

TRION[®] EFB Series

Commercial Air Purifier





TRION – a history
of excellent
customer service

TRION – 70 years of unrivaled focus on air purification

Since being established in 1947, TRION® has built an excellent reputation with high-quality products and excellent customer service. The TRION name is well known worldwide. These products and solutions are widely used in residences, offices, factories, hospitals, hotels, restaurants, and other places with high Indoor Air Quality (IAQ) requirements. Johnson Controls acquired TRION in 2015 and strategically focuses on the construction sector, combining with a broader business portfolio

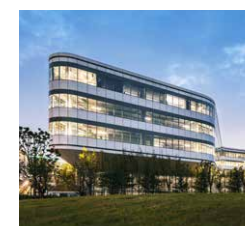
that includes HVAC, Industrial Refrigeration, Security and Fire Protection. TRION offers a comprehensive range of reliable and high-performance air purification products. From residential to commercial, products developed by TRION are always designed to create a cleaner, safer and more comfortable indoor air environment. Our product innovation will continue to meet customer needs as we take pride in providing world-class air purification products.



1947 | TRION is established in Sanford, North Carolina, US



2002 | TRION sets up factory in Suzhou Industrial Park, China

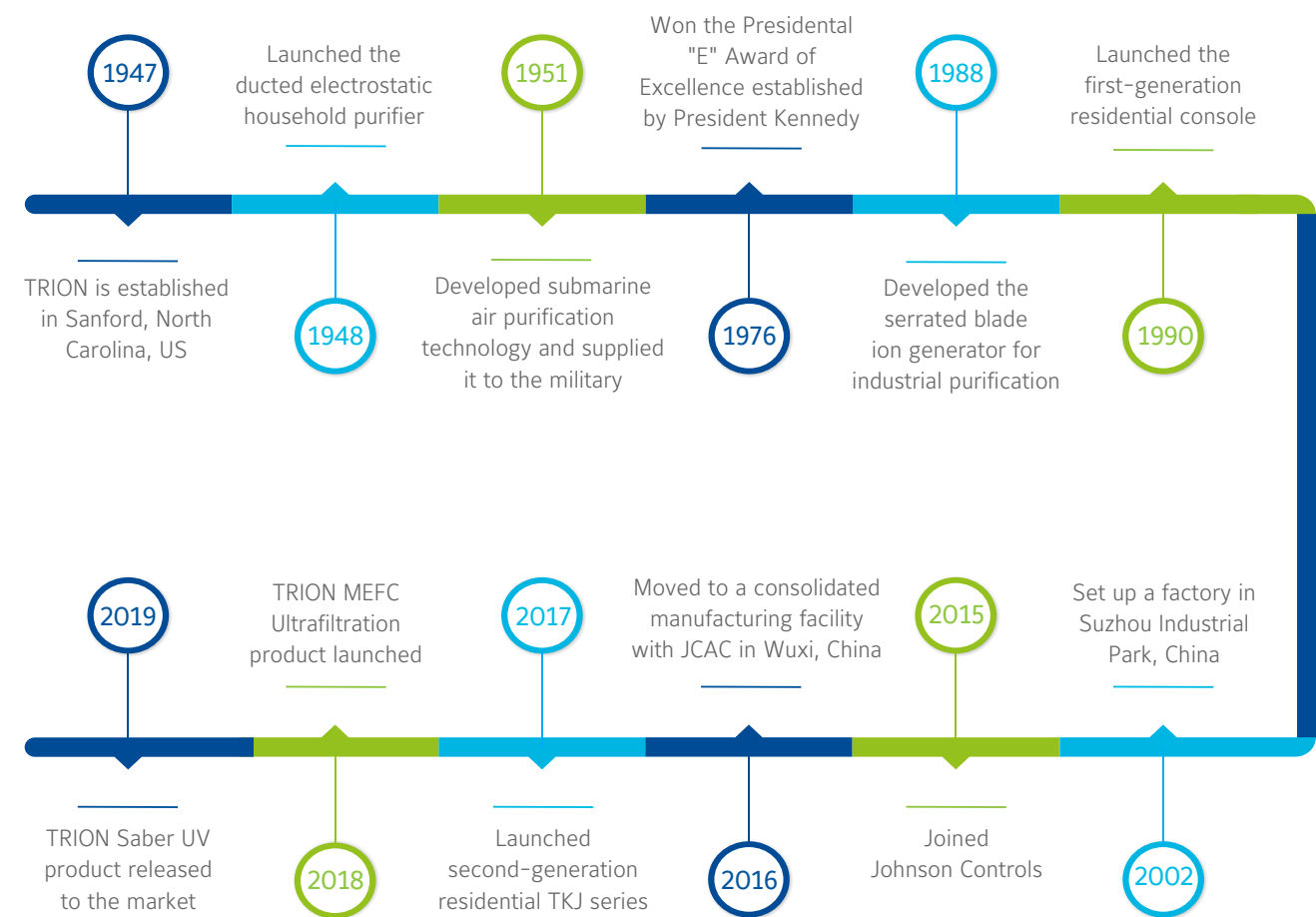


2015 | Joined Johnson Controls and began a bright new journey



