

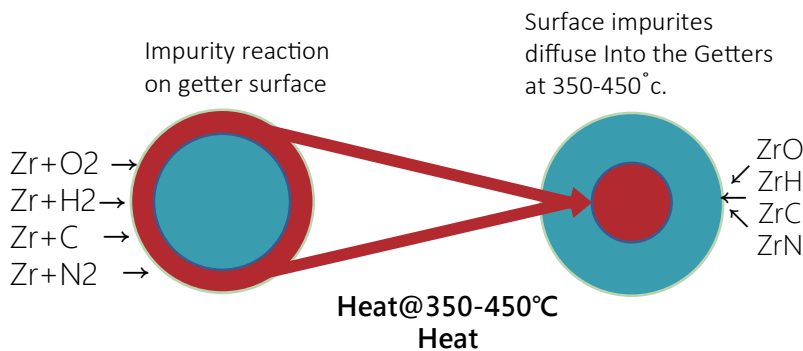
GETTRON

Getter Type Gas Purifiers

Tronic Purity's GETTRON® line implements getters, which consist of zirconium alloys in the form of porous pellets that come in a myriad of sizes, as the main adsorption mechanism. The GETTRON® series, like many getter purifiers, is a heat-induced model that typically operates at around 350-450°C, depending on the targeted gas and impurities.

Zirconium (Zr) alloys that contain aluminum (Al), iron (Fe), and vanadium (V) have been used for gas purification for over 40 years. These alloys have great reactivity with a broad range of gas species, such as H₂O, O₂, CO, CO₂, N₂ and CH₄. Heat plays a fundamental role in the overall reaction. The chemical equations shown below occur on the surface of the getter pellets, and the reaction products then diffuse into the core of the getter alloys, clearing up fresh surfaces so that adsorption can be reactivated continuously.

The GETTRON® purifiers have incorporated this long-standing technology with an operator-friendly human-machine interface, bringing our clients a trusty solution to handle various challenging tasks.



Purification reactions:

√ Zr+O ₂ → ZrO	(Chemical Sorption)
√ Zr+H ₂ O → ZrH + ZrO	(Chemical Sorption)
√ Zr+CO → ZrC+ZrO	(Chemical Sorption)
√ Zr+CO ₂ → ZrC+ZrO	(Chemical Sorption)
√ Zr+H ₂ → ZrH	(Chemical Sorption)
√ Zr+N ₂ → ZrN	(Chemical Sorption)
√ Zr+CH ₄ → ZrC+ZrH	(Chemical Sorption)



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Tronic Purity, inc.

GAS Analytical
Delivery
Purification



Tronic Purity, inc.

GETTRON, GT1

1 ~3 slpm Getter Type Gas Purifiers

GETTRON® GT1-R/N series designed by a Getter Cartridge, one-stage purification unit with 3 slpm maximum flow capacity, which is specially designed for gas chromatography, zero gas and other analytical applications.

Outlet impurities for H₂O, O₂, H₂, CO, CO₂, CH₄ (and N₂ in Rare Gases) are reduced to below one parts per billion (ppb) levels at elevated temperature with 1 slpm or lower for one year guarantee.

GT1-R/N gas purifier provides 110VAC and 220VAC power voltage for selection, and, various installation options, 1/8" Compression Fittings and 1/4" MVCR, both models are available for outlet flow direction for up and down for your easily installation.

APPLICATIONS

- ✓ Analytical zero and carrier gas
- ✓ Annealing cover gases
- ✓ Crystal pulling
- ✓ MOCVD
- ✓ Optical fiber manufacturing
- ✓ Pharmaceutical production
- ✓ Photolithography
- ✓ PVD, CVD
- ✓ Welding and Purging
- ✓ Silicon epitaxy
- ✓ Semiconductor equipment
- ✓ Welding and Purging



Numbering System

GT1	-	X	-	X	-	X
		└─┘		└─┘		└─┘
		R = Rare Gas N = Nitrogen		1 = 110 VAC 2 = 220 VAC		1 = 1/8" Compression, Outlet Gas Flow Up 2 = 1/8" Compression, Outlet Gas Flow Down 3 = 1/4" VCR, Outlet Gas Flow Up 4 = 1/4" VCR, Outlet Gas Flow Down



Installed Power Informaiton

	NITROGEN		ARGON / HELIUM	
MODEL NO.	GT1-N-1-1/2/3/4	GT1-N-2-1/2/3/4	GT1-R-1-1/2/3/4	GT1-R-2-1/2/3/4
Power Voltage	110 VAC	220 VAC	110 VAC	220 VAC
Installed Power	75W	50W	100W	75W

Installation Information

MODEL NO.	GT1-N/R-1/2-1	GT1-N/R-1/2-2	GT1-N/R-1/2-3	GT1-N/R-1/2-4
Height (mm)	414.9	433.1	416.6	441.2
Width (mm)	118	118	118	118
Depth (mm)	123	123	123	123
Weight	3.5 Kg	3.5 Kg	3.5 Kg	3.5 Kg
Inlet Gas Connection	1/8" Compression Fitting	1/8" Compression Fitting	1/4" MVCR	1/4" MVCR
Outlet Gas Connection	1/8" Compression Fitting	1/8" Compression Fitting	1/4" MVCR	1/4" MVCR
Outlet Gas Flow Direction	Flow Up	Flow Down	Flow Up	Flow Down
Normal Flow	1 slpm	1 slpm	1 slpm	1 slpm
Maximum Flow	3 slpm	3 slpm	3 slpm	3 slpm
Maximum Inlet Pressure	9.8 bar / 142 psig	9.8 bar / 142 psig	9.8 bar / 142 psig	9.8 bar / 142 psig
Minimun Inlet Pressure	3.5 bar / 50 psig	3.5 bar / 50 psig	3.5 bar / 50 psig	3.5 bar / 50 psig
Pressure Drop (at 100 psig inlet pressure)	< 7 psid @ Normal Flow	< 7 psid @ Normal Flow	< 7 psid @ Normal Flow	< 7 psid @ Normal Flow
Purified Outlet Filter	100 µm/3T sintered filter	100 µm/3T sintered filter	100 µm/3T sintered filter	100 µm/3T sintered filter
Operation Temperature	300 ~ 350 Celius	300 ~ 350 Celius	350 ~ 400 Celius	350 ~ 400 Celius
Outlet Gas Temperature*	<90 °C @ 1 slpm	<90 °C @ 1 slpm	<90 °C @ 1 slpm	<90 °C @ 1 slpm
Tube Surface Treatment	SUS 316L-EP	SUS 316L-EP	SUS 316L-EP	SUS 316L-EP
Life time	>3 years @ normal flow	>3 years @ normal flow	>3 years @ normal flow	>3 years @ normal flow

* External outlet gas pipe cooling must be considered by user.

