TRION
Indoor Air Quality

TRION® Air Green Series

The TRION Air Green Series offers customers market-leading air purification solutions

The power behind **your mission**

Johnson Controls

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 now widely used in residences, offices, factories, hospitals, hotels, restaurants, and other places with high indoor air quality 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 provides 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 set up a factory in Suzhou Industrial Park, China

2015 | Joined Johnson Controls and began a bright, new journey

2016 | Moved to a consolidated manufacturing facility with JCAC in Wuxi, China

Brand history

Cooking oil fumes – a global issue

Continuously evolving changes in societies and economic improvements are driving up the quality of our living standards. The catering industry has also developed rapidly.

However, the catering industry's cooking oil fume (COF) emissions have become the third-largest air polluter after industrial and traffic pollution. The rise in pollution has created a significant impact on the living environment and the atmosphere. Therefore, the national environmental protection department and most countries' local governments have stipulated the control and rectification of COF emissions.

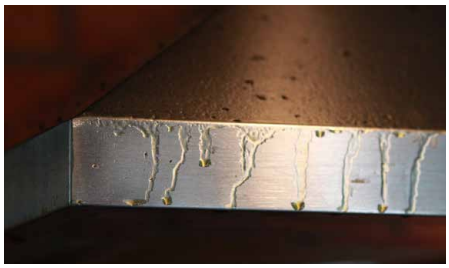
The pollutants of kitchen cooking oil fumes

The volatilized fats, organic matter and their thermal decomposition or cracking products produced during food cooking and processing are collectively referred to as COF. Cooking oil fume pollutants include grease, oil fumes and gaseous volatiles.

Gaseous volatile VOCs are mainly fatty acids, alkanes, olefins, aldehydes, ketones, alcohols, esters, and aromatic compounds. Among them, polycyclic aromatic hydrocarbons are one of the carcinogens.

Odor

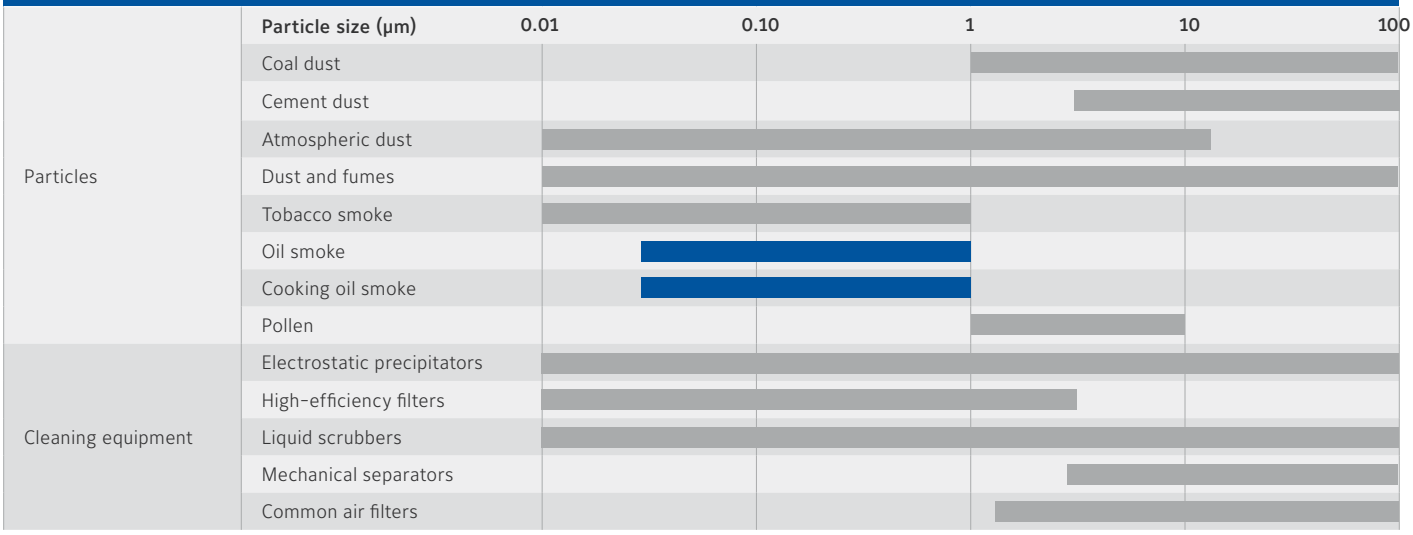
Oil smoke



Grease

Particle characteristics

Air purification methods and particle sizes range



The impact of kitchen cooking oil fumes

Cooking oil fumes (COF) emissions in kitchens pollute the environment and buildings and pose a considerable fire hazard. At the same time, it will also affect the health of the people exposed to them, such as consumers and employees. These kitchens risk closure for failing to abide by local government pollution regulations or an audit check.

