FABTRON

The Large Bulk Gas Purifiers

Targeted for semiconductor fabs, display manufacturers and gas plants, Tronic Purity's technically advanced FABTRON® line is the only electronic-grade gas purification system without consumable parts in the industry that serves and provides our customers with a solution that is extremely cost effective while consistently delivering sub-ppb level purification performance.

Utilizing Tronic Purity's revolutionary "Granular Hollow Fiber" technology, the FABTRON® series is effortlessly operable at room temperature when processing at large flow rates ranging from 10 Nm3/hr to 20,000 Nm3/hr. With its 12-inch Human Machine Interface (HMI) and a programmable logic controller (PLC), the FABTRON® purifiers can immediately carry out purification and regeneration procedures automatically upon set-up with no consumables needed, offering industrial manufacturers an economical way of production.

BENIFIT

- Full regeneration design, no consumable.
- Ambient temperature adsorption, power saving up to 90%.
- High Impurities Removal, safe and reliable.

HMI

- Maintenance data, historical alert messages.
- Operation Manual show on HMI.
- Troubleshooting guideline on HMI.
- IoT interface expansion possible.

芯動能設備股份有限公司
Tronic Purity, inc.®
GAS Analytical Delivery Purification

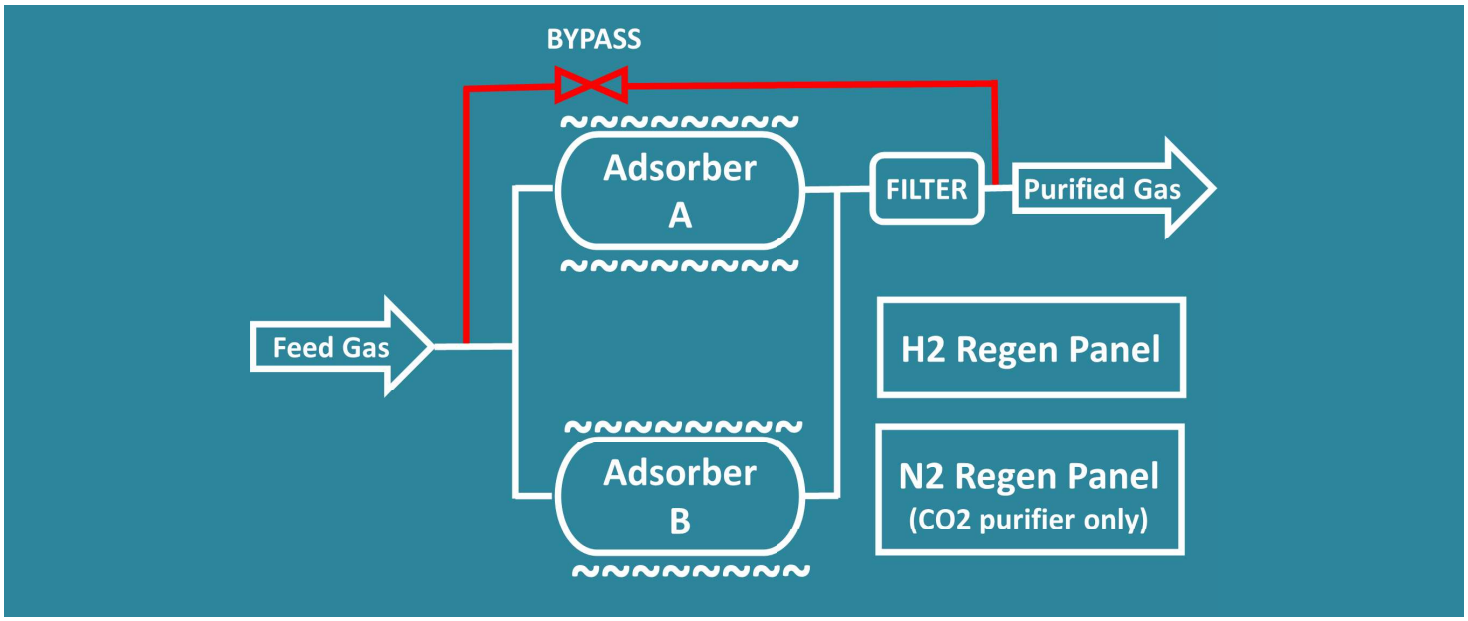
Tronic Purity, inc.

Ar, He, N2 and CO2 regenerable gas purifiers.

5-nines to 9-nines grade purity.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT1	10 to 20,000	Ar, He, N2	H2O, O2, H2, CO, CO2, CH4 to < 1 ppb
		Ar, He, N2, CO2	H2O < 1 ppb, O2 < 100 ppt, Organics, Acids, Bases < 5 ppt, Metals < 1 ppbV, Refractory Compounds to < 1 ppt

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI.	√		Inlet and Outlet Manual Isolation Valve.		√
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.		√
Emergency Off Button (EMO).		√	Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown.	√		Auto / Manual Bypass Valve.		√
MODBUS with Ethernet Output, RJ45 Connect.	√		Hydrogen Leak Detector. (H2 mixed for regeneration)		√
UPS for Separate Control Power.		√	Overpressure Relief Protection.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.		√
* External Regenable Adsorber & Controller Redundent Unit.		√	Particle Filtration. (Metal or Teflon Filtration)		√