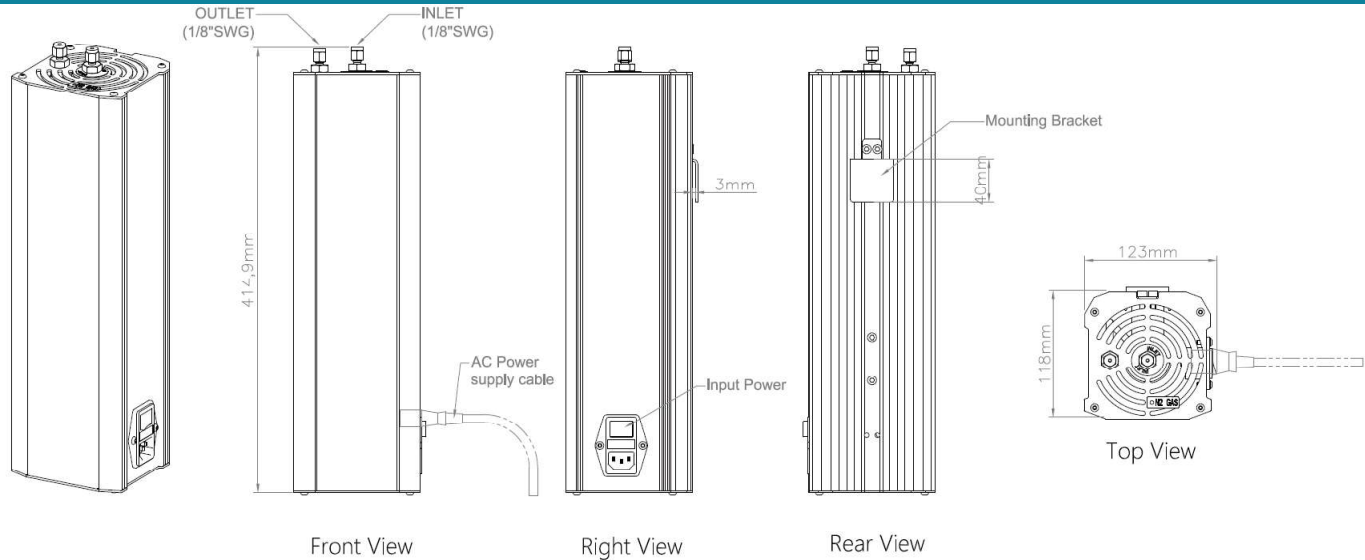
Performance

	NITROGEN		ARGON / HELIUM	
IMPURITIES	INLET	OUTLET	INLET	OUTLET
H2O	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv
O2	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv
CO	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv
CO2	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv
H2	<0.5 ppmv	≤ 10 ppbv *	<0.5 ppmv	≤ 10 ppbv *
CH4	<0.25 ppmv	≤ 1.0 ppbv	<0.25 ppmv	≤ 1.0 ppbv
N2	N/A	N/A	<1.0 ppmv	≤ 1.0 ppbv

* Can be down to ≤ 1 ppb after used for 4 weeks with >200 sccm flow.

