

GETTRON, GT4 Platform

150 ~ 400 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 and Getter Protection 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

GT4 - X - X

150 = 150 slpm
200 = 200 slpm
300 = 300 slpm
400 = 400 slpm

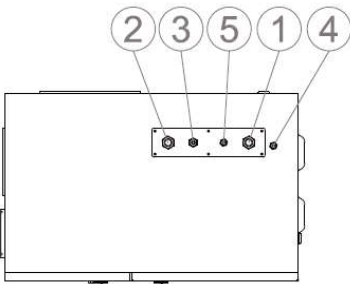
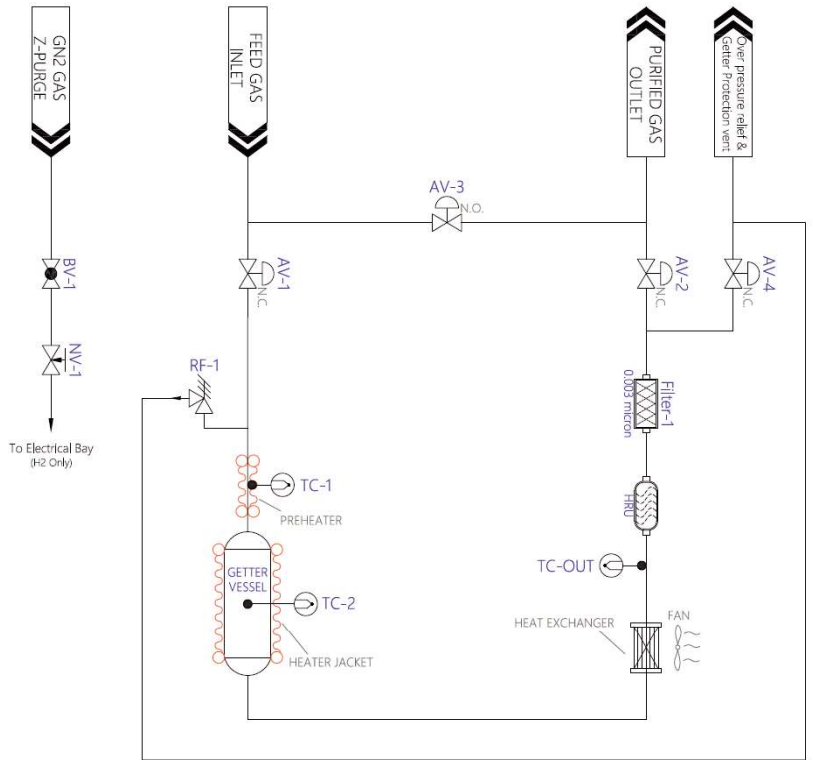
R = Rare Gas
N = Nitrogen
H = Hydrogen

Specifications						
PURIFY GAS	NITROGEN		ARGON / HELIUM		HYDROGEN	
MODEL NO.	GT4-150-N	GT4-300-N	GT4-150-R	GT4-300-R	GT4-200-H	GT4-400-H
Maximum Flow	150 slpm	300 slpm	150 slpm	300 slpm	200 slpm	400 slpm
Purified Outlet Filter	0.003 μm metal filter		0.003 μm metal filter		0.003 μm 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 / inch)	1,241 mm / 48.88"		1,241 mm / 48.88"		1,241 mm / 48.88"	
Width (mm / inch)	700 mm / 27.56"		700 mm / 27.56"		700 mm / 27.56"	
Depth (mm / inch)	450 mm / 17.72"		450 mm / 17.72"		450 mm / 17.72"	
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" MVCR	
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 & Getter Protection Vent	1/4" SWG		1/4" SWG		1/4" SWG	
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 Nm3/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	

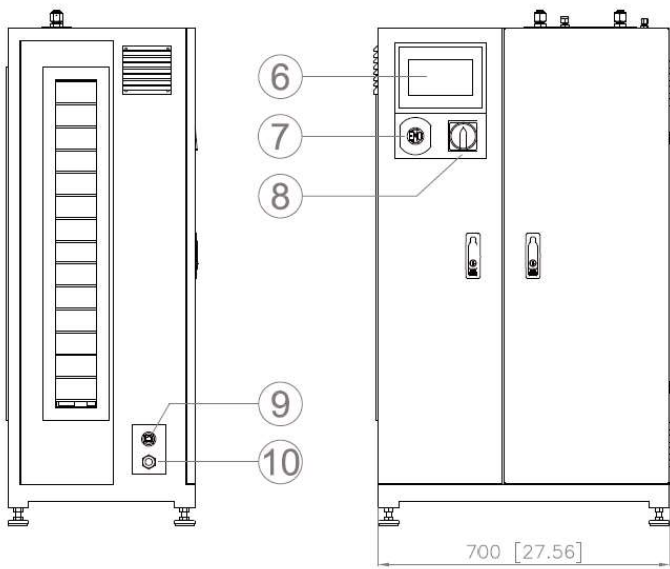


Installation Information

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

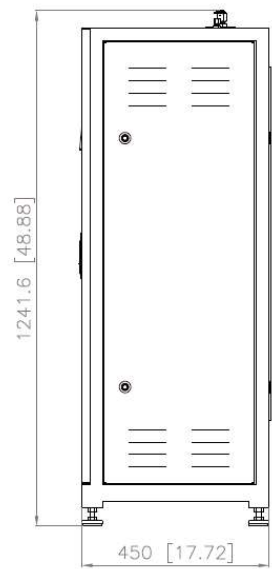


TOP VIEW

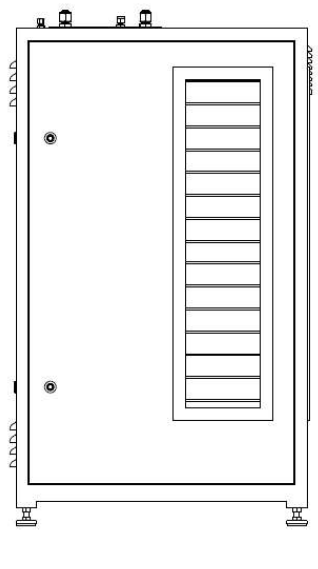


LEFT VIEW

FRONT VIEW



RIGHT VIEW



REAR VIEW



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