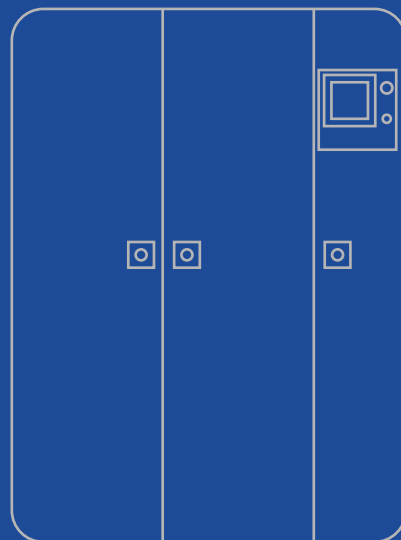
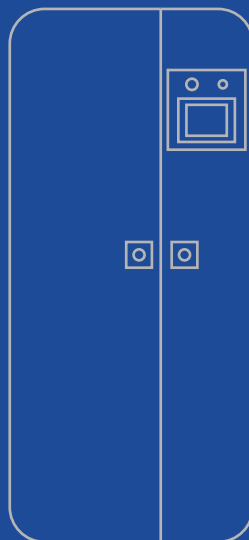
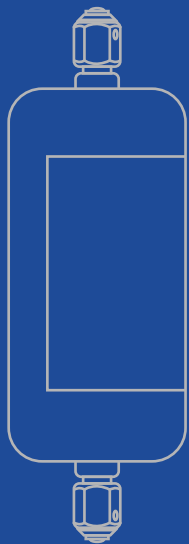


9N SERIES

High Performance Gas Purification Products



SIMPURE
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Product Overview

SimPure 9N series high performance gas purifiers include POU(Point-of-Use) gas purifier, getter-based gas purifier and in-situ regeneration gas purification system which use catalyst/adsorber and getter technologies designed specifically to provide ultra-high purity bulk gases, such as Nitrogen, Argon, Helium, Hydrogen, Oxygen and so forth, and specialty gases, such as Hydride Gas, Carbon Dioxide and so forth. The 9NP series gas purifiers can remove impurities such as H₂O, O₂, CO, CO₂, H₂, CH₄, NMHC, etc. to less than one part-per-billion (ppb) at flow rate from 1 slm to 20000Nm³/h.



High Quality Purification Media
Pressure Vessel Certification Providable
Effectively Remove Impurities
to Less than 1 ppb



World-Class Brands Valves,
Pipes and Fittings
Welded and Assembled in
CLASS 1000 Clean Room



Assembled and Tested in Clean Room



World-Class Brands Touch Screen, PLC,
Temperature Controllers, etc.
Fully Automated System Operation



Model selection information

9N Series Gas Purification Products Ordering Information



Contact SimPure for more information

9N Series Purification Products Selection Guide

Product Series	9NP	9NG	9NS	9NS-IM	9NS-OM
Typical Gas Type*	N ₂ , Ar, He, H ₂ , O ₂ , CDA, etc.	N ₂ , H ₂ , Ar, He, Xe, Ne, etc.	N ₂ , Ar, He, H ₂ , O ₂ , CDA, etc.	N ₂ , Ar, He, etc.	O ₂
Flow Rate Range	1–2000slm	1slm–720Nm ³ /h	10–20000Nm ³ /h	30–6000Nm ³ /h	10–3000Nm ³ /h
Operating Pressure Range	1.0MPa	1.0MPa	1.0–2.0MPa	1.0MPa	1.0MPa
Filtration Removal Rating	0.003 μm**	0.003 μm***	0.003 μm***	0.003 μm***	0.003 μm***
Purification Technology	Catalyst/Adsorber	Getter	Catalyst/Adsorber	Heating Catalyst+ Catalyst/Adsorber	Heating Catalyst+ Adsorber
Regeneration Method	Regenerable at manufacturer	Cannot be regenerated. Change the purification unit after saturation.	In-situ regeneration	No need to regeneration for the heating catalyst purification unit. In-situ regeneration for adsorber purification units.	

* Contact SimPure for more gas types and purified gases.