With improving quality of life and living standards, people are conscious of the effects of environmental pollution and have a strong preference for a healthy environment. Therefore, having a good kitchen purifying system that meets national standards is a social responsibility and a necessity for long-term business gains.

The impact of kitchen cooking oil fumes

Disturbance and air pollution

Fire hazards

Polluted buildings

Business closures caused by pollution non-compliance and audits

Bad customer experiences

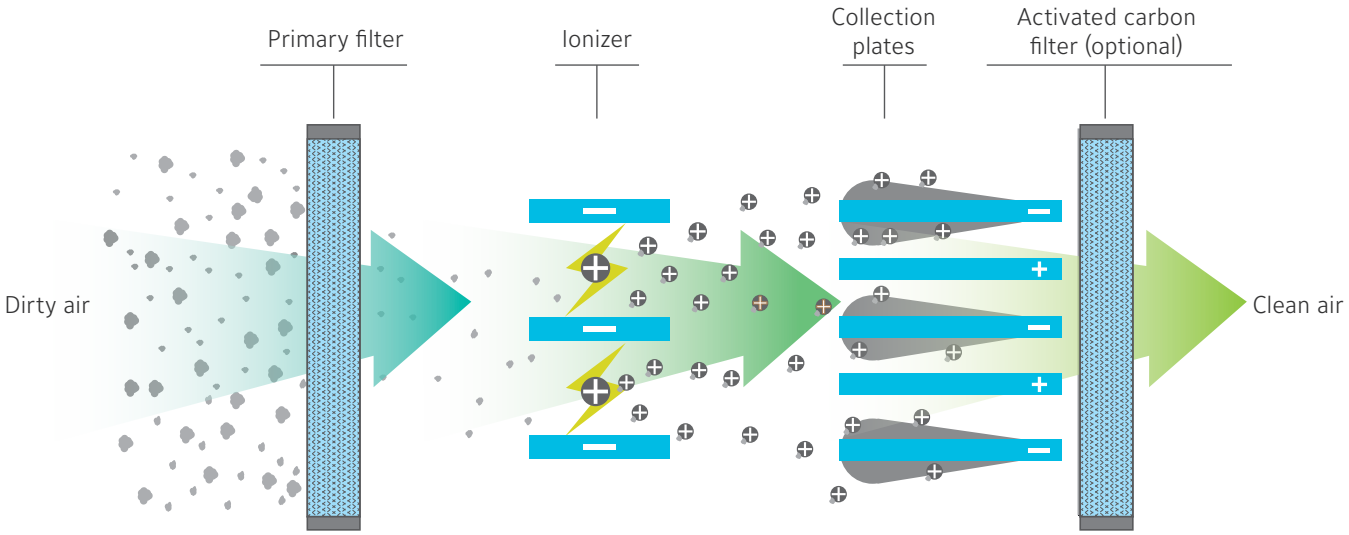
Affects employee health

TRION Kitchen Exhaust Air Cleaner

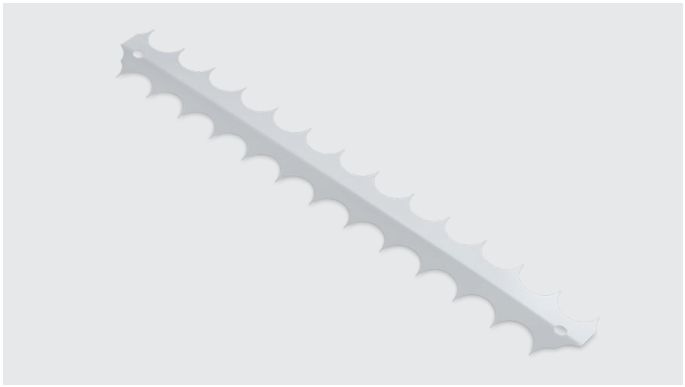
TRION Kitchen Exhaust Air Cleaner

The principle of electrostatic purification technology

- The dirty air will go through the primary filter, where large particles of pollutants in the air are intercepted. The smaller particles that escape through the primary filter enter the ionization zone.
- In the ionization zone, particles as small as 0.01μm are effectively ionized and carry a positive charge to continue to the dust collection area.
- The dust collection area is composed of many parallel plates. These charged particles are then attracted to and adhere to this series of parallel plates, which form the negative elements of an electrostatic field.
- The clean air enters the activated carbon filter (optional). The activated carbon filter will absorb the odor molecules and the clean and fresh air will be sent back to the room or discharged into the atmosphere.

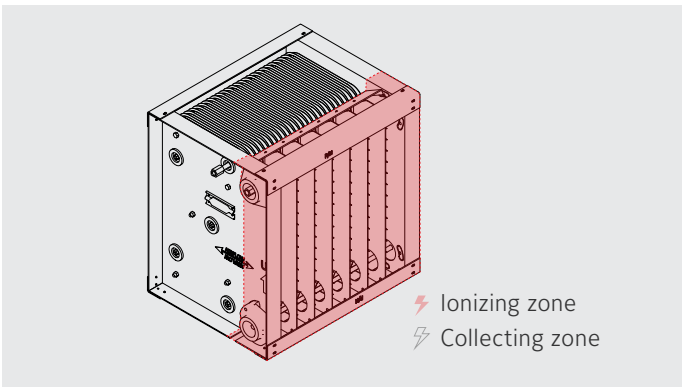


High purification efficiency



Staggered spiked ionizer

TRION Teeth Spiked Ionizer Blades use a double-sided staggered complementary design to improve discharge and ensure fully charged oil fume particles. At the same time, the stainless steel design is not easily stained by oil, ensuring the equipment is always in a high-efficiency state.



