

FABTRON

The FT23 Series , PVSA + TSA Type Oxygen Purifier

The FABTRON FT23 Series is a high-performance oxygen purifier combining Pressure Vacuum Swing Adsorption (PVSA) and Thermal Swing Adsorption (TSA) technologies to deliver ultra-high purity oxygen for semiconductor, electronics, and hi-tech industrial applications. By integrating granular adsorbent media with a hollow fiber structured module, the system maximizes mass transfer efficiency while maintaining a compact footprint.

During operation, the PVSA stage removes bulk impurities such as N₂ and CH₄ at ambient temperature through pressure cycling and deep vacuum regeneration, ensuring energy-efficient and continuous purification. The TSA stage adsorbs strongly retained contaminants such as H₂O, H₂, CO, and CO₂, impurities at ambient temperature. Regeneration is performed by controlled heating (typically up to 180°C) with back flushing desorption, enabling thorough regeneration and long-term adsorbent stability.

The high-surface-area granular hollow fiber configuration enhances gas distribution uniformity, reduces channeling, and improves overall adsorption efficiency. The dual-train PVSA + TSA alternating design ensures uninterrupted high-purity oxygen supply while supporting scalable capacity and simplified maintenance.

Advantages

- * Capable of removing N₂ impurity.
- * High Purification Efficiency.
- * Efficient ambient-temperature PVSA and high-temperature TSA regeneration.
- * No Consumable Parts.
- * Continuous Operation.
- * Low Pressure Drop Design.
- * Modular & Scalable Configuration.
- * Lots Power Energy Saving.

Designed Flow Rate

- * 10 to 2,000 Nm³/Hr.



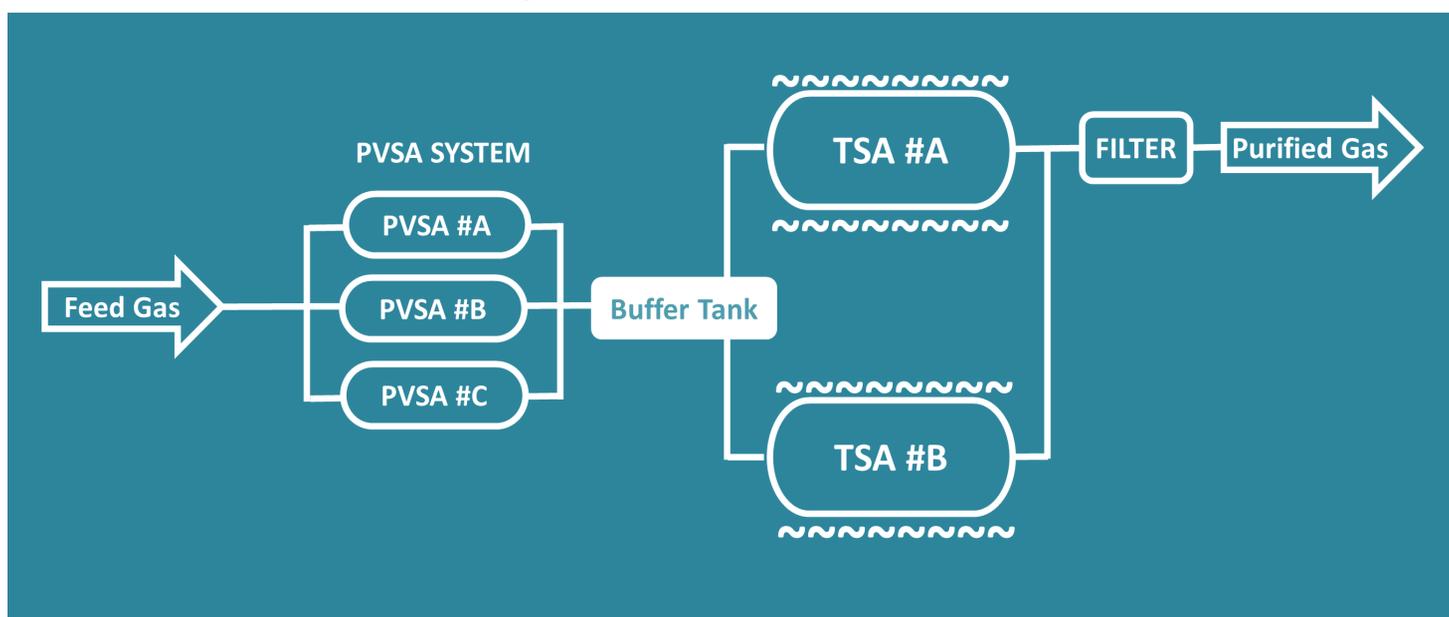


O₂, Air PVSA + TSA Technology gas purifier.

3-nines to 9-nines grade purity.

Platform No.	Flow Rate (Nm ³ /Hr)	Gas Purified :	Impurities Removed :
FT23	10 to 2,000	O ₂	H ₂ O, H ₂ , CO, CO ₂ , CH ₄ , N ₂ to <1 ppb

Platform and Flow Diagram



Features Table

Instrumentation	Standard	Optional	Instrumentation	Standard	Optional
Fully Automated Controller by Programmable Logic Controller.	√		Inlet and Outlet Manual Isolation Valve.		√
12 inches Touchable Human Machine Interface.	√		Auto / Manual Bypass Valve.		√
Separate Control Power. 100-240 VAC.		√	Inlet Mass Flow Meter.		√
UPS for Separate Control Power.		√	Inlet and Outlet Pressure Transmitters.		√
Emergency Off Button (EMO).		√	Inlet and Outlet Analytical Port.		√
Emergency Remote Shutdown	√		Instrument Air Management System with Reservoir.		√
Purified Gas Moisture Transmitter.		√	Over Pressure Relief Valves.	√	
MODBUS or PROFINET Communication Port.	√		0.003µm Particle Filter, Metal or Teflon.		√
Alarm Light Tower.		√	Purifier fixed bolster brackets.		√
Analog Signal Output Interface. * Mass Flow Meter 4-20 mA Signal Output. * Pressure Transmitters 4-20 mA Signal Output. * Common Alarm Relay, N.C. * Gas Relay Indicating Purifier Status, N.C.		√	Backup Column with Auto/ Manual regeneration		√
			Outdoor Enclosure.		√