** Built-in 0.003 μm particle filter for 9NP Series

*** Options for partial models

9NP SERIES

SimPure 9NP series high performance gas purifiers use catalyst/adsorber technology designed specifically to provide ultra-high purity gases under ambient temperature conditions. The 9NP series gas purifiers can remove impurities such as H₂O, O₂, CO, CO₂, NHMC, etc. to less than 1 ppb (part-per-billion). The 9NP series gas purifier features a built-in 0.003 μ m filter in the electrochemically polished 316L stainless steel canister.

Product Features

Operate at ambient temperature

Maximum flow rate from 1 to 2000slm

Outlet impurity level < 1ppb

Built-in a 0.003 μ m 316L SS particle filter

316L SS EP purification canister, 100% Helium leak tested

Options for the purifier to mounted with dual valves, three valves, four valves, etc.

Regenerable at manufacturer

Purifier with CE certification

Low cost-of-ownership

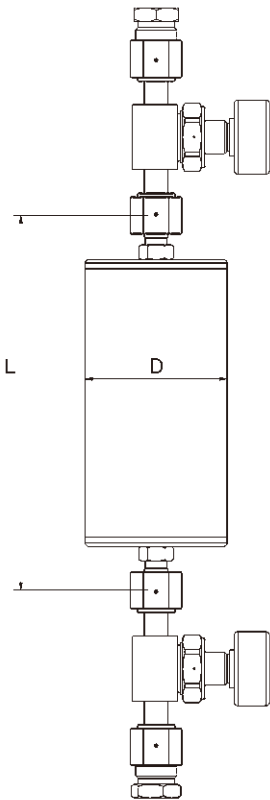


9NP SERIES

Purification Specification

Gas Type*	Purified Gases*	Impurities	Outlet Impurity Level
Inert Gas-I	N2, Ar, He, Xe, Ne, Kr	H2O, O2, CO, CO2, H2, NMHC	<1ppb
Oxygen-O	O2, CDA	H2O, CO2, NMHC	
Hydrogen-H	H2 The mixture gas of hydrogen and inter gas	H2O, O2, CO, CO2, NMHC	

* Contact SimPure for more gas types and purified gases.



General Specifications

Model	Nominal Flow Rate (slm)	Max. Pressure (MPa)	Max. Pressure Drop (MPa)	Filtration Removal Rating (µm)	Inlet/Outlet Fitting	Length (Face-to-Face) -L	Outside Diameter - D
9NP001	1	1.0	0.1	0.003	1/4" MVCR	3.3" (84mm)	1.5" (38.1mm)
9NP003	3	1.0	0.1	0.003	1/4" MVCR	4.5" (114mm)	1.5" (38.1mm)
9NP005	5	1.0	0.1	0.003	1/4" MVCR	5" (127mm)	1.5" (38.1mm)
9NP030	30	1.0	0.1	0.003	1/4" MVCR	6.3" (160mm)	2" (50.8mm)
9NP050	50	1.0	0.1	0.003	1/4" MVCR	7.9" (202mm)	3" (76.2mm)
9NP300	300	1.0	0.1	0.003	1/4" MVCR	17.3" (440mm)	4" (101.6mm)
9NP300-8L	500	1.0	0.1	0.003	1/2" MVCR	20.0" (508mm)	4" (101.6mm)
9NP999	1000	1.0	0.1	0.003	1/2" FVCR 1/2" MVCR	28.2" (716mm)	6" (152.4mm)
9NP1999S	2000	1.0	0.1	0.003	3/4" MVCR	50.8" (1290mm)	6" (152.4mm)

* Contact SimPure for more requirements.

9NG SERIES

SimPure 9NG series high performance gas purifiers consist of two parts: the gas purifier and the electrical controller. The gas purifier is composed of heated getter purification columns, valves, gas pipelines and heat sinks. It uses Getter technology and can be outfitted with 0.003 μm filters in the electrochemical polished 316L stainless steel canister to remove impurities such as H_2O , O_2 , CO , CO_2 , CH_4 , NMHC, etc. to less than 1 ppb (part-per-billion). The electrical controller continually monitors system operation, providing fault detection and temperature control to ensure smooth operation.