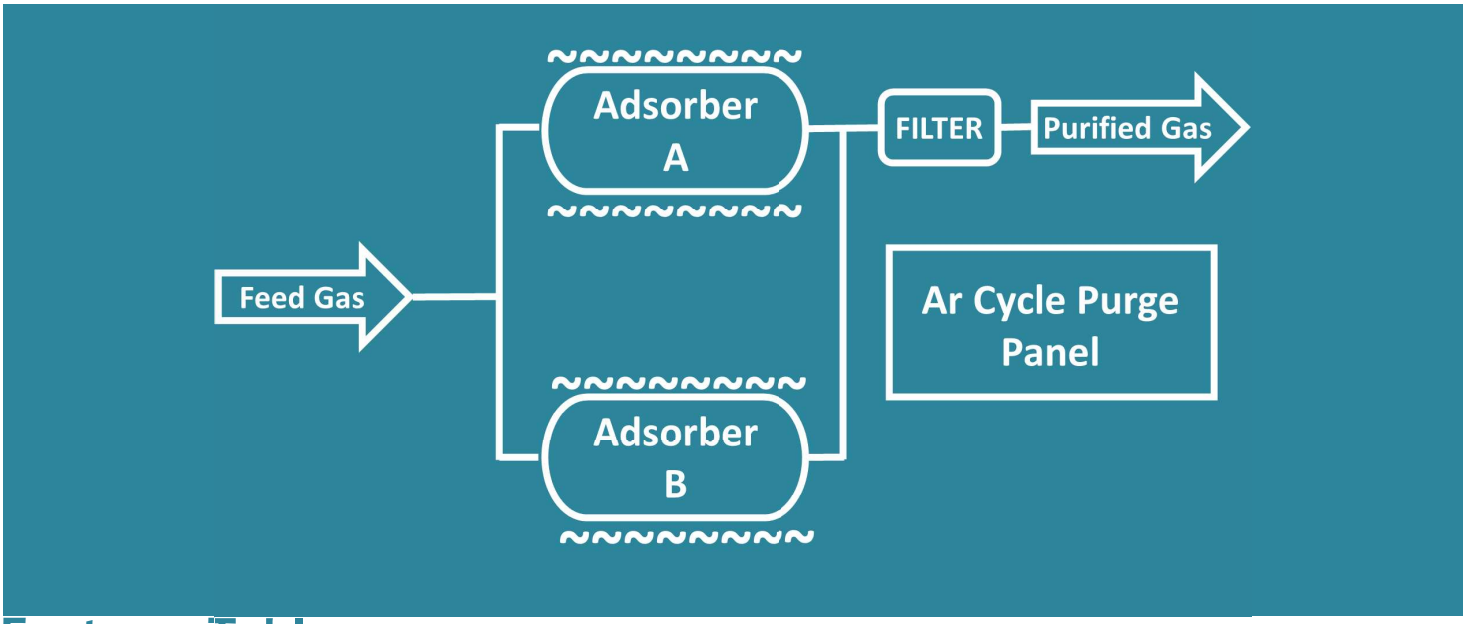
Tronic Purity, inc.

H2 regenerable gas purifier.

5-nines to 9-nines grade purity.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT2	10 to 500	H2	H2O, O2, CO, CO2, CH4 to < 1 ppb

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI	√		Inlet and Outlet Actuated Isolation Valve.	√	
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.	√	
Emergency Off Button (EMO).	√		Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown	√		Z-Purge for Electrical Cabinet	√	
MODBUS with Ethernet Output, RJ45 Connect.	√		Hydrogen Leak Detector.	√	
UPS for Separate Control Power.		√	Overpressure Relief Protection.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.	√	
* External Regenable Adsorber & Controller Redundent Unit.		√	Particle Filtration. (Metal or Teflon Filtration)		√

