

# GETTRON, GT5 Platform

## 15 ~ 150 Nm<sup>3</sup>/Hr. Heated 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 350-400°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 H<sub>2</sub>O, O<sub>2</sub>, CO, CO<sub>2</sub>, H<sub>2</sub>, N<sub>2</sub> and CH<sub>4</sub>. 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® GT5 series purifier uses PLC as the main control system, 12-inch touchable human-machine interface, MODBUS communication protocol, providing more convenient operation and stable operation.

Standard Features	
<b>Controller</b>	
√	Fully Automated Controller by Programmable Logic Controller.
√	12" Touchable Human Machine Interface.
√	Instrument Air Pressure Switch
√	High Pressure Relief Vent.
√	PLC MODBUS Communication Port, Ethernet, RJ45 Connector.
<b>Gas Panel &amp; Hardware</b>	
√	Inlet and Outlet Actuated Valves.
√	Auto Bypass Actuated Valve.
√	Over Pressure Safety and Getter Protection Vent.
√	Hydrogen Removal Unit.
√	0.003µm Particle Filter, Metal.
√	Metal Enclosure.



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



## Numbering System

GT5	-	X	-	Y
		15 = 15 Nm <sup>3</sup> /Hr 30 = 30 Nm <sup>3</sup> /Hr 50 = 50 Nm <sup>3</sup> /Hr 100 = 100 Nm <sup>3</sup> /Hr 150 = 150 Nm <sup>3</sup> /Hr		R = Rare Gas N = Nitrogen

Please contact us for more flexible flow rates.

Specifications					
PURIFY GAS	NITROGEN				
MODEL No.	GT5-15-N	GT5-30-N	GT5-50-N	GT5-100-N	GT5-150-N
Maximum Flow	15 Nm <sup>3</sup> /Hr	30 Nm <sup>3</sup> /Hr	50 Nm <sup>3</sup> /Hr	100 Nm <sup>3</sup> /Hr	150 Nm <sup>3</sup> /Hr
Purified Outlet Filter	0.003 μm metal filter				
Pressure Drop (at 100 psig inlet pressure)	< 7 psid @ Maximum Flow				
Operation Temperature	350 Celius				
Outlet Gas Temperature	<50 °C @ Maximum Flow				
Installation Information					
Height (mm / inch)	2,000 mm / 78.8" (2,336 mm/92" with light tower)			2,000 mm / 78.8" (2,336 mm/92" with light tower)	
Width (mm / inch)	800 mm / 31.50"			1,200mm / 47.20"	1,500 mm / 59.05"
Depth (mm / inch)	800 mm / 31.50"			1,500 mm / 59.05"	1,800 mm / 70.86"
Weight	<340 Kg	<380 Kg	<460 Kg	<880 Kg	<1,250 Kg
Installed Power	220 VAC, 1P+E, 3.5 KW	220 VAC, 1P+E, 5.6 KW	220 VAC, 1P+E, 10.5 KW	220 VAC, 3P+E, 20.9 KW	220 VAC, 3P+E, 31.4 KW
Data Output Communication	RJ45/Ethernet, MODBUS				
Inlet and Outlet Gas Connection	1/2" MVCR	1/2" MVCR	3/4" MVCR	1" MVCR	1" MVCR
Inlet Gas Pressure Range	3.5 ~ 9.8 barg (50 ~ 142 psig)				
Instrument Air Connection	3/8" SWG				
Instrument Air Pressure Range	5.9 ~ 6.9 barg (85 ~ 100 psig)				
Over Pressure Relief & Getter Protection Vent	1/2" SWG	1/2" SWG	1/2" SWG	1/2" SWG	1/2" SWG
Tube Surface Treatment	SUS316L-BA, and EP after getter cartridge				
Pressure Vessel Design Code	ASME Vessel Standards Section VIII CE Marking GB150/SQLO Chinese Vessel Standards				



## Specifications

PURIFY GAS	ARGON / HELIUM				
MODEL No.	GT5-15-R	GT5-30-R	GT5-50-R	GT5-100-R	GT5-150-R
Maximum Flow	15 Nm3/Hr	30 Nm3/Hr	50 Nm3/Hr	100 Nm3/Hr	150 Nm3/Hr
Purified Outlet Filter	0.003 $\mu$ m metal filter				
Pressure Drop (at 100 psig inlet pressure)	< 7 psid @ Maximum Flow				
Operation Temperature	400 Celius				
Outlet Gas Temperature	<50 °C @ Maximum Flow				

## Installation Information

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Width (mm / inch)	800 mm / 31.50"			1,200mm / 47.20"	1,500 mm / 59.05"
Depth (mm / inch)	800 mm / 31.50"			1,500 mm / 59.05"	1,800 mm / 70.86"
Weight	<340 Kg	<380 Kg	<460 Kg	<880 Kg	<1,250 Kg
Installed Power	220 VAC, 1P+E, 3.5 KW	220 VAC, 1P+E, 5.6 KW	220 VAC, 1P+E, 10.5 KW	220 VAC, 3P+E, 20.9 KW	220 VAC, 3P+E, 31.4 KW
Data Output Communication	RJ45/Ethernet, MODBUS				
Inlet and Outlet Gas Connection	1/2" MVCR	1/2" MVCR	3/4" MVCR	1" MVCR	1" MVCR
Inlet Gas Pressure Range	3.5 ~ 9.8 barg (50 ~ 142 psig)				
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Over Pressure Relief & Getter Protection Vent	1/2" SWG	1/2" SWG	1/2" SWG	1/2" SWG	1/2" SWG
Tube Surface Treatment	SUS316L-BA, and EP after getter cartridge				
Pressure Vessel Design Code	ASME Vessel Standards Section VIII CE Marking GB150/SQLO Chinese Vessel Standards				



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