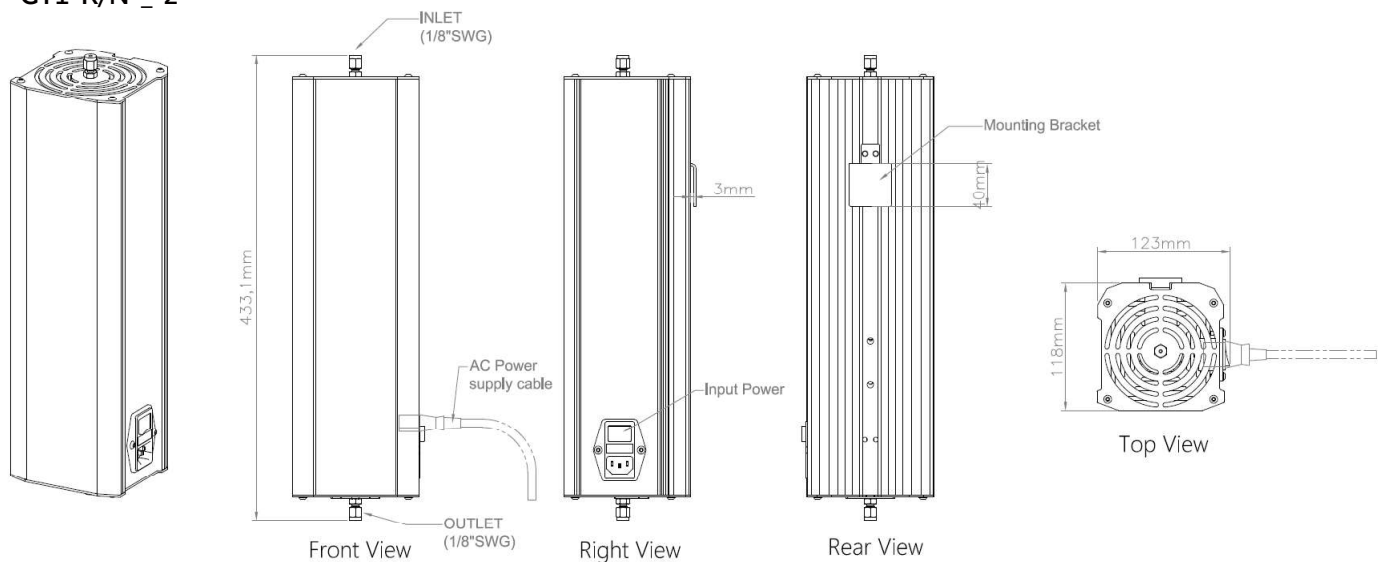
Platform Number Selection Guide

GT1-R/N-_-1

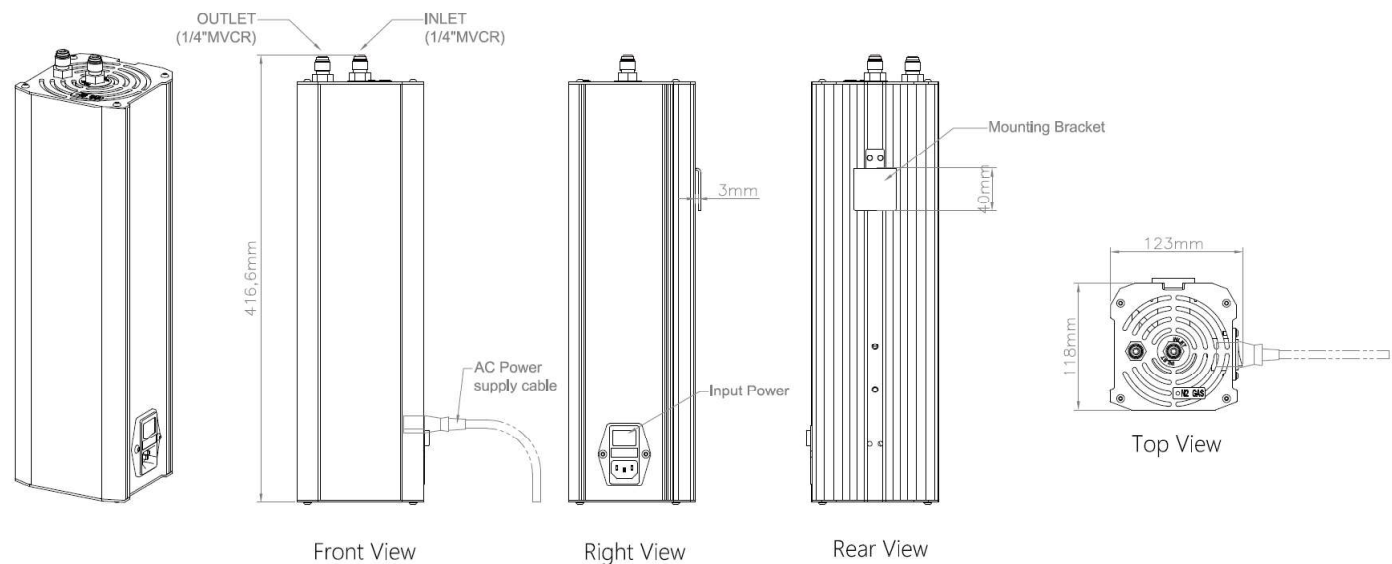


GT1-R/N-_-2

GT1-R/N-_-2



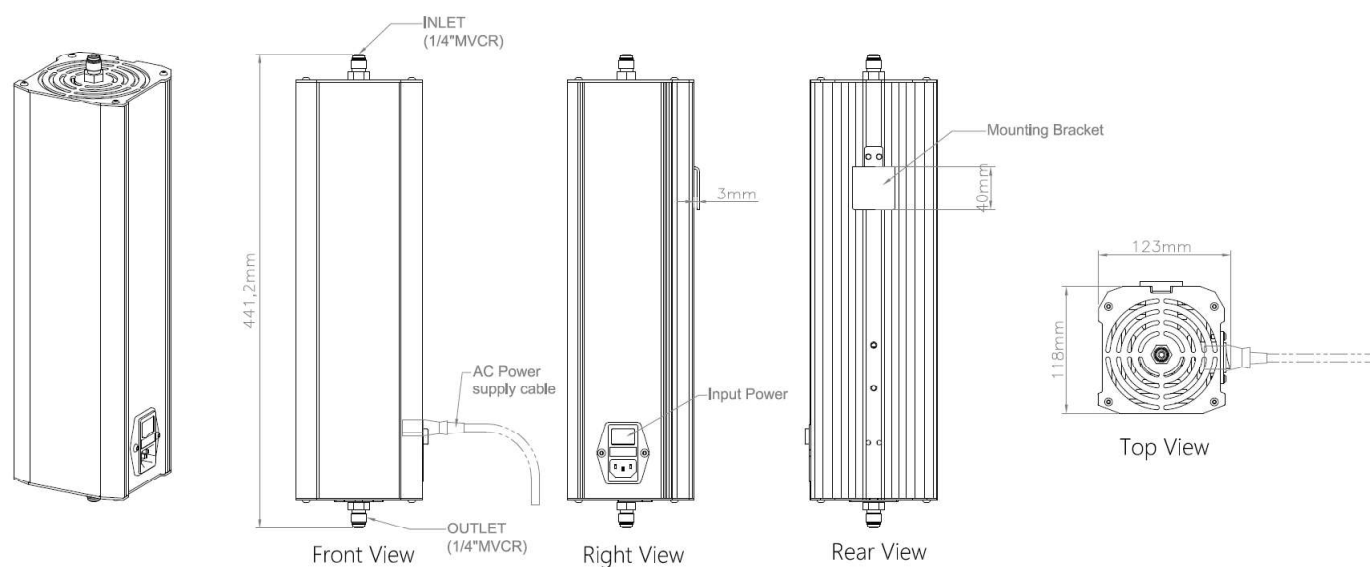
GT1-R/N-_-3





Tronic Purity, inc.

GT1-R/N-_-4



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GETTRON, GT2

10 slpm Getter Type Gas Purifiers

GETTRON® GT2-R/N Purifier: An advanced purifier designed for precision in semiconductor and analytical applications. It efficiently removes impurities like H₂O, O₂, H₂, CO, CO₂, CH₄, and N₂ (rare gases only) to levels below one part per billion (ppb) using a heated getter and a Hydrogen Removal Unit two-stages purification and up to 10 slpm flow rate. It maintains elevated temperatures, ensuring consistent 9-N gas purity for over a year.

110VAC and 220VAC Power Options: The GETTRON® GT2-R/N Purifier offers adaptable power supply choices for diverse applications. Select between 110VAC and 220VAC to suit your specific needs and ensure optimal performance.

PID Temperature Controller: Integrated within the purifier, this controller precisely manages and maintains elevated temperatures. By regulating the temperature, it ensures consistent gas purity in the outlet stream, enhancing the overall performance of the system.

Wall-Mountable Design: The purifier's space-saving design is engineered for efficiency. It can be conveniently mounted on walls.

Applications

Vapor Deposition Process	Point-Of Use Gas Purification
Photolithography	Analytical
Epitaxy	Crystal pulling
Etching	Fiber Optics
LED, Laser	Solar and Photovoltaics



Numbering System

GT2	-	X	-	X
		└─		└─
		R = Rare Gas		1 = 110 VAC
		N = Nitrogen		2 = 220 VAC



GT2 Series Purifier Installed Power Informaiton

	NITROGEN		ARGON / HELIUM	
MODEL NO.	GT2-N-1	GT2-N-2	GT2-R-1	GT2-R-2
Power Voltage	110 VAC	220 VAC	110 VAC	220 VAC
Installed Power	120W	100W	120W	100W
Operation Temperature	300 ~ 350 Celius	300 ~ 350 Celius	350 ~ 400 Celius	350 ~ 400 Celius
Outlet Gas Temperature*	<60 °C	<60 °C	<60 °C	<60 °C

* External outlet gas pipe cooling must be considered by user.

GT2 Platform Specifications

MODEL NO.	GT2-N-1	GT2-N-2	GT2-R-1	GT2-R-2
Height (mm)	254	254	254	254
Width (mm)	635	635	635	635
Depth (mm)	123	123	123	123
Weight	5.2 Kg	5.2 Kg	5.2 Kg	5.2 Kg
Inlet Gas Connection	1/4" FVCR	1/4" FVCR	1/4" FVCR	1/4" FVCR
Outlet Gas Connection	1/4" FVCR	1/4" FVCR	1/4" FVCR	1/4" FVCR
Outlet Gas Flow Direction	Flow Down	Flow Down	Flow Down	Flow Down
Maximum Flow	10 slpm	10 slpm	10 slpm	10 slpm
Maximum Inlet Pressure	9.8 bar / 142 psig	9.8 bar / 142 psig	9.8 bar / 142 psig	9.8 bar / 142 psig
Minimun Inlet Pressure	3.5 bar / 50 psig	3.5 bar / 50 psig	3.5 bar / 50 psig	3.5 bar / 50 psig
Pressure Drop (at 100 psig inlet pressure)	< 5 psid	< 5 psid	< 5 psid	< 5 psid
Purified Outlet Filter	0.003 μ m sintered filter	0.003 μ m sintered filter	0.003 μ m sintered filter	0.003 μ m sintered filter
Tube Surface Treatment	SUS 316L-EP	SUS 316L-EP	SUS 316L-EP	SUS 316L-EP
Life time	>1 year @ maximum flow	>1 year @ maximum flow	>1 year @ maximum flow	>1 year @ maximum flow