2016 | Moved to a consolidated manufacturing facility with Johnson Controls Air Conditioning (JCAC) in Wuxi, China

Brand history



Indoor Air Quality concerns

Economic growth has led to higher quality of life expectations in recent years. However, it has also brought about health concerns from increased environmental pollution. With current trends indicating that people are spending more than 80 percent of their time engaging in indoor activities, Indoor Air Quality (IAQ) has become increasingly important.

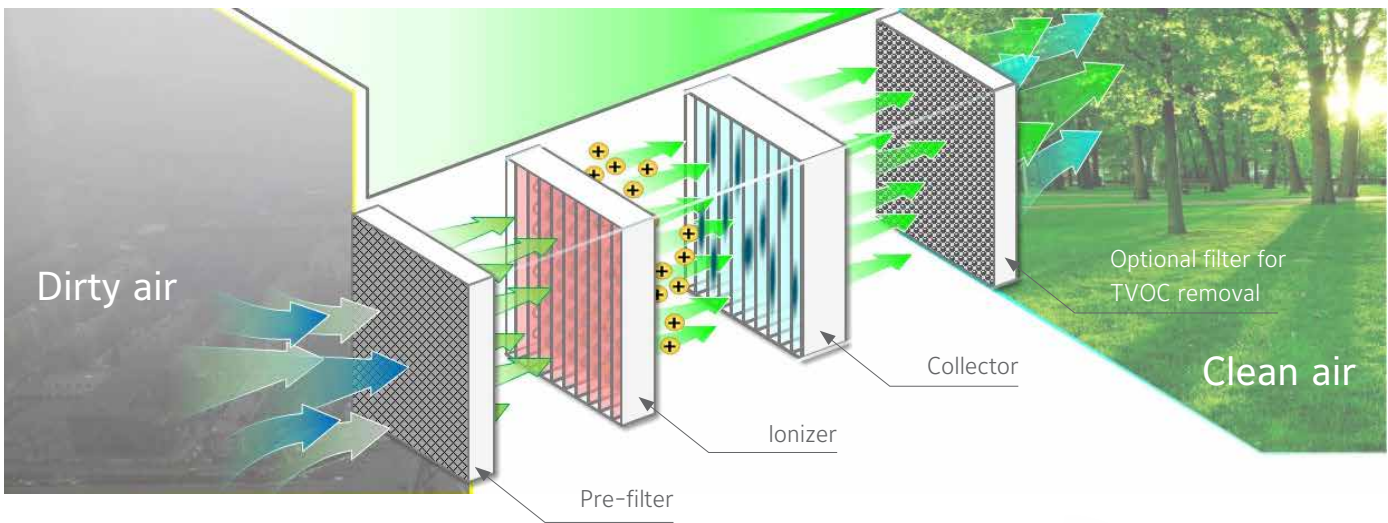
Indoor pollution is a significant barrier to a healthy life at home. With modern construction practices adopting enclosed designs with little fresh air intake, the negative impact of indoor pollution on human health has become more evident through Sick Building Syndrome (SBS), Building-Related Illness (BRI) and Multiple Chemical Sensitivities (MCI).

Indoor pollution usually consists of particulate matter (PM2.5), toxic gases and biological pollutants, such as bacteria. The pollutants can originate from smoking, renovation materials, furniture, inadequate air conditioning system design, and improper servicing and maintenance.

On the other hand, the polluted outside air can also be introduced indoors via air inlets. Therefore, equipping commercial and public areas with highly efficient air purification systems has become a basic requirement to protect human health.