Product Features

- Maximum flow rate from 1 slm to 720Nm³/h
- Outlet impurity level < 1ppb
- Remove CH_4 from rare gases and nitrogen
- Remove N_2 from rare gases and hydrogen
- Options to configure 0.003 μm particle filters
- 316L SS EP purification canister

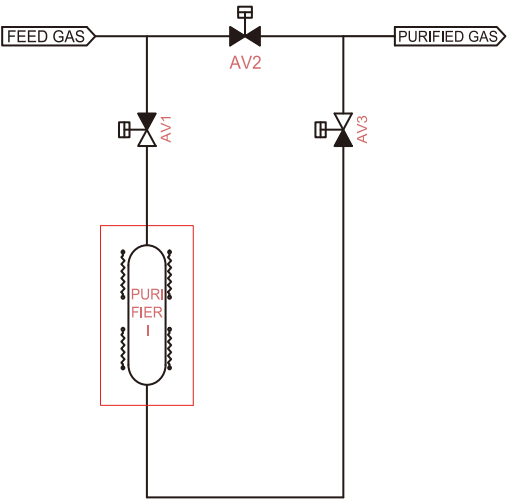


9NG SERIES

Purification Specification

Gas Type*	Purified Gases*	Impurities	Outlet Impurity Level
Rare Gas–R	Ar, He, Xe, Ne, Kr	H2O, O2, CO, CO2, H2, CH4, NMHC, N2	<1ppb
Hydrogen–H	H2	H2O, O2, CO, CO2, CH4, NMHC, N2	
Nitrogen–N	N2	H2O, O2, CO, CO2, H2, CH4, NMHC	

* Contact SimPure for more gas types and purified gases.



General Specifications

Model	Nominal Flow Rate*	Max. Pressure* (MPa)	Max. Pressure Drop* (MPa)	Filtration Removal Rating* (μm)
9NG001—030	1, 5, 30slm	1.0	0.1	0.003
9NG150—1000	10, 20, 30, 60Nm3/h	1.0	0.1	0.003
9NG2000—8500	120, 200, 240, 360, 500Nm3/h	1.0	0.1	N/A
9NG10000—12000	600, 720Nm3/h	1.0	0.1	N/A

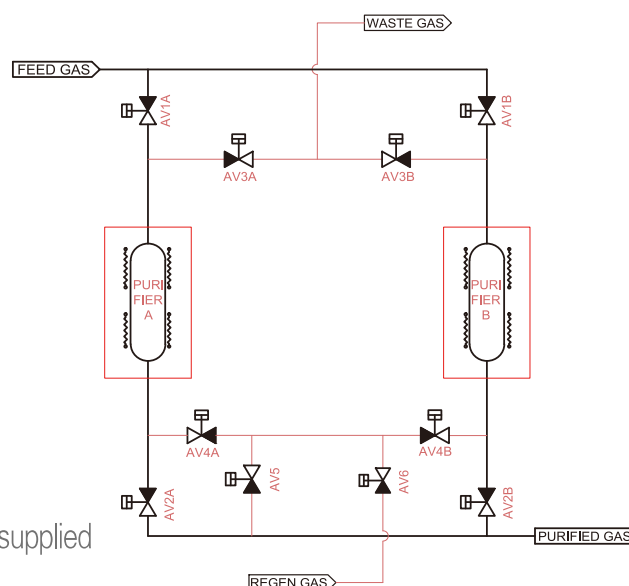
* Contact SimPure for more requirements.

9NS SERIES

SimPure 9NS series high performance gas purification system consists of two parts: the gas purifier and the electrical controller. The gas purifier is composed of multi-vessel designed purification columns, valves, gas pipelines and heat sinks. It uses catalyst/adsorber technology and automatic in-situ regeneration to provide ultra-high purity gases. The electrical controller features a touch screen, PLC and temperature controllers to continually monitor system operation. It provides fault detection and control over the purification and regeneration process. The 9NS Series gas purification system can remove impurities such as H₂O, O₂, CO, CO₂, NMHC, H₂, etc. to less than 1 ppb (part-per-billion). Moreover, the 9NS Series gas purification system can be outfitted with optional 0.003 μ m filters.