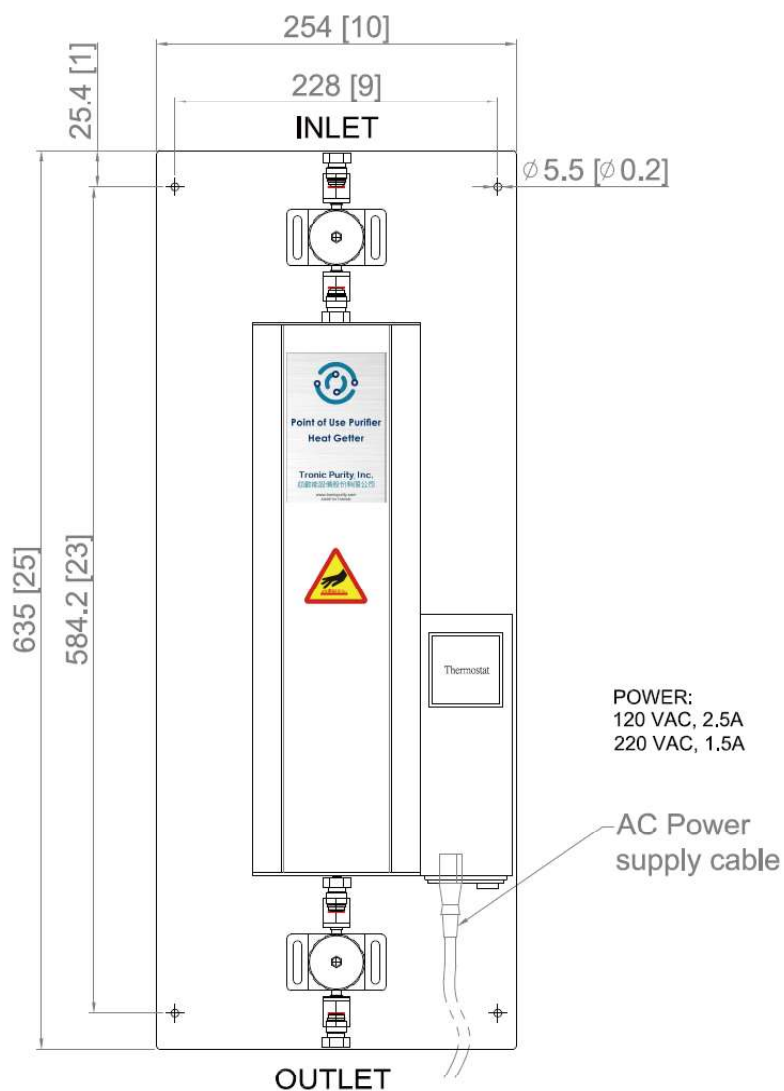
GT2 Series Purifier Performance

	NITROGEN		ARGON / HELIUM	
IMPURITIES	INLET	OUTLET	INLET	OUTLET
H2O	<1.0 ppmv	$\leq$ 1.0 ppbv	<1.0 ppmv	$\leq$ 1.0 ppbv
O2	<1.0 ppmv	$\leq$ 1.0 ppbv	<1.0 ppmv	$\leq$ 1.0 ppbv
CO	<0.5 ppmv	$\leq$ 1.0 ppbv	<0.5 ppmv	$\leq$ 1.0 ppbv
CO2	<0.5 ppmv	$\leq$ 1.0 ppbv	<0.5 ppmv	$\leq$ 1.0 ppbv
H2	<0.5 ppmv	$\leq$ 10 ppbv *	<0.5 ppmv	$\leq$ 10 ppbv *
CH4	<0.25 ppmv	$\leq$ 1.0 ppbv	<0.25 ppmv	$\leq$ 1.0 ppbv
N2	N/A	N/A	<1.0 ppmv	$\leq$ 1.0 ppbv



Tronic Purity, inc.

Installation Information.



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GETTRON, GT3

80 slpm, Getter Type Gas Purifiers

GETTRON® series GT3-R/N/H purifier is a Getter-Based purifier designed for analytical and semiconductor applications. Heated getter technology to remove impurities to 1 ppb levels for Nitrogen, Hydrogen and Rare Gases with up to 80 slpm flow rate.

Operated by a PLC and featuring a user-friendly 4.3" touchable color HMI, the GT3 Purifier ensures steadfast stability and control. Furthermore, it offers MODBUS protocol for seamless integration into customer SCADA systems.

Applications

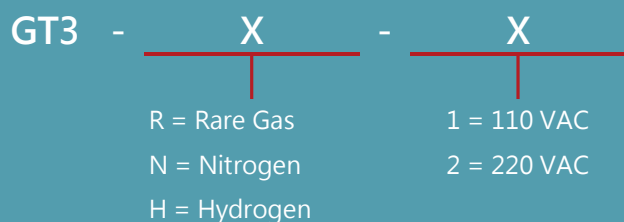
- ✓ Analytical zero and carrier gas
- ✓ Annealing cover gases
- ✓ Crystal pulling
- ✓ MOCVD
- ✓ Optical fiber manufacturing
- ✓ Pharmaceutical production
- ✓ Photolithography
- ✓ PVD, CVD
- ✓ Welding and Purging
- ✓ Silicon epitaxy
- ✓ Semiconductor equipment
- ✓ Welding and Purging



Standard Features		Performance					
Controller	PURIFY GAS	NITROGEN		ARGON / HELIUM		HYDROGEN	
✓ Fully Automated Controller by Programmable Logic Controller.	IMPURITIES	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET
✓ 4.3" Touchable Human Machine Interface.	H2O	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv
✓ PLC MODBUS Communication Port, Ethernet, RJ45 Connector.	O2	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv
Gas Panel & Hardware	CO	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv
✓ Inlet, Outlet and Bypass Actuated Valves.	CO2	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv
✓ Over Pressure Safety Vent.	H2	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv	N/A	N/A
✓ Hydrogen Removal Unit. (N2 and Rare Gas models only)	CH4	<0.25 ppmv	≤ 1.0 ppbv	<0.25 ppmv	≤ 1.0 ppbv	N/A	N/A
✓ 0.003µm Particle Filter, Metal.	N2	N/A	N/A	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv
✓ Metal Enclosure.	Particle		0.1µm ≤ 1ppcf		0.1µm ≤ 1ppcf		0.1µm ≤ 1ppcf



Numbering System



Specifications

PURIFY GAS	NITROGEN	ARGON / HELIUM	HYDROGEN
MODEL NO.	GT3-N-1/2	GT3-R-1/2	GT3-H-1/2
Maximum Flow	80 slpm	80 slpm	80 slpm
Purified Outlet Filter	0.003 μ m metal filter	0.003 μ m metal filter	0.003 μ m metal filter
Pressure Drop (at 100 psig inlet pressure)	< 7 psid @ Maximum Flow	< 7 psid @ Maximum Flow	< 7 psid @ Maximum Flow
Operation Temperature	300 Celius	350 Celius	300 Celius
Outlet Gas Temperature	<50 °C @ Maximum Flow	<50 °C @ Maximum Flow	<50 °C @ Maximum Flow