Dual-zone bi-voltage design

The product adopts a dual-zone bi-voltage design to ensure the particles are fully charged in the ionizing zone and fully captured in the collecting zone, realizing an excellent purification effect.

Large dust-trapping capacity

The collecting zone adopts a small-pitch, large-area structure design. TRION has a unique airflow channel design to ensure the charged particles are effectively attracted through the dust collecting area to achieve high purification efficiency.

PWM power board

The product is equipped with a PWM power board to ensure a constant and stable output voltage. This enables the unit to work in the best condition. In addition, the arcing detection and automatic reset function ensure a stable and efficient purification effect.

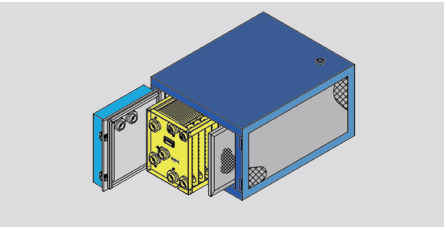
Safe and reliable

Reliable insulation

The ESP cell adopts small and large ceramic insulation to limit contamination to build up and increase the life of the product. The ESP cell adopts high-voltage copper contacts to transfer high voltage that meets CE safety requirements, and complies with IEC60335 standards, to guarantee a stable voltage output.

Safe and durable

The stainless steel ionizer blade and aviation aluminum dust collecting plate enable high strength and corrosion resistance. In addition, the solid electric components meet UL flame retardant requirements.



Multi-protection

The product comes with a safety switch to ensure product use and maintenance are safe. The system also has multiple protection features, such as short circuits and arc extinguishing, to ensure stable and reliable operation.

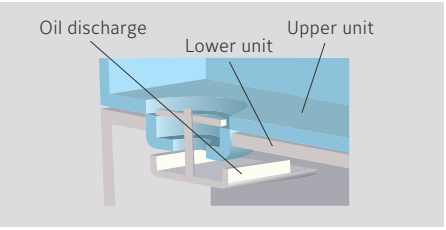
Easy installation and maintenance

Modular design

The product unit can be assembled to achieve greater air volume to meet different locations and different kitchen purification requirements.