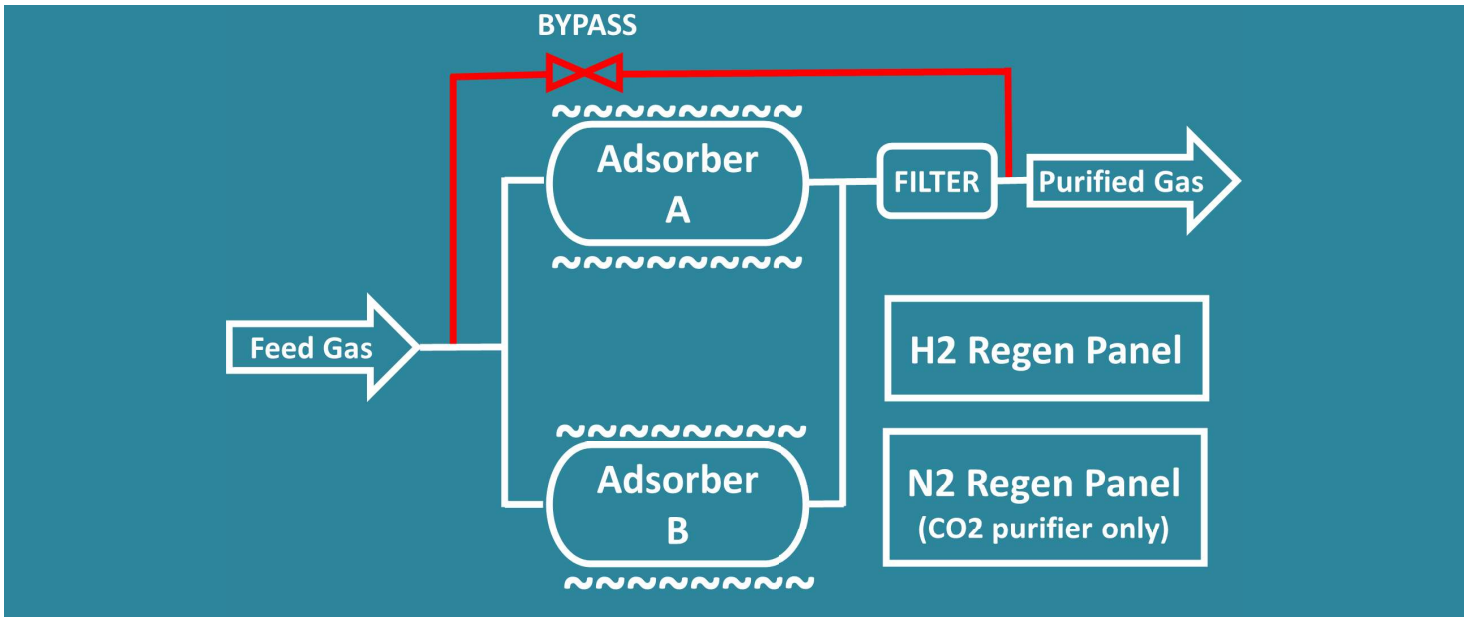
Tronic Purity inc.

O2, Air, CO2 regenerable gas purifier.

5-nines to 9-nines grade purity.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT3	10 to 20,000	O2	H2O, H2, CO, CO2, CH4 to <1 ppb
		CDA, CO2	H2O <1 ppb, Organics, Acids, Bases <5ppt, Metals <1 ppb, Refractory Compounds to <1 ppt

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI.	√		Inlet and Outlet Manual Isolation Valve.		√
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.		√
Emergency Off Button (EMO).		√	Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown	√		Auto / Manual Bypass Valve.		√
MODBUS with Ethernet Output, RJ45 Connect.	√		CO2 Leak Detector. (Applicable for CO2 purification only)	√	
UPS for Separate Control Power.		√	Overpressure Relief Protection.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.		√
* External Regenable Adsorber & Controller Redundent Unit.		√	Particle Filtration. (Metal or Teflon Filtration)		√

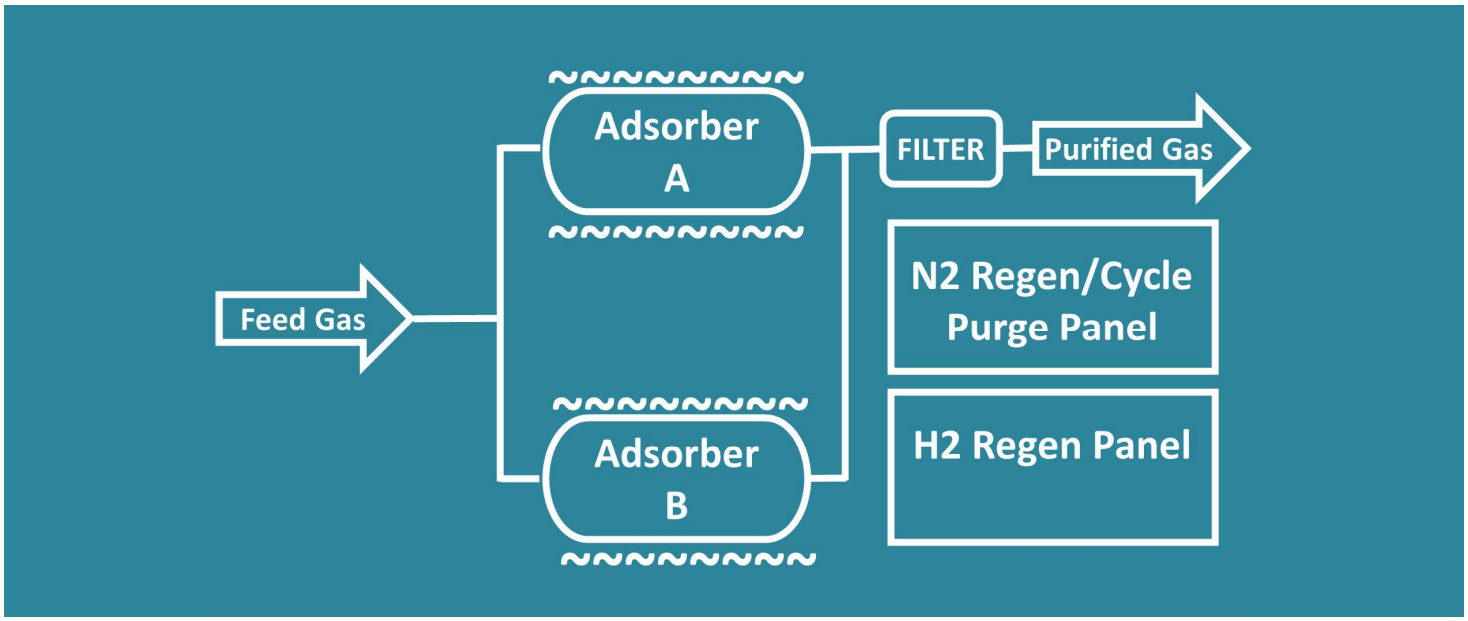
Tronic Purity, inc.