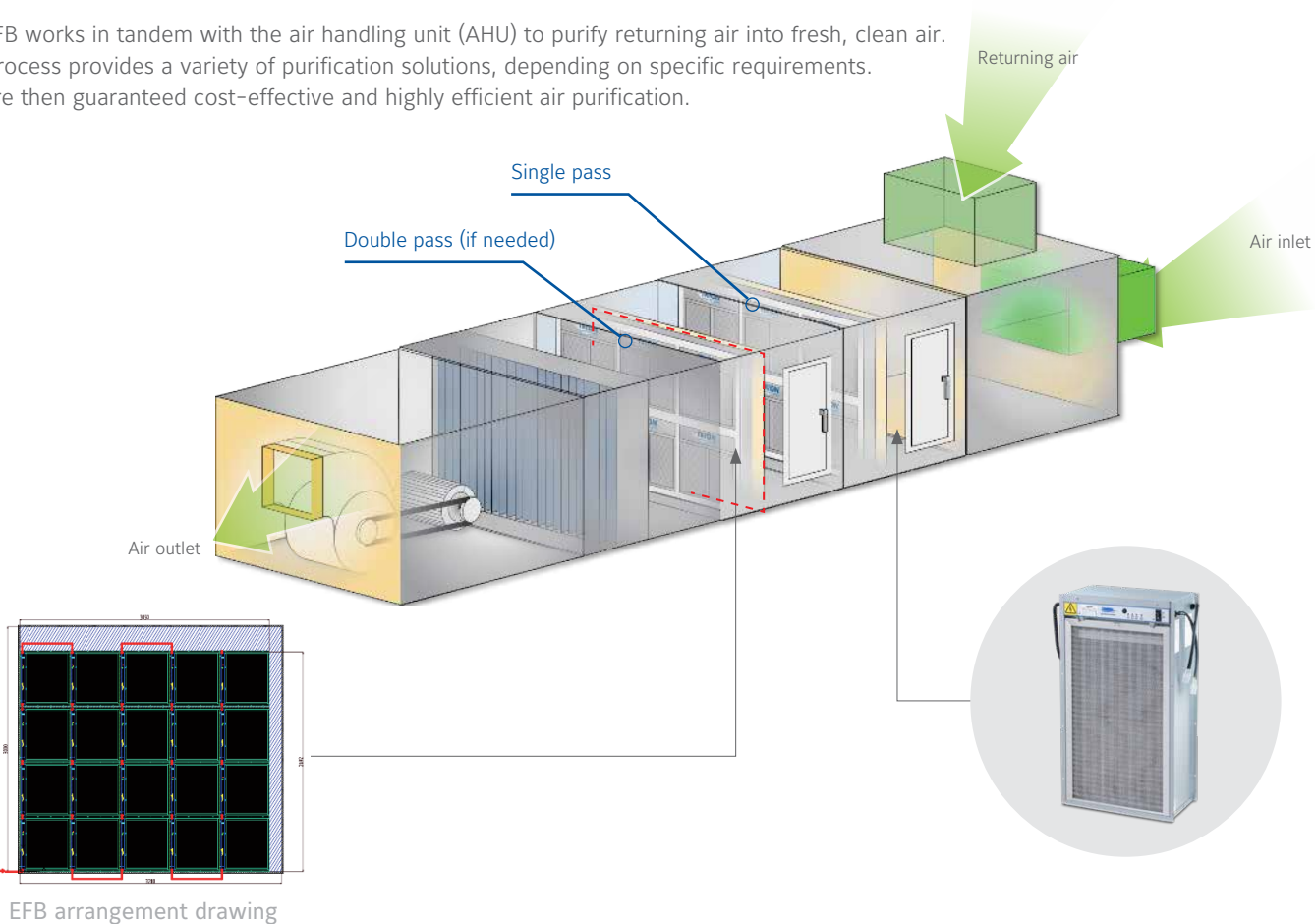
Operating principle

The TRION Electronic Air Purifier is technically known as an electrostatic precipitator (ESP). This is because all airborne particles, even those 0.01µm in size, are electronically charged as they pass through a high-voltage ionizer. These charged particles are then drawn through a series of parallel collecting plates. Subsequently, purified clean air is discharged to generate a cleaner and healthier indoor environment.



EFB and AHU combine to purify air

The EFB works in tandem with the air handling unit (AHU) to purify returning air into fresh, clean air. This process provides a variety of purification solutions, depending on specific requirements. You are then guaranteed cost-effective and highly efficient air purification.



Product features

EFB provides highly efficient purification and low operational and maintenance costs



Industry-leading efficiency

Particle removal: PM2.5 purifying efficiency reaches 95 percent*. The efficiency is equal to MERV15 per ASHRAE 52.2**.

Microorganism removal: Microorganism purifying efficiency reaches 95 percent*.