Easy maintenance

A reminder function is available for the user to set the cleaning cycle time. The ion chamber can be easily pulled out for cleaning and maintenance. The smart auto-wash unit can do automatic regular cleaning, effectively reducing manpower costs and ensuring the unit operates efficiently.



Oil draining system

Even though the product is stacked in multiple layers, the unique draining design ensures the oil is collected into the tank and drained in time.

Smart auto-clean system solutions

The TRION Kitchen Air Cleaner is a smart auto-clean solution for people who clean units by hand. Smart auto-cleaning can effectively reduce staffing costs and provide different system solutions according to the type of kitchen and cooking fume emissions to ensure high purification efficiency.

Light cooking fume emissions

Kitchens with low COF emissions, such as western restaurants and restaurants that mainly use steam and boil cooking methods and can choose the most economical cleaning solution.

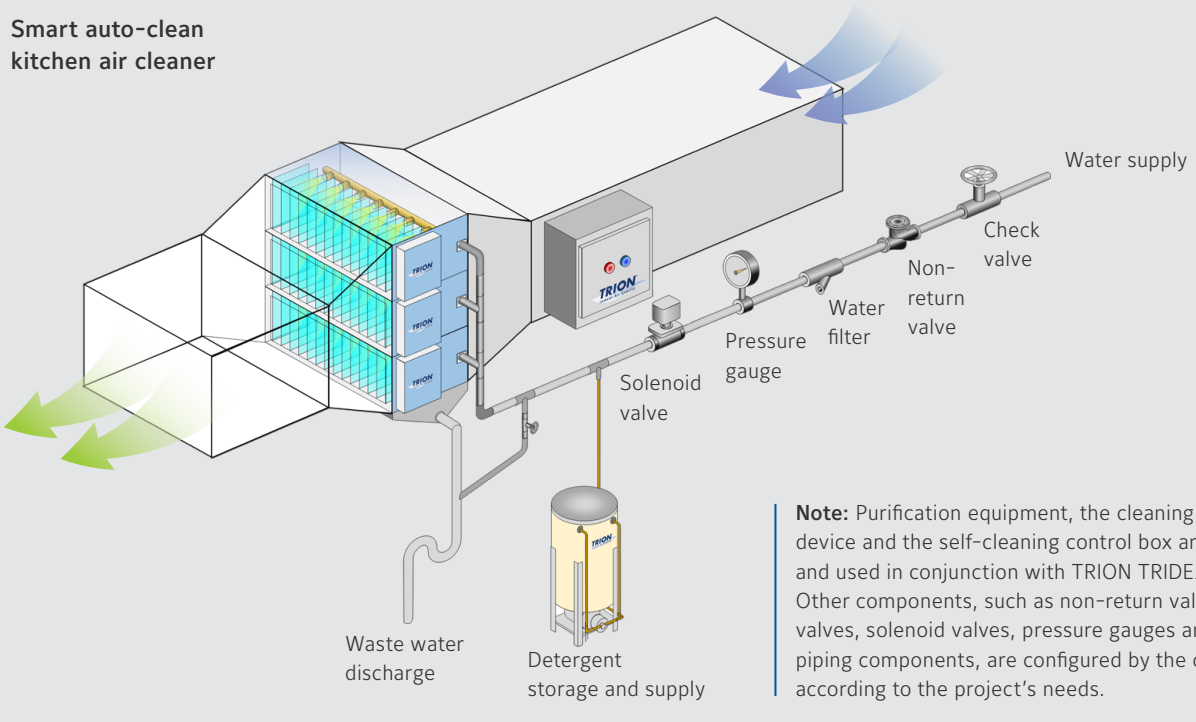
Medium cooking fume emissions

The traditional restaurant that usually fries food - which creates more fumes - can use the highly efficient clearing solution with better effect.

Heavy cooking fume emissions

High COF emission and heavy oil pollution restaurants, such as those focusing on barbecued food and teppanyaki, shall appropriately increase the cleaning frequency and use the powerful oil remover solution.

Smart auto-clean system diagram



Note: Purification equipment, the cleaning detergent device and the self-cleaning control box are provided and used in conjunction with TRION TRIDEX detergent. Other components, such as non-return valves, check valves, solenoid valves, pressure gauges and other piping components, are configured by the customer according to the project's needs.