Specialty Gas regenerable gas purifier.

5-nines to 9-nines grade purity.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT4	10 to 500	Specialty Gas	H2O and O2 to < 1 ppb.

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI	√		Inlet and Outlet Actuated / Manual Isolation Valve.		√
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.	√	
Emergency Off Button (EMO).	√		Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown	√		Z-Purge for Electrical Cabinet		√
MODBUS with Ethernet Output, RJ45 Connect.	√		Gas Leak Detector.		√
UPS for Separate Control Power.		√	Overpressure Relief Protection.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.	√	
		√	Particle Filtration. (Metal or Teflon Filtration)		√

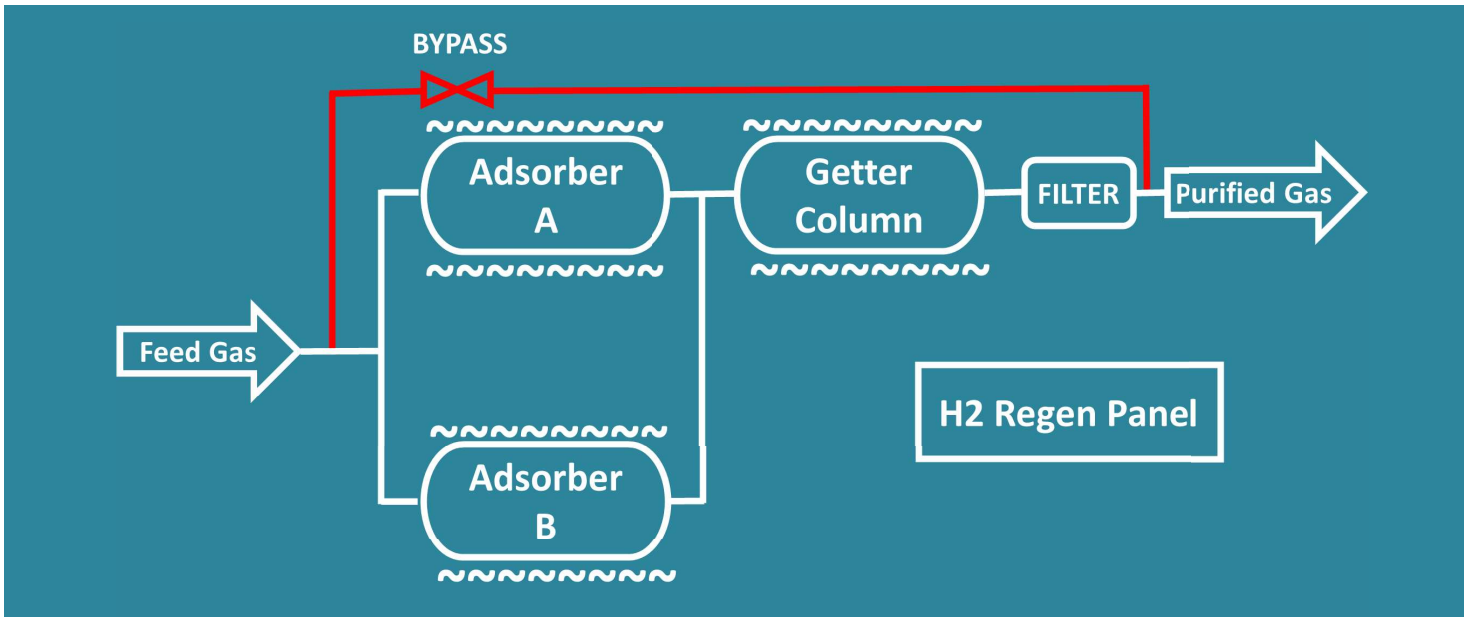
Tronic Purity, inc.

Ar, He Gas regenerable gas purifier.

5-nines to 9-nines grade purity, with N2 removal.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT5	10 to 200	Ar, He	H2O, O2, H2, CO, CO2, CH4, N2 to < 1 ppb

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI.	√		Inlet and Outlet Actuated Isolation Valve.	√	
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.		√
Emergency Off Button (EMO).	√		Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown.	√		Auto / Manual Bypass Valve.		√
MODBUS with Ethernet Output, RJ45 Connect.	√		Hydrogen Leak Detector. (H2 mixed for regeneration)		√
UPS for Separate Control Power.		√	Overpressure and Getter Protection Relief.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.	√	
			Particle Filtration. (Metal or Teflon Filtration)		√

Tronic Purity, inc.