Low resistance

The pressure drop is lower than 20Pa @ 2.5m/s velocity. The pressure drops to less than 10Pa during use, which leads to fan energy consumption savings of around 10 percent.



Enhanced durability

The ionizer uses aircraft aluminum with a high anti-corrosion capability. This is washable for repeated use. Therefore, it is extremely rare for replacements to be required.

High security reliability and modular design



Security reliability

- **Ceramic insulation:** The EFB is applied with ceramic for stable insulation and high security.
- **Airflow sensor control:** The AHU has a working alignment to reduce energy consumption and protect the EFB.
- **Safety switch:** The product is configured with a safety switch to protect users.
- **Smart controls:** There are indicator lights for product statuses, including running, errors and wash reminders. A dry contact is also available for BMS communication.



Easy installation

- **Modular design:** The product is designed with flexibility and easy installation in mind.
- **Easy to maintain:** The handy design means easy maintenance disassembly and reassembly.
- **Intelligent wash reminder:** Get alerts to clean the product to maintain constant purification.



UV sterilization module (optional)

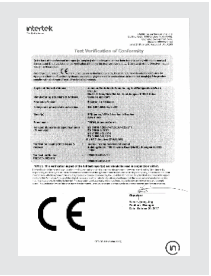


The optional UV sterilization module is equipped with a UV lamp and TiO₂ catalyst, which provide UV sterilization and photocatalytic oxidation (PCO) to quickly eliminate airborne viruses and bacteria.

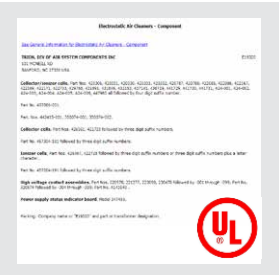
Tested and certified to the highest standards



Performance testing report



CE Certification



UL Certification for our ionizer

* Tested based on GB14295-2008.

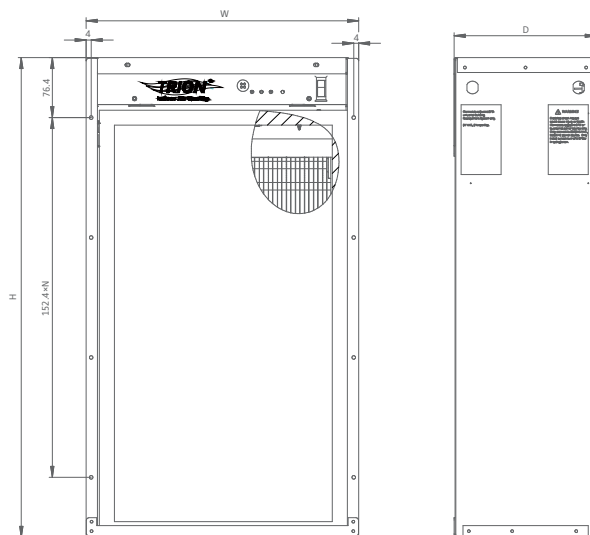
** Calculated based on ASHRAE 52.2. The test is conducted by the National Centre of Quality Supervision and Inspection and Testing for Air Conditioning Equipment.

Product specifications

Configuration		EFB Single		EFB Double		EFB Double-Stack	
Parameter	Air volume (m³/h)	1,700	2,500	3,400	5,000	3,400	5,000
	Power supply	220-240V, 50/60Hz/1PH					
	Pressure drop (Pa)	<20 @ 2.5 m/s					
	Power (w)	30 (70)*	40 (80)*	40 (115)*	35	50	50
	Weight (kg)	12 (14)*	18 (20)*	18 (20)*	14	22	21
	Safety protection	Safety switch, AFS					
	Pre-filter	Aluminum mesh					
	Pre-filter (optional)	G2 22mm, G4 45mm (optional)					

* EFB plus UV sterilization module (optional)

Product dimensions



Model	Air volume (m³/h)	W (mm)	H (mm)	D* (mm)	D** (mm)	D*** (mm)	D**** (mm)	N (pcs)
EFB Single	1700	348	610	182	203	270	290	3
	2,500	489	610	182	203	270	290	3
EFB Double	3,400	660	610	182	203	270	290	3
	5,000	931	610	182	203	270	290	3
EFB Double-Stack	3,400	348	1,115	182	203	270	290	6
	5,000	489	1,115	182	203	270	290	6

* EFB with a 22mm pre-filter

** EFB with a 45mm pre-filter

*** EFB plus UV sterilization module (optional) with a 22mm pre-filter

**** EFB plus UV sterilization module (optional) with a 45mm pre-filter

The power behind **your mission**