TRION Kitchen Exhaust Air Cleaner

Air Green Series

The TRION Air Green Series Kitchen Air Cleaner is an ideal product for removing air pollutants such as smoke, soot and oil mist. According to the type of cooking and the concentration of pollutant emissions, single-stage or double-stage purification can be selected, and odor purification can be configured to ensure effective purification and meet emission standards.

High purification efficiency

The product utilizes PWM solid-state power supply, which ensures a highly efficient, stable and continuous supply.

Safe and reliable

It is equipped with a safety switch and a power switch, giving double the protection.

Modular design

The modular design enables horizontal parallel assembly or vertical stacking to meet various on-site requirements.

Staggered spiked ionization

The ionizer uses stainless steel staggered zigzag multi-point ionization and is not easily stained by oil.

Building Automation (BA) option

This model offers remote power control, a reset wash reminder and the option to monitor your operation, cleaning, time and fault statuses.

Outdoor installation

IPX4 protection rating for outdoor installation. This also offers aviation aluminum alloy plates for enhanced corrosion resistance.

TRION Smart Auto-Clean Air Green Series

The maintenance of kitchen air cleaners is usually carried out by staff, which increases business costs. The TRION Smart Auto-Clean Air Green Series provides flexible auto-clean wash solutions. The user can customize the cleaning frequency with the system then self-cleaning automatically, enabling the unit to keep high purification efficiency and, importantly, saving on maintenance costs.

Flexible performance
Provides a variety of intelligent self-cleaning solutions depending on different types of kitchen and oil fume emissions.

Durability
The copper cleaning pipe and stainless steel nozzle design ensure durability.

Smart controls
Products come equipped with smart controls, such as fan linkage, fire linkage, kitchen remote control.

V-shaped inclined water tray
The V-shaped inclined water tray increases accumulated water and allows sewage to flow out of the drainage hole in time.

Smart auto-clean
360-degree cleaning to market-leading effect. An intelligent cleaning program enables freely set cleaning times and frequencies.

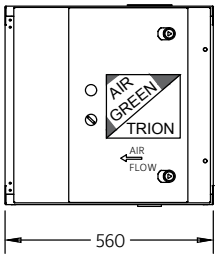
Safe and reliable
It comes with safe and reliable functions such as a safety switch, water shortage reminder, short circuit protection and arcing extinguishing.

T1001

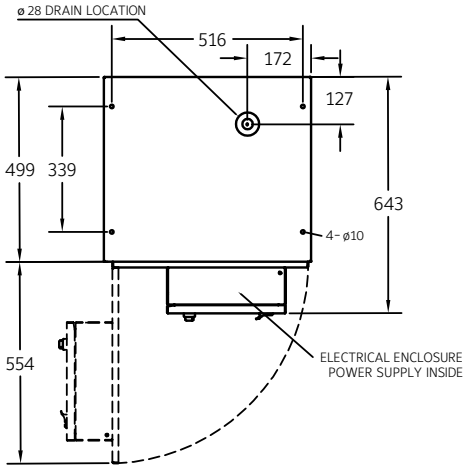
The T1001 is designed for in-duct installation where other external sources provide air movement. It has a single combined aluminum ionizer/collector cell with stainless steel spiked ionizers and an air volume range up to 4,000 CMH.

T1001 specifications	
Dimensions (mm)	560D x 643W x 534H
Installation	Suspended, wall, frame, or duct mounted
Unit weight (kg)	50
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	12kV/6kV
Product power (w)	30
Number of cells	1
Airflow (CMH)	4,000 (2,354 CFM)
Pressure drop (Pa)	≤65
Flange size (mm)	499 x 534
Controls	Power switch with an indicator light
Pre-filter	460L x 460W x 22.2D Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/ collector cell
After-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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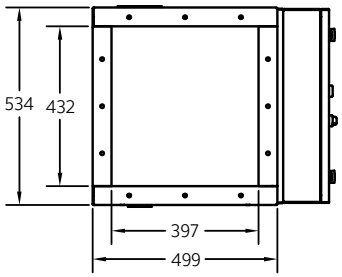