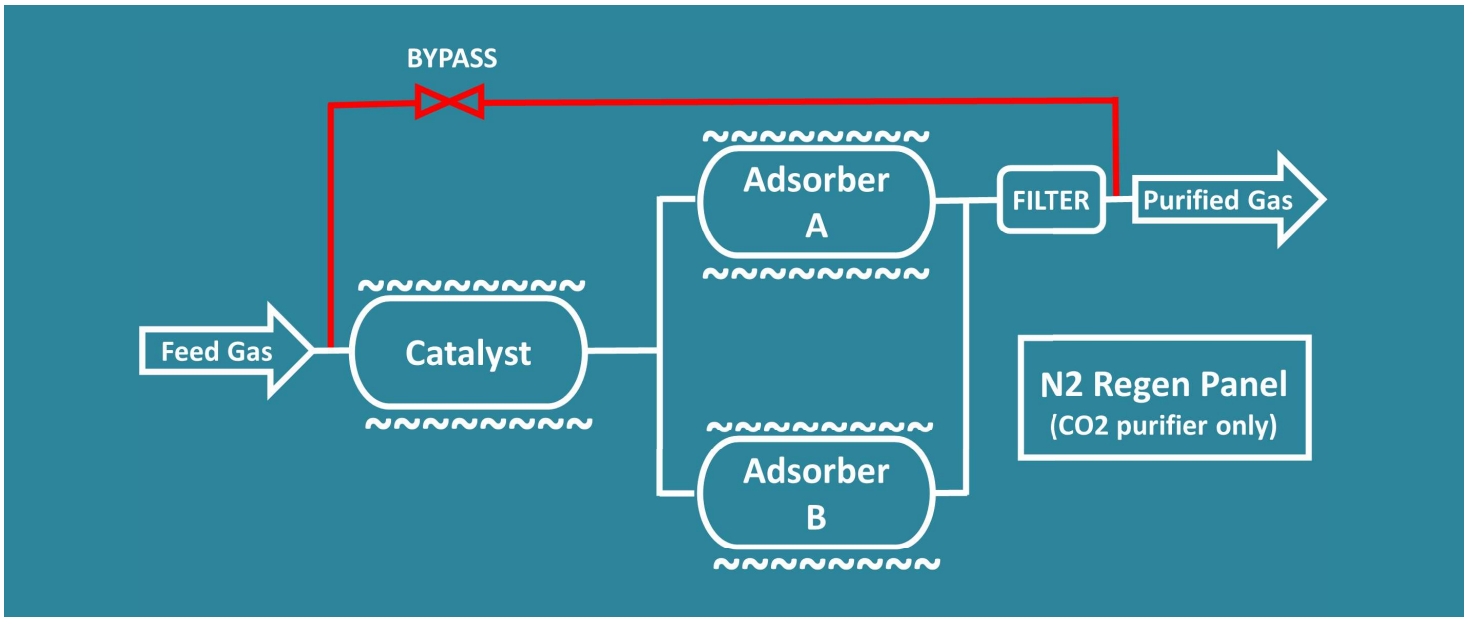
O2, Air, CO2 Gas regenerable gas purifier.

5-nines to 9-nines grade purity, with high CH4 removal.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT6	10 to 500	O2, Air, CO2	H2O, CO, CO2*, H2, CH4 to < 1 ppb

***Not applicable for CO2 Purifier.**

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI.	√		Inlet and Outlet Manual Isolation Valve.		√
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.		√
Emergency Off Button (EMO).		√	Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown.	√		Auto / Manual Bypass Valve.		√
MODBUS with Ethernet Output, RJ45 Connect.	√		CO2 Leak Detector. (Applicable for CO2 purification only)		√
UPS for Separate Control Power.		√	Overpressure Relief Protection.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.		√
			Particle Filtration. (Metal or Teflon Filtration)		√

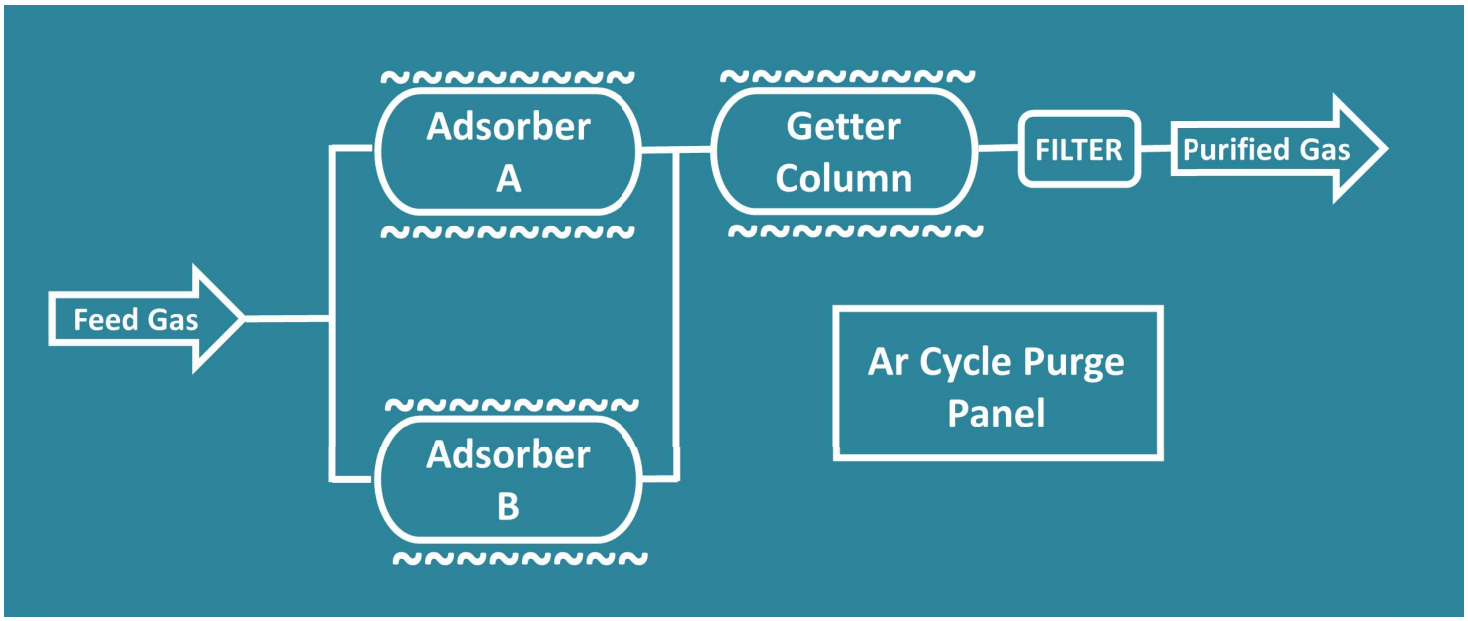
Tronic Purity, inc.

