factory Regenerable	Dangerous Goods	Lifetime of 1 year based on inlet challenge
HCG-1106	H ₂ O	< 100 ppt	no	no	3 ppm H ₂ O
HCG-1108	H ₂ O, H ₂ , O ₂ , CO, CO ₂ , NMHC, Sulfur Compounds	< 100 ppt	no	yes	1 ppm O ₂
HCG-1115	NMHC, Refractory Compounds, DMF	< 100 ppt	no	no	1 ppm NMHC (as Toluene)

Ordering Information

Example: Inert Gas Purifier



Class

IG = Inert Gas

Fill

See IG Series Media chart for details.

Size

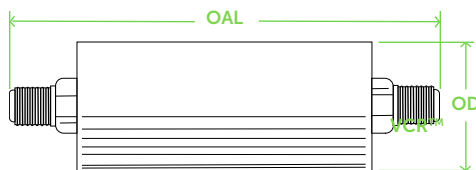
First two digits are the diameter (OD); Last four digits are the length (OAL) in inches.

Fittings

V04=1/4" V12=3/4"
V08=1/2" V16=1"

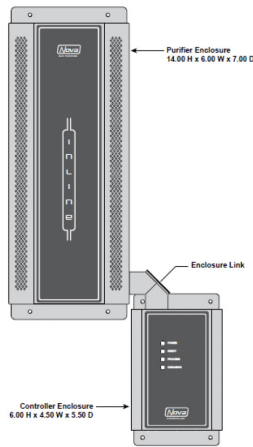
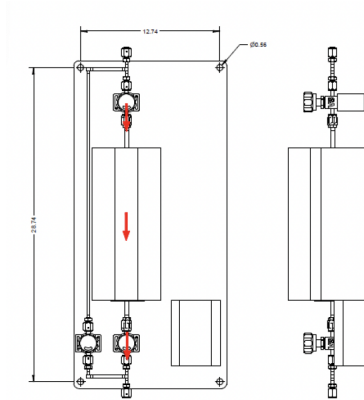
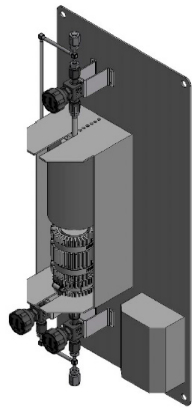
Filtration

No letter = .1 micron filter
F = 1.5nm filter



NOVA™ Nitrogen Gas Purifier

Nova Series Dimensions



SPECIFICATIONS

GASES PURIFIED

- Nitrogen (N_2) and Nitrogen Mixtures

DESIGN FLOW RATE

Up to 10 slpm

IMPURITIES REMOVED

- Oxygen (O_2) < 1 ppb
- Carbon Monoxide (CO) < 1 ppb
- Carbon Dioxide (CO_2) < 1 ppb
- THC (as CH_4) < 1 ppb
- Moisture (H_2O) < 1 ppb
- Hydrogen (H_2) < 1 ppb

MAXIMUM PRESSURE

150 PSIG

Nova Series Ordering Information

Example: NOVA Nitrogen Gas Purifier

N	—	2101	—	200880	—	N	—	F	—	115N
Product Line		Fill		Model Number		Working Gas		Filtration		Power Supply

Product Line

N - Nova Series

Model Number

200880 - For flow rates up to 10 slpm

Filtration

F - 1.5 nm filter

Fill*

2101 - Nitrogen Gas Media

Working Gas

N - Nitrogen Gas

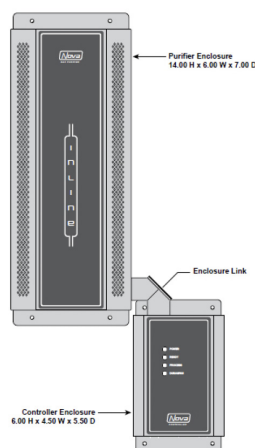
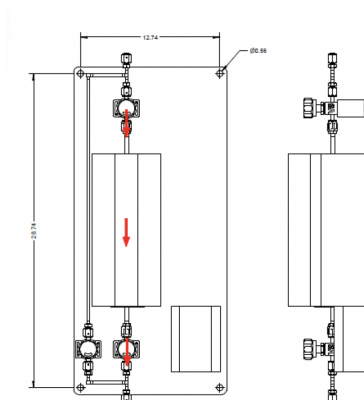
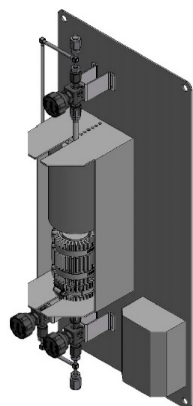
Power Supply

115N - 115V with Nema plug
230C - 230V with CEE 7/7 plug
230B - 230V with BS 1363 plug

*Other options available for rare gases and methane.