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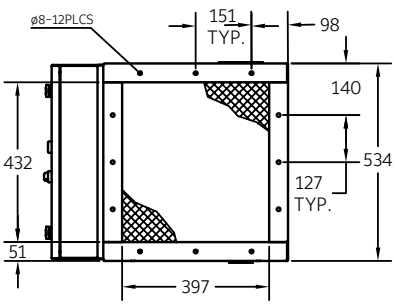
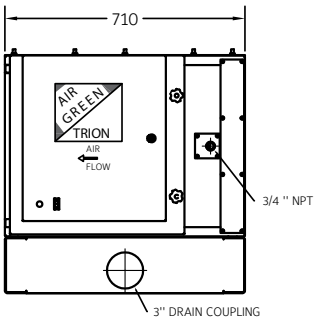


T1001W

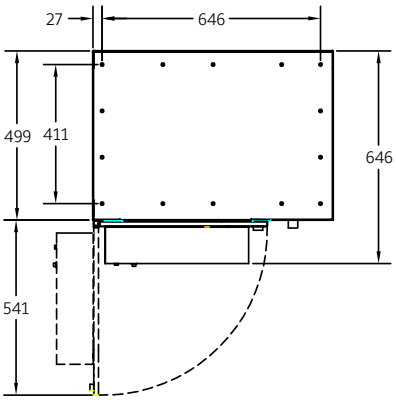
The T1001W is designed for in-duct installation where other external sources provide air movement. It has a single combined aluminum ionizer/collector cell with stainless steel spiked ionizers and an air volume range up to 4,000 CMH.

T1001W specifications	
Main unit dimensions (mm)	710D x 646W x 702H
Subordinate unit dimensions (mm)	710D x 634W x 534H
Installation	Suspended, wall, frame, or duct mounted
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	11.5kV/5.5kV
Product power (w)	50
Number of cells	1
Airflow (CMH)	4,000 (2,354 CFM)
Pressure drop (Pa)	≤95
Flange size (mm)	499 x 534
Detergent consumption (L)	0.9
Water flow (m^3/hr @ 3.5 bar)	0.8
Water inlet connection size	DN20
Controls	Sequenced wash/filtration controller
Pre-filter	460L x 460W x 22.2D Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/ collector cell
Post-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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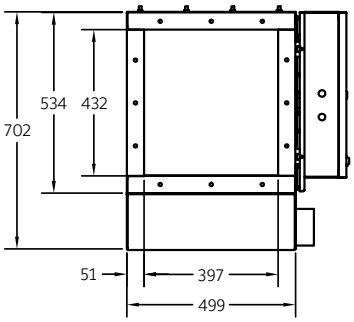

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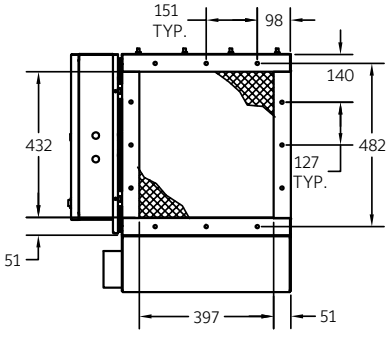
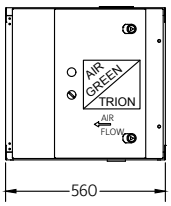


T2002

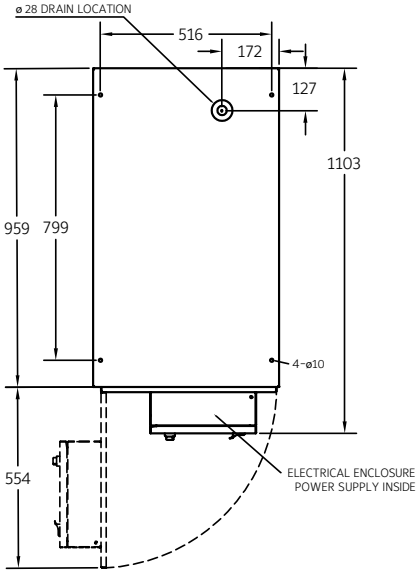
The T2002 is designed for in-duct installation where other external sources provide air movement. It has two combined aluminum ionizers/collector cells with stainless steel