H2 Gas regenerable gas purifier.

5-nines to 9-nines grade purity, with N2 removal.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT7	10 to 200	H2	H2O, O2, CO, CO2, CH4, N2 to < 1 ppb

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI.	√		Inlet and Outlet Actuated Isolation Valve.	√	
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.	√	
Emergency Off Button (EMO).	√		Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown.	√		Z-Purge for Electrical Cabinet	√	
MODBUS with Ethernet Output, RJ45 Connect.	√		Hydrogen Leak Detector	√	
UPS for Separate Control Power.		√	Overpressure and Getter Protection Relief.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.	√	
			Particle Filtration. (Metal or Teflon Filtration)		√

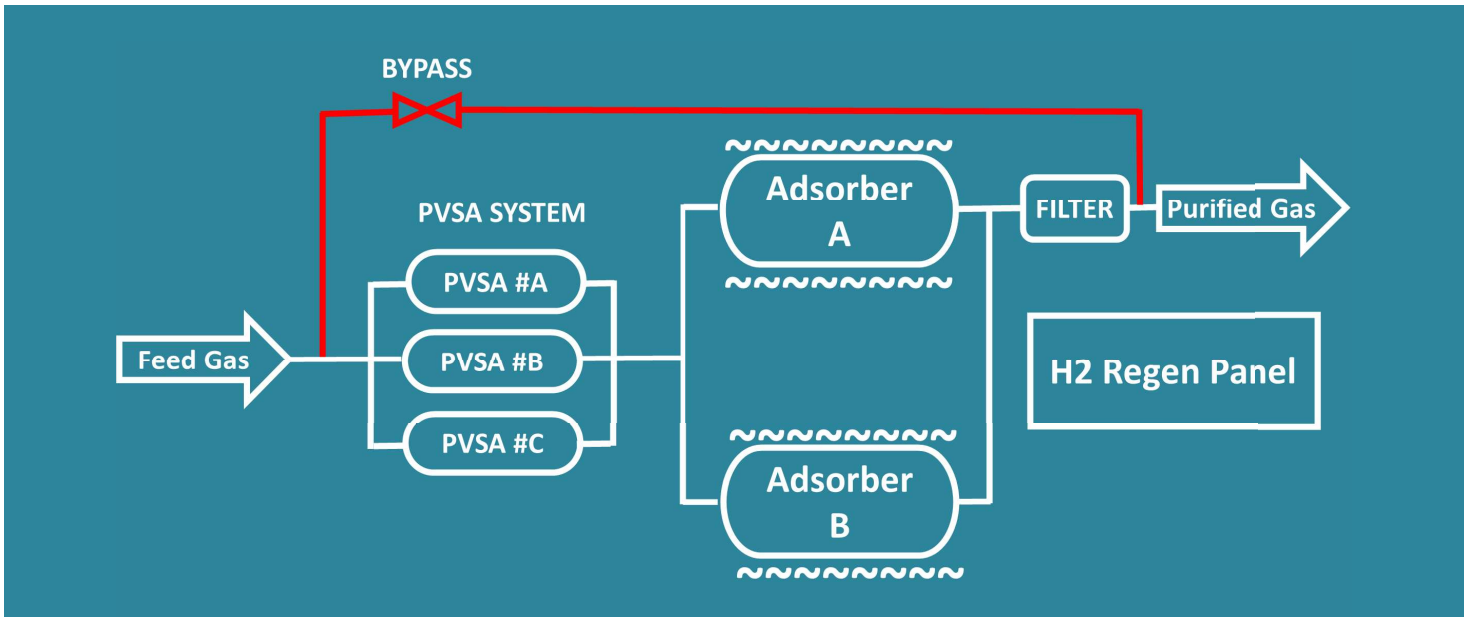
Tronic Purity, inc.