NOVA™ Rare Gas Purifier

Nova Series Dimensions



SPECIFICATIONS

GASES PURIFIED

- Ar, He, Ne, Xe, Kr

DESIGN FLOW RATE

Up to 10 slpm

IMPURITIES REMOVED

- Oxygen (O_2) < 1 ppb
- Carbon Monoxide (CO) < 1 ppb
- Carbon Dioxide (CO_2) < 1 ppb
- THC (as CH_4) < 1 ppb
- Moisture (H_2O) < 1 ppb
- Hydrogen (H_2) < 1 ppb
- Nitrogen (N_2) < 1 ppb

MAXIMUM PRESSURE

150 PSIG

Nova Series Ordering Information

Example: NOVA Rare Gas Purifier

N	—	2102	—	200880	—	R	—	F	—	115N
Product Line		Fill		Model Number		Working Gas		Filtration		Power Supply

Product Line

N - Nova Series

Model Number

200880 - For flow rates up to 10 slpm

Filtration

F - 1.5 nm filter

Fill*

2102 - Rare Gas Media

Working Gas

R - Rare Gases that contain
< 10ppm N

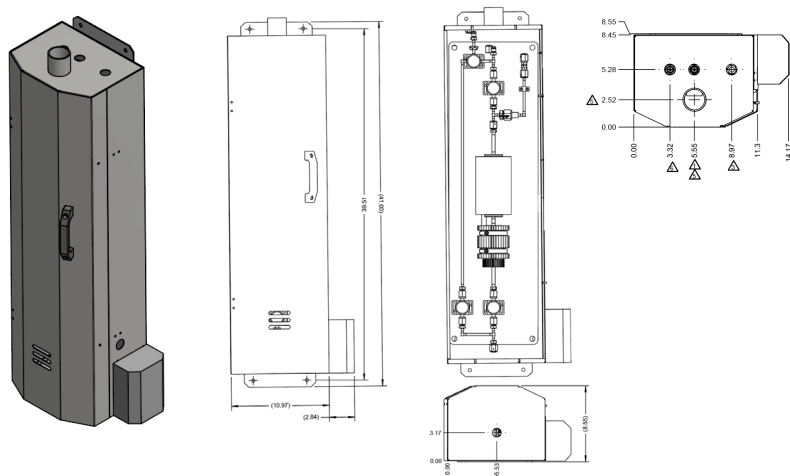
Power Supply

115N - 115V with Nema plug
230C - 230V with CEE 7/7 plug
230B - 230V with BS 1363 plug

*Other options available for nitrogen gases and methane.

NOVA™ Methane Purifier

Nova Series Dimensions



SPECIFICATIONS

GASES PURIFIED

- Methane CH_4

DESIGN FLOW RATE

Up to 10 slpm

IMPURITIES REMOVED

- Moisture (H_2O) < 1 ppb
- Oxygen (O_2) < 1 ppb
- Nitrogen (N_2) < 1 ppb

MAXIMUM PRESSURE

150 PSIG

Nova Series Ordering Information

Example: NOVA Methane Purifier

N	—	2106	—	200880	—	M	—	F	—	115N
Product Line		Fill		Model Number		Working Gas		Filtration		Power Supply

Product Line

N - Nova Series

Model Number

200880 - For flow rates up to 10 slpm

Filtration

F - 1.5 nm filter

Fill*

2106 - Methane Media

Working Gas

M - Methane CH_4

Power Supply

115N - 115V with Nema plug
230C - 230V with CEE 7/7 plug
230B - 230V with BS 1363 plug

*Other options available for nitrogen gases and methane.

Learn how we can help you meet your gas purification needs by visiting www.arpurification.com.

For more information, contact your ARM Purification sales rep or visit arpurification.com/request-quote/.

To place an order, email orders@appliedenergysystems.com.



ARM PURIFICATION
BY APPLIED ENERGY SYSTEMS

BROUGHT TO YOU BY



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