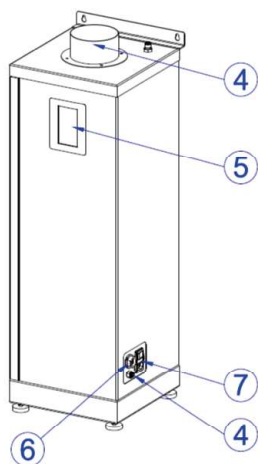
Installation Information

Height (mm)	950 mm	950 mm	950 mm
Width (mm)	300 mm	300 mm	300 mm
Depth (mm)	300 mm	300 mm	300 mm
Weight	41 Kg	41 Kg	42 Kg
Installed Power, GT3-_-1	110 VAC, 1P+E, 600 W	110 VAC, 1P+E, 600 W	110 VAC, 1P+E, 600 KW
Installed Power, GT3-_-2	220 VAC, 1P+E, 1,000 W	220 VAC, 1P+E, 1,000 W	220 VAC, 1P+E, 1,000 W
Data Output Communication	RJ45/Ethernet, MODBUS	RJ45/Ethernet, MODBUS	RJ45/Ethernet, MODBUS
Inlet & Outlet Gas Connection	1/4" MVCR	1/4" MVCR	1/4" FVCR
Inlet Gas Pressure Range	3.5 ~ 9.8 barg (50 ~ 142 psig)	3.5 ~ 9.8 barg (50 ~ 142 psig)	3.5 ~ 9.8 barg (50 ~ 142 psig)
Instrument Air Connection	1/4" Quick Plug	1/4" Quick Plug	1/4" Quick Plug
Instrument Air Pressure Range	4.1 ~ 6.9 barg (60 ~ 100 psig)	4.1 ~ 6.9 barg (60 ~ 100 psig)	4.1 ~ 6.9 barg (60 ~ 100 psig)
Over Pressure Relief Vent	N/A	N/A	1/4" Compression Fitting
Purifier Housing Exhaust (Facilities Vacuum: 0.2 inches H2O)	4" duct	4" duct	4" duct
Tube Surface Treatment	SUS316L-BA, and EP after getter cartridge	SUS316L-BA, and EP after getter cartridge	SUS316L-BA, and EP after getter cartridge
Pressure Vessel Design Code	ASME Vessel Standards Section VIII CE Marking GB150/SQLO Chinese Vessel Standards	ASME Vessel Standards Section VIII CE Marking GB150/SQLO Chinese Vessel Standards	ASME Vessel Standards Section VIII CE Marking GB150/SQLO Chinese Vessel Standards

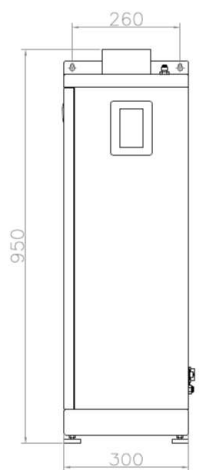
GT3-H, Gas Flow Diagram and Installation Information

GT3-H, Installation Information

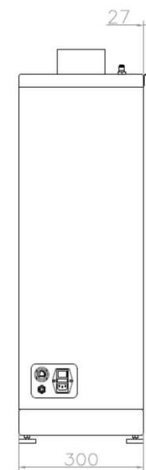
- | | |
|----------------------------------|-----------------|
| 1 Feed Gas Inlet Connection | 1/4" MVCR |
| 2 Purified Gas Outlet Connection | 1/4" MVCR |
| 3 Over Pressure Relief Vent | 1/4" SWG |
| 4 Exhaust | 4" Duct |
| 5 HMI, 4.3" | |
| 6 Instrument Air Connection | 1/4" Quick Plug |
| 7 Communication Port | RJ45 / Ethernet |
| 8 Main Power Connection Port | |



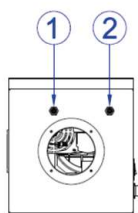
LEFT VIEW



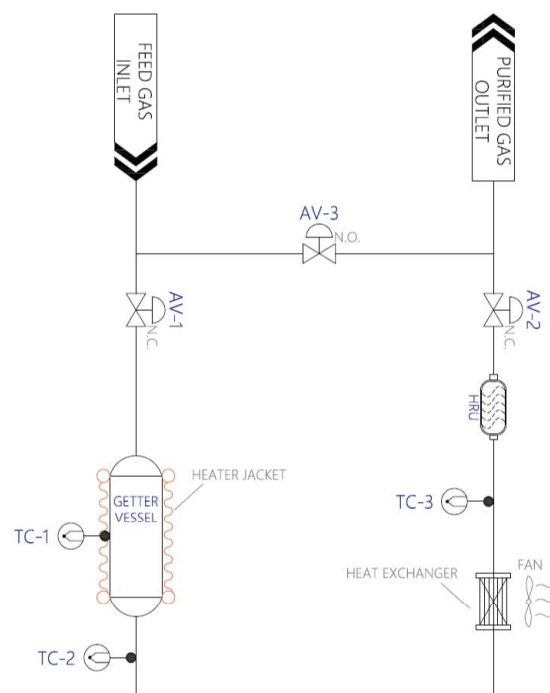
FRONT VIEW



RIGHT VIEW



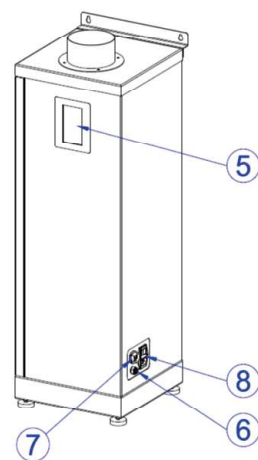
TOP VIEW



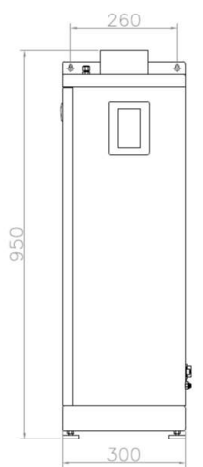
GT3-R/N, Gas Flow Diagram and Installation Information

GT3-R/N, Installation Information

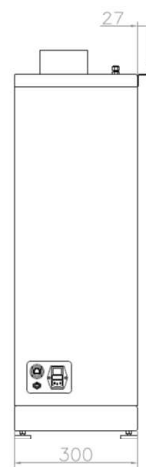
- | | |
|----------------------------------|-----------------|
| 1 Feed Gas Inlet Connection | 1/4" MVCR |
| 2 Purified Gas Outlet Connection | 1/4" MVCR |
| 3 Exhaust | 4" Duct |
| 4 HMI, 4.3" | |
| 5 Instrument Air Connection | 1/4" Quick Plug |
| 6 Communication Port | RJ45 / Ethernet |
| 7 Main Power Connection Port | |