Product Features

- Maximum flow rate from 10 to 20000Nm³/h
- Outlet impurity level < 1ppb
- Options to configure 0.003 μ m particle filters
- 316L SS EP purification canister
- Multi-vessel design, in-situ regeneration
- Fully automated system operation with continuously gas supplied



Purification Specification

Gas Type*	Purified Gases*	Impurities	Outlet Impurity Level
Inert Gas-I	N ₂ , Ar, He, Xe, Ne, Kr	H ₂ O, O ₂ , CO, CO ₂ , H ₂ , NMHC	<1ppb
Oxygen-O	O ₂ , CDA	H ₂ O, CO ₂ , NMHC, H ₂	
Hydrogen-H	H ₂ The mixture gas of hydrogen and inter gas	H ₂ O, O ₂ , CO, CO ₂ , NMHC	

* Contact SimPure for more gas types and purified gases.

General Specifications

Model	Nominal Flow Rate* (Nm ³ /h)	Max. Pressure* (MPa)	Max. Pressure Drop* (MPa)	Filtration Removal Rating* (μ m)
9NS010-060	10, 20, 30, 40, 60	1.0	0.1	0.003
9NS100-2000	100, 150, 200, 300, 400, 600, 800, 1000, 1500, 2000	1.0	0.1	0.003
9NS3000-8000	3000, 4000, 6000, 8000	1.0	0.1	N/A
9NS10000-20000	10000, 15000, 20000	1.0	0.1	N/A

* Contact SimPure for more requirements.

9NS-IM SERIES

SimPure 9NS-IM series high performance inert gas purification system consists of two parts: the gas purifier and the electrical controller. The gas purifier is composed of a heating catalyst purification column and multi-vessel designed ambient temperature catalyst/adsorber purification columns, valves, gas pipelines and heat sinks. It uses catalyst/adsorber technology and automatic in-situ regeneration to provide ultra-high purity gases. The electrical controller features a touch screen, PLC and temperature controllers to continually monitor system operation. It provides fault detection and control over the purification and regeneration process. The 9NS-IM Series gas purification system can remove impurities such as H₂O, O₂, CO, CO₂, CH₄, NMHC, H₂, etc. to less than 1 ppb (part-per-billion). Moreover, the 9NS-IM Series gas purification system can be outfitted with optional 0.003 μ m filters.

Product Features

Maximum flow rate from 30 to 6000 Nm³/h

Outlet impurity level < 1ppb

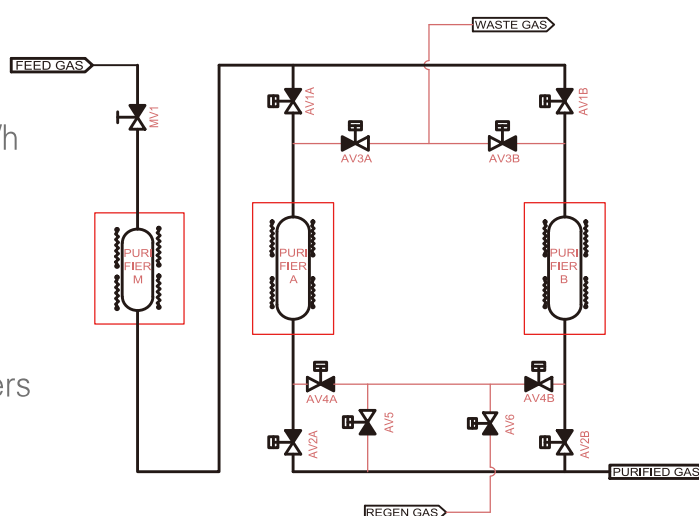
Remove CH₄ from inert gas

Options to configure 0.003 μ m particle filters

316L SS EP purification canister

No need to regenerate the heating catalyst purification unit.
In-situ regeneration for ambient temperature catalyst/adsorber purification unit.

Fully automated system operation with continuously gas supplied



Purification Specification

Gas Type*	Purified Gases*	Impurities	Outlet Impurity Level
Inert Gas-I	N ₂ , Ar, He, Xe, Ne, Kr	H ₂ O, O ₂ , CO, CO ₂ , H ₂ , CH ₄ , NMHC	<1ppb

* Contact SimPure for more gas types and purified gases.

General Specifications

Model	Nominal Flow Rate* (Nm ³ /h)	Max. Pressure* (MPa)	Max. Pressure Drop* (MPa)	Filtration Removal Rating* (μ m)
9NS030-200-IM	30, 40, 60, 100, 150, 200	1.0	0.1	0.003
9NS300-800-IM	300, 400, 600, 800	1.0	0.1	N/A
9NS1000-6000-IM	1000, 1500, 2000, 3000, 4000, 6000	1.0	0.1	N/A

* Contact SimPure for more requirements.