N2 PVSA Technology gas purifier.

3-nines to 9-nines grade purity.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT21	10 to 3,000	N2	H2O, O2, H2, CO, CO2, CH4 to <1 ppb

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI.	√		Inlet and Outlet Manual Isolation Valve.		√
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.		√
Emergency Off Button (EMO).		√	Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown.	√		Auto / Manual Bypass Valve		√
MODBUS with Ethernet Output, RJ45 Connect.	√		Hydrogen Leak Detector. (H2 mixed for regeneration)		√
UPS for Separate Control Power.		√	Overpressure Relief Protection.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.		√
			Particle Filtration. (Metal or Teflon Filtration)		√

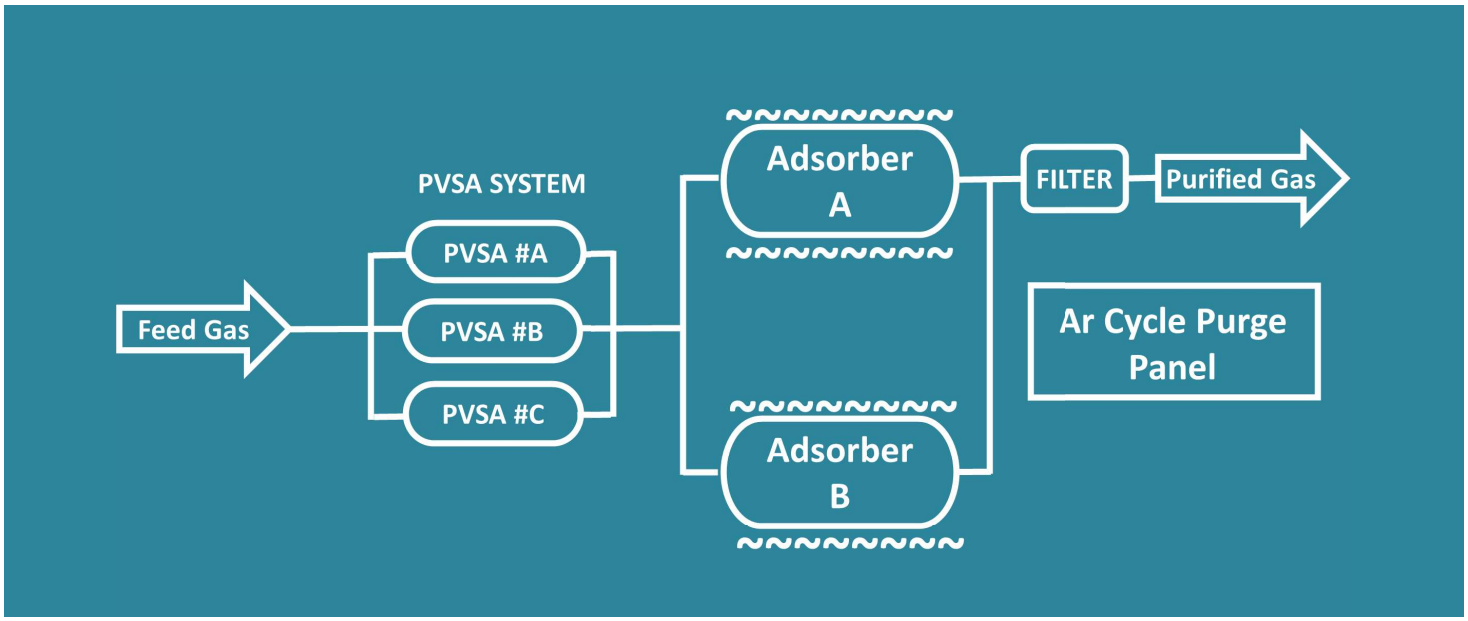
Tronic Purity, inc.

H2 PVSA Technology gas purifier.

3-nines to 9-nines grade purity.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT22	10 to 1,500	H2	H2O, O2, CO, CO2, CH4, N2 to <1 ppb

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI.	√		Inlet and Outlet Actuated Isolation Valve.	√	
Fully Automatic by the Programmable Logic Controller.	√		Inlet and Outlet Pressure Transducer.	√	
Emergency Off Button (EMO).	√		Inlet and Outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown.	√		Z-Purge for Electrical Cabinet	√	
MODBUS with Ethernet Output, RJ45 Connect.	√		Hydrogen Leak Detector.	√	
UPS for Separate Control Power.		√	Overpressure Relief Protection.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.	√	
			Particle Filtration. (Metal or Teflon Filtration)		√