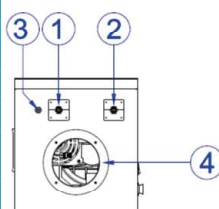
LEFT VIEW



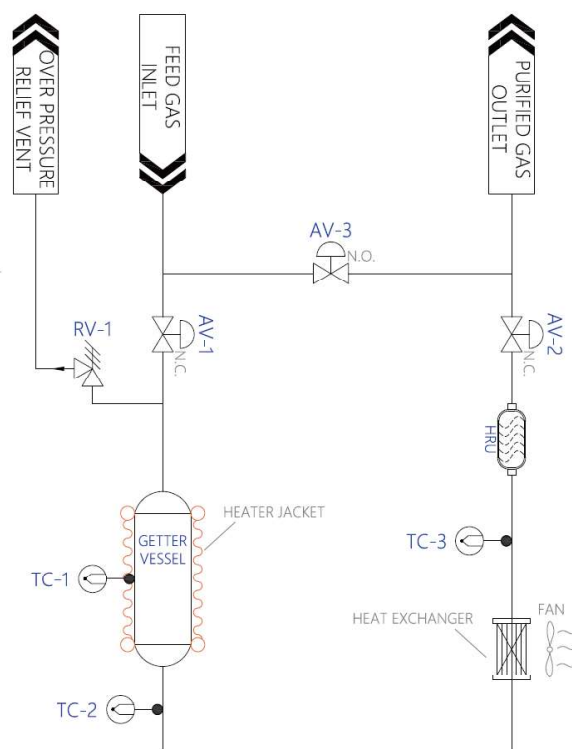
FRONT VIEW



RIGHT VIEW



TOP VIEW



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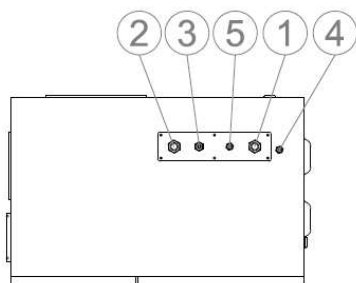
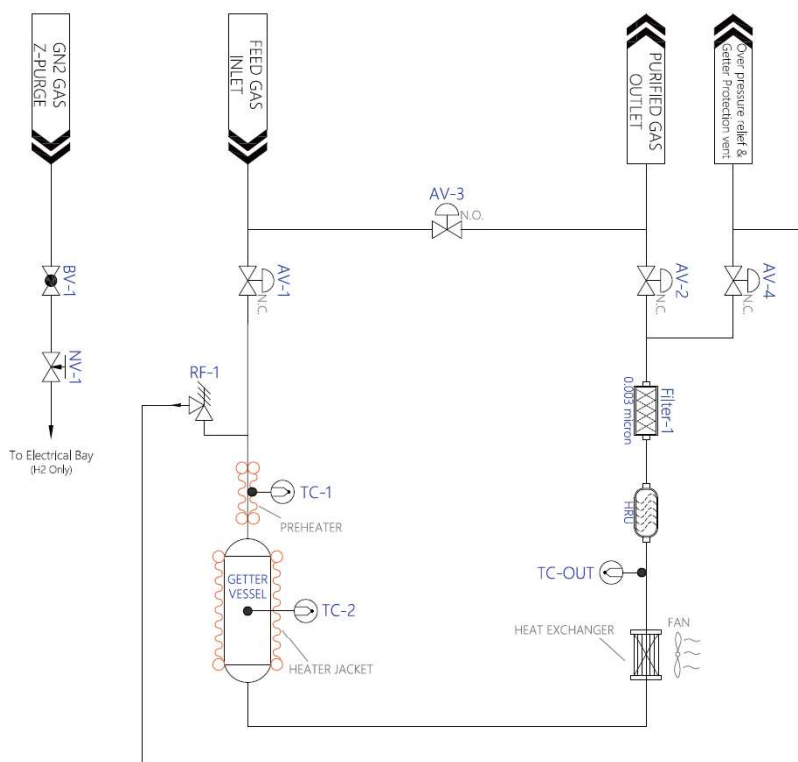




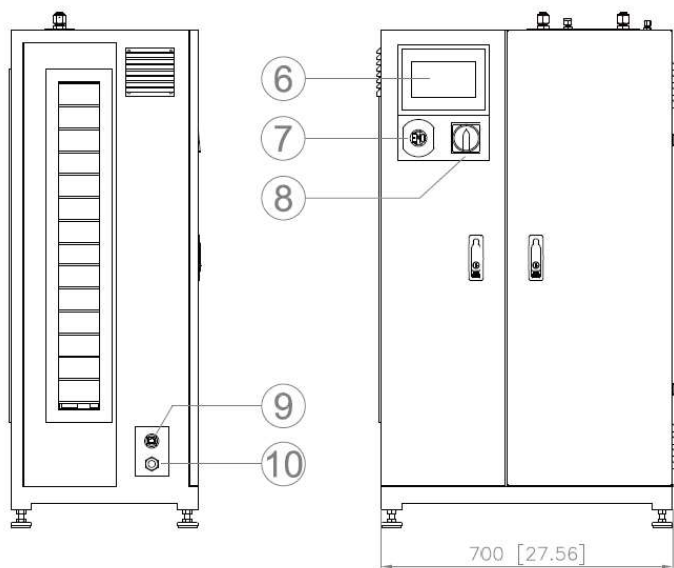
Tronic Purity, inc.

Installation Information

- | | | |
|----|---|-----------------|
| 1 | Feed Gas Inlet Connection | 1/2" MVCR |
| 2 | Purified Gas Outlet Connection | 1/2" MVCR |
| 3 | Over Pressure Relief & Getter Protection Vent | 1/4" SWG |
| 4 | Instrument Air Inlet Connection | 1/4" SWG |
| 5 | GN2 Z-Purge (GT4-H only) | 1/4" SWG |
| 6 | Touhable HMI. | 7" |
| 7 | Emergency Off Button (EMO) | |
| 8 | Main Power Switch | |
| 9 | Communication Port | RJ45 / Ethernet |
| 10 | Main Power Connection Port | 220 VAC, 1P+E |

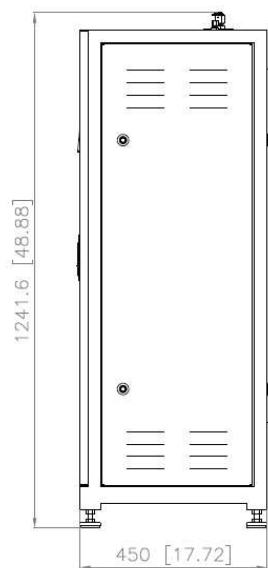


TOP VIEW

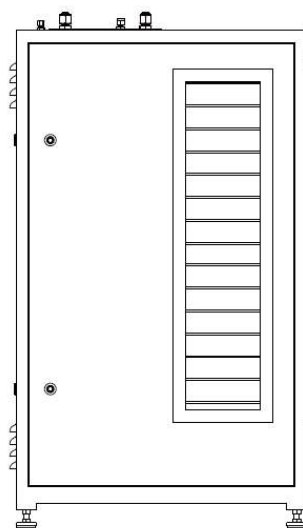


LEFT VIEW

FRONT VIEW



RIGHT VIEW



REAR VIEW



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GETTRON, GT4 Platform

150 / 300 slpm Getter Type Gas Purifiers

Tronic Purity's GETTRON® line implements getters, which consist of zirconium alloys in the form of porous pellets that come in a myriad of sizes, as the main adsorption mechanism. The GETTRON® series, like many getter purifiers, is a heat-induced model that typically operates at around 300-400°C, depending on the targeted gas and impurities.

Zirconium (Zr) alloys that contain aluminum (Al), iron (Fe), and vanadium (V) have been used for gas purification for over 40 years. These alloys have great reactivity with a broad range of gas species, such as H₂O, O₂, CO, CO₂, N₂ and CH₄. Heat plays a fundamental role in the overall reaction. The chemical equations shown below occur on the surface of the getter pellets, and the reaction products then diffuse into the core of the getter alloys, clearing up fresh surfaces so that adsorption can be reactivated continuously.

The GETTRON® GT4 series purifier uses PLC as the main control system, 7-inch touchable human-machine interface, MODBUS communication protocol, providing more convenient operation and stable operation.