9NS-OM SERIES

SimPure 9NS-OM series high performance oxygen purification system consists of two parts: the gas purifier and the electrical controller. The gas purifier is composed of a heating catalyst purification column and multi-vessel designed ambient temperature catalyst/adsorber purification columns, valves, gas pipelines and heat sinks. It uses catalyst/adsorber technology and automatic in-situ regeneration to provide ultra-high purity gases. The electrical controller features a touch screen, PLC and temperature controllers to continually monitor system operation. It provides fault detection and control over the purification and regeneration process. The 9NS-OM Series gas purification system can remove impurities such as H₂O, CO, CO₂, CH₄, NMHC, H₂, etc. to less than 1 ppb (part-per-billion). Moreover, the 9NS-OM Series gas purification system can be outfitted with optional 0.003 μ m filters.

Product Features

Maximum flow rate from 10 to 3000 Nm³/h

Outlet impurity level < 1ppb

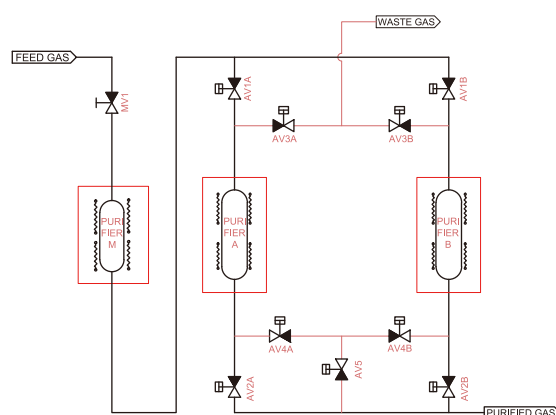
Remove CH₄ from oxygen

Options to configure 0.003 μ m particle filters

316L SS EP purification canister

No need to regenerate the heating catalyst purification unit
In-situ regeneration for ambient temperature adsorber purification unit

Fully automated system operation with continuously gas supplied



Purification Specification

Gas Type*	Purified Gases*	Impurities	Outlet Impurity Level
Oxygen-O	O ₂	H ₂ O, CO, CO ₂ , H ₂ , CH ₄ , NMHC	<1ppb

* Contact SimPure for more gas types and purified gases.

General Specifications

Model	Nominal Flow Rate* (Nm ³ /h)	Max. Pressure* (MPa)	Max. Pressure Drop* (MPa)	Filtration Removal Rating* (μ m)
9NS010-200-OM	10, 20, 30, 40, 60, 100, 150, 200	1.0	0.1	0.003
9NS300-800-OM	300, 400, 600, 800	1.0	0.1	N/A
9NS1000-3000-OM	1000, 1500, 2000, 3000	1.0	0.1	N/A

* Contact SimPure for more requirements.

9N Series

Purification Products Applications

IC Manufacture

12-inch Semiconductor Silicon Wafer

Flat Panel Display

Optics Fiber

High Purity Gas, Standard Gas, Mixture Gas,
Electronics Gas Production

R&D

Semiconductor Discrete Device and Chip

LED, Laser Diode

Solar Cell

Semiconductor process tools, such as Epitaxy,
CVD, MOCVD, PECVD, Bulk gases purification

Purge Gas, Carrier Gas, Zero Gas Purifying



9N Series High Performance Gas Purification Products:

- 9NP Series High Performance POU Gas Purifier
- 9NG Series High Performance Getter Type Gas Purifier
- 9NS Series High Performance Gas Purification System
- 9NS-IM/OM Series High Performance CH₄ Removal Gas Purification System

7N Series Economical Gas Purification Products

- 7NP Series Economical POU Gas Purifier
- 7NG Series Economical Getter Type Gas Purifier
- 7NS Series Economical Gas Purification System
- 7NS-IM/OM Series Economical CH₄ Removal Gas Purification System

HP/UP High/Ultra High Pressure Series Gas Purification Products

- 9NP HP Series POU Gas Purifier
- 7NP HP Series POU Gas Purifier
- 7NK HP/UP Series Gas Purification System
- 7NG HP/UP Series Getter Type Gas Purifier

GC Series Low Flow Gas Purifier for Gas Analytical Instruments

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