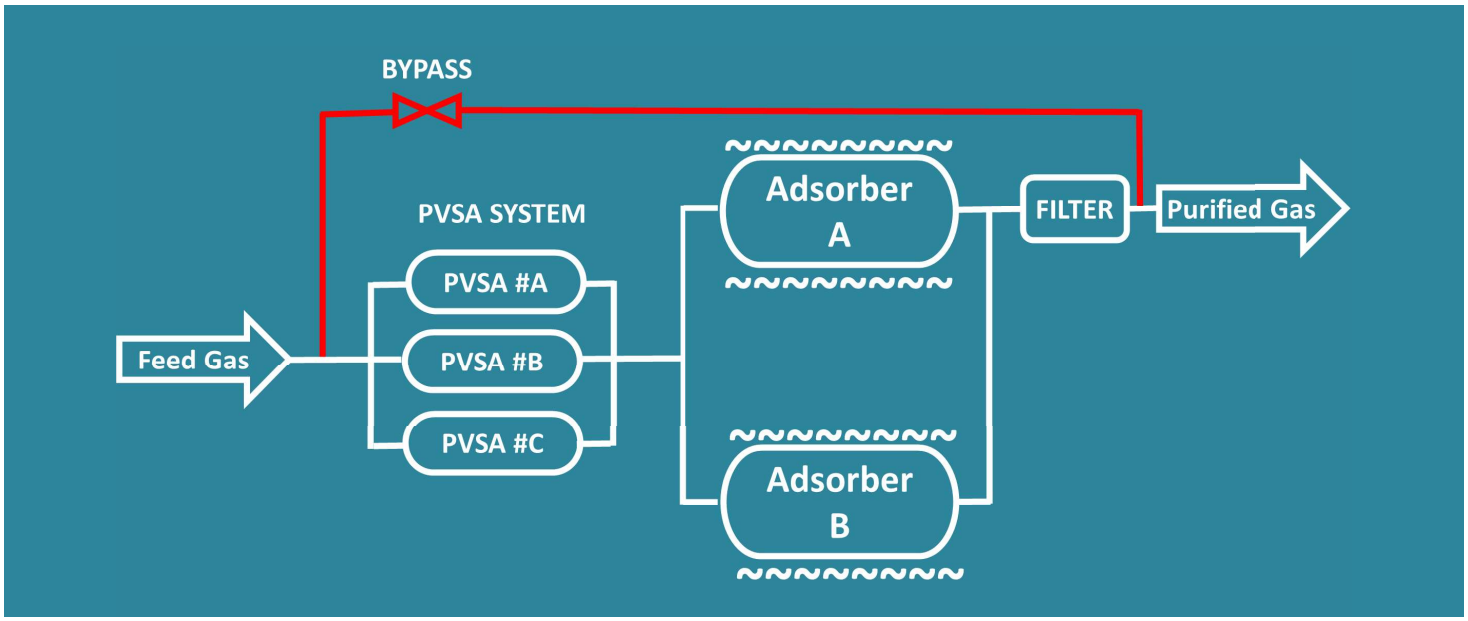
Tronic Purity, inc.

O2, Air PVSA Technology gas purifier.

3-nines to 9-nines grade purity.

Platform No.	Flow Rate (Nm3/Hr)	Gas Purified :	Impurities Removed :
FT23	10 to 3,000	O2	H2O, H2, CO, CO2, CH4 to <1 ppb

Platform and Flow Diagram

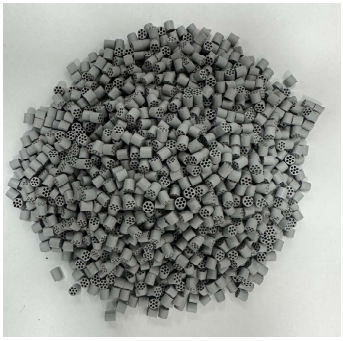


Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
12" Touchscreen HMI.	√		Inlet and outlet Manual Isolation Valve.		√
Fully Automatic by the Programmable Logic Controller.	√		Inlet and outlet Pressure Transducer.		√
Emergency Off Button (EMO).		√	Inlet and outlet Analytical Port.	√	
Separate Control Power. 110 VAC or 220 VAC or 24 VDC.		√	Flow Meter / Flow Totalizer.		√
Emergency Remote Shutdown.	√		Auto / Manual Bypass Valve.		√
MODBUS with Ethernet Output, RJ45 Connect.	√		CO2 Leak Detector (Applicable for CO2 purification only)		√
UPS for Separate Control Power.		√	Overpressure Relief Protection.	√	
Alarm Light Tower.		√	Instrument Air Management System, with IA reservoir.		√
			Particle Filtration. (Metal or Teflon Filtration)		√

Tronic Purity inc.

What is Hollow Fiber?



Adsorbent Hollow Fiber is made from porous materials such as molecular sieves, zeolites, natural zeolite, and so on. During the synthesis process, the precursor or raw material slurry or Sub-powder is added into a mixture with high temperature polymer and goes through the phase inversion process to form the hollow fiber tubes.

The adsorption behavior is the same as physical or chemical adsorption. The major difference is mass-transfer-resistance. The adsorbent hollow fiber has much lower mass-transfer- resistance than commercial pellet adsorbent.

FABTRON Numbering System

FT X - Y - Z

- X: Platform No.
- Y: Flow Rate (Nm3/Hr.)
- Z: Gas Type

Product Lines

FABTRON
√ Hollow Fiber Technology,
Large Flow Regenerable Gas Purifier

LABTRON
√ Hollow Fiber Technology
Low Flow Regenerable Gas Purifier

GETTRON
√ Getter Technology Gas Purifier

LINETRON
√ Point Of Use Inline Gas Purifier

FACILITRON
√ Ambient Bulk Gas Purifier