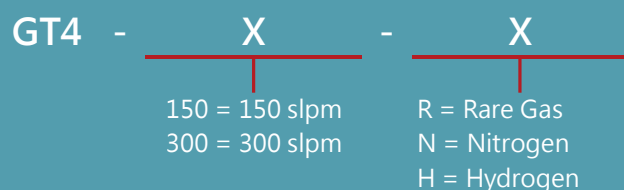
Standard Features	
Controller	
✓	Fully Automated Controller by Programmable Logic Controller.
✓	7" Touchable Human Machine Interface.
✓	Instrument Air Pressure Switch
✓	High Pressure Relief Vent.
✓	PLC MODBUS Communication Port, Ethernet, RJ45 Connector.
Gas Panel & Hardware	
✓	Inlet and Outlet Actuated Valves.
✓	Auto Bypass Actuated Valve.
✓	Over Pressure Safety Vent.
✓	Hydrogen Removal Unit. (N ₂ and Rare Gas models only)
✓	0.003µm Particle Filter, Metal.
✓	Metal Enclosure.



Performance						
PURIFY GAS	NITROGEN		ARGON / HELIUM		HYDROGEN	
IMPURITIES	INLET	OUTLET	INLET	OUTLET	INLET	OUTLET
H ₂ O	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv
O ₂	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv
CO	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv
CO ₂	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv
H ₂	<0.5 ppmv	≤ 1.0 ppbv	<0.5 ppmv	≤ 1.0 ppbv	N/A	N/A
CH ₄	<0.25 ppmv	≤ 1.0 ppbv	<0.25 ppmv	≤ 1.0 ppbv	N/A	N/A
N ₂	N/A	N/A	<1.0 ppmv	≤ 1.0 ppbv	<1.0 ppmv	≤ 1.0 ppbv
Particle		0.1µm ≤ 1ppcf		0.1µm ≤ 1ppcf		0.1µm ≤ 1ppcf



Numbering System



Specifications

PURIFY GAS	NITROGEN		ARGON / HELIUM		HYDROGEN	
MODEL NO.	GT4-150-N	GT4-300-N	GT4-150-R	GT4-300-R	GT4-150-H	GT4-300-H
Maximum Flow	150 slpm	300 slpm	150 slpm	300 slpm	150 slpm	300 slpm
Purified Outlet Filter	0.003 μ m metal filter		0.003 μ m metal filter		0.003 μ m metal filter	
Pressure Drop (at 100 psig inlet pressure)	< 7 psid @ Maximum Flow		< 7 psid @ Maximum Flow		< 7 psid @ Maximum Flow	
Operation Temperature	300 Celcius		350 Celcius		300 Celcius	
Outlet Gas Temperature	<50 °C @ Maximum Flow		<50 °C @ Maximum Flow		<50 °C @ Maximum Flow	

Installation Information

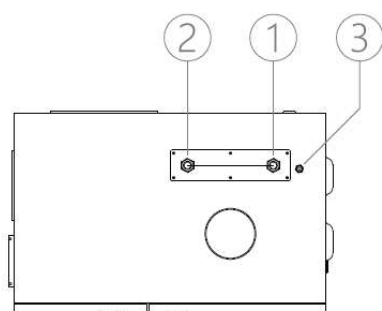
Height (mm)	1,270 mm		1,270 mm		1,270 mm	
Width (mm)	700 mm		700 mm		700 mm	
Depth (mm)	450 mm		450 mm		450 mm	
Weight	<150 Kg	<170 Kg	<150 Kg	<170 Kg	<150 Kg	<170 Kg
Installed Power	220 VAC, 1P+E, 2.4 KW		220 VAC, 1P+E, 2.4 KW		220 VAC, 1P+E, 2.4 KW	
Data Output Communication	RJ45/Ethernet, MODBUS		RJ45/Ethernet, MODBUS		RJ45/Ethernet, MODBUS	
Inlet and Outlet Gas Connection	1/2" MVCR		1/2" MVCR		1/2" FVCR	
Inlet Gas Pressure Range	3.5 ~ 9.8 barg (50 ~ 142 psig)		3.5 ~ 9.8 barg (50 ~ 142 psig)		3.5 ~ 9.8 barg (50 ~ 142 psig)	
Instrument Air Connection	1/4" SWG		1/4" SWG		1/4" SWG	
Instrument Air Pressure Range	5 ~ 6.9 barg (72.5 ~ 100 psig)		5 ~ 6.9 barg (72.5 ~ 100 psig)		5 ~ 6.9 barg (72.5 ~ 100 psig)	
Over Pressure Relief Vent	1/4" MVCR		1/4" MVCR		1/4" FVCR	
Purifier Housing Exhaust (Facilities Vacuum: 0.2 inches H ₂ O)	4" duct		4" duct		4" duct	
Z-Purge for Electrical Bay	N/A		N/A		1/4" SWG	
Z-Purge Supply Pressure for Electrical Bay	N/A		N/A		2 ~ 4 barg (29 ~ 58 psig)	
Z-Purge Gas Type and Purity	N/A		N/A		99.999% (5N) Pure Nitrogen	
Z-Purge Flow Rate	N/A		N/A		2 Nm ³ /Hr	
Tube Surface Treatment	SUS316L-BA and EP after getter cartridge		SUS316L-BA and EP after getter cartridge		SUS316L-BA and EP after getter cartridge	
Pressure Vessel Design Code	ASME Vessel Standards Section VIII CE Marking GB150/SQLO Chinese Vessel Standards		ASME Vessel Standards Section VIII CE Marking GB150/SQLO Chinese Vessel Standards		ASME Vessel Standards Section VIII CE Marking GB150/SQLO Chinese Vessel Standards	



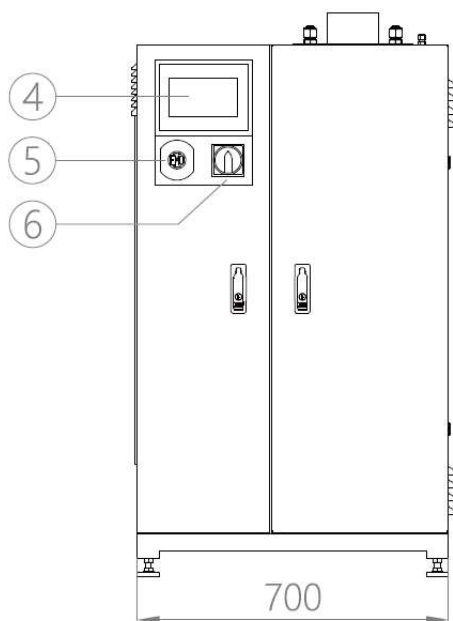
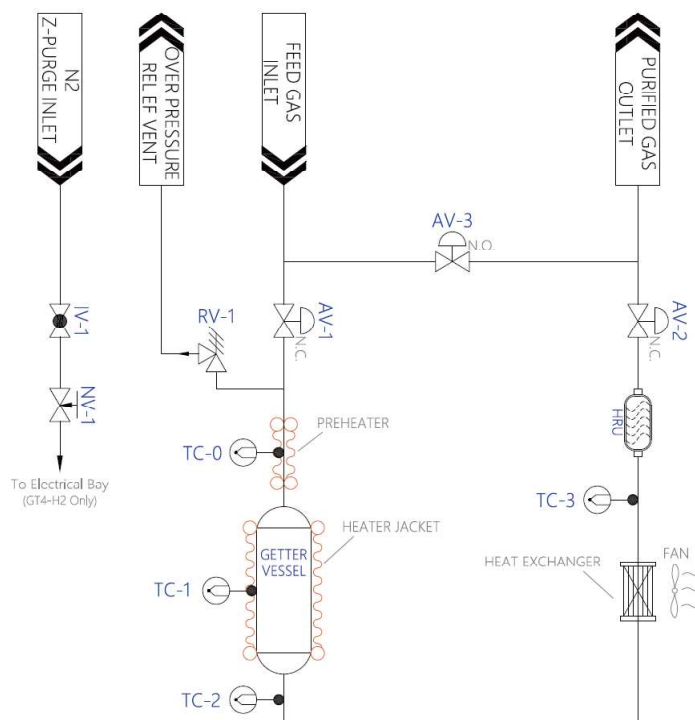
Tronic Purity, inc.

Installation Information

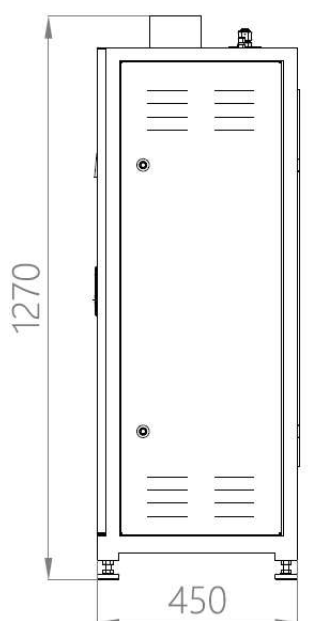
- | | | |
|---|--------------------------------|-----------------|
| 1 | Feed Gas Inlet Connection | 1/2" MVCR |
| 2 | Purified Gas Outlet Connection | 1/2" MVCR |
| 3 | Instrument Air Connection | 1/4" SWG |
| 4 | HMI, 7" | |
| 5 | Emergency Off Button (EMO) | |
| 6 | Main Power Switch | RJ45 / Ethernet |
| 7 | Communication Port | RJ45 / Ethernet |
| 8 | Main Power Connection Port | |



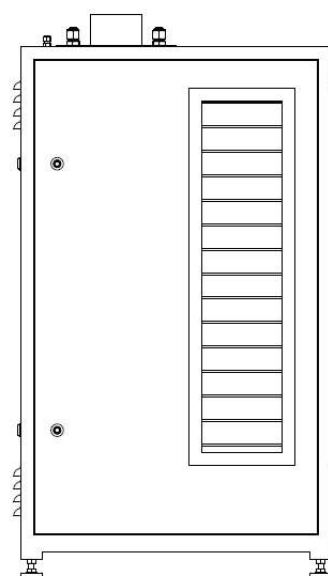
TOP VIEW



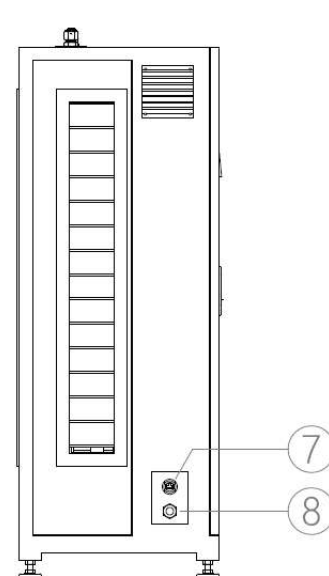
FRONT VIEW



RIGHT VIEW



REAR VIEW



LEFT VIEW



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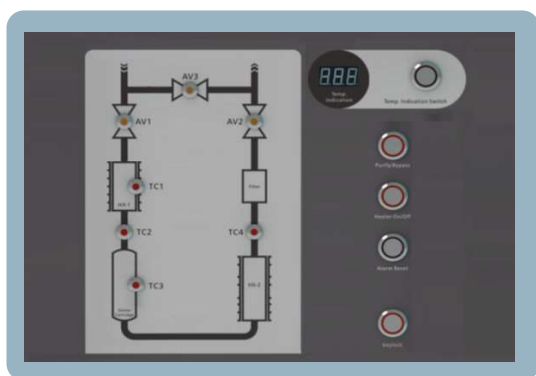


GETTRON, The GT5 Large Flow Getter Type Purifier

Applications

Vapor Deposition Process
Photolithography
Epitaxy
Etching
LED, Laser

Point-Of Use Gas Purification
Analytical
ICrystal pulling
Fiber Optics
Solar and Photovoltaics



Intuitive operation interface

Model No.	Impurities Removal	Outlet Performance
GT5-***R	H ₂ O, O ₂ , H ₂ , CH ₄ , CO, CO ₂ , NMHC, N ₂	< 1 PPB
GT5-***N	H ₂ O, O ₂ , H ₂ , CH ₄ , CO, CO ₂ , NMHC	< 1 PPB

*** is the flow rate in slpm



Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
Intuitive Operation Interface	√		Actuated Inlet Valve	√	
MCU Control PCB.	√		Actuated Outlet Valve	√	
RS-232 Communication	√		Bypass Valves	√	
PLC Controller with MODBUS Communication Data Output		√	Inlet Pressure Transducer		√
Light Tower		√	Out Pressure Transducer		√
Emergency Shutdown	√		Flow Meter / Flow Totalizer		√
Emergency Remote Shutdown	√		Overpressure Relief Protection	√	
			Gas Leak Detectors		√
			0.003 μm Particle Filter	√	
			Instrument Air Reservoir		√



Tronic Purity, inc.

Process Gas Specifications					
GT5 Series Model No.	GT5-10*	GT5-20*	GT5-40*	GT5-50*	GT5-100*
Maximum Process Gas Flow Rate	10 Nm3/Hr	20 Nm3/Hr	40 Nm3/Hr	50 Nm3/Hr	100 Nm3/Hr
Minimum Gas Flow Request	1 Nm3/Hr	2 Nm3/Hr	4 Nm3/Hr	5 Nm3/Hr	10 Nm3/Hr
Maximum Process Gas Inlet Pressure	9.8 Bar (142 psig)				
Minimum Process Gas Inlet Pressure	4.0 Bar (60 psig)				
Maximum Pressure Drop @6.9 Bar	<15 psid				
Process Inlet Gas Temperature	0° C - 35° C				
Purified Gas Temperature	< 60° C				
Electrical Requirements					
Installed Power, 120 VAC, 1P+E, 50/60 Hz	2 KW		3.4 KW		6.8 KW
Installed Power, 240 VAC, 1P+E, 50/60 Hz	2.4 KW		4.0 KW		8.0 KW
General Requirements					
Instrument Air Pressure (CDA or N2 filtered to 10 μm)	4 ~ 6 Bar (60~87 psig)				
Environment Temperature	5°-35°C				
General Specifications					
Height	1,604 mm		1,820 mm		2,000 mm
Width	800 mm		800 mm		1,200 mm
Depth	830 mm		830 mm		1,550 mm
Process Gas Inlet	1/2 inch MVCR				3/4 inch MVCR
Purified Gas Outlet	1/2 inch MVCR				3/4 inch MVCR
Relief Vent Outlet	1/4 inch MVCR				
Instrument Gas Inlet	1/4 inch SWG				
Clearance Around Purifier	≥1 meter for all sides				
Tube Surface Treatment	SUS316L-BA and EP after adsorbers				

North America representation by:
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GAS Analytical
Delivery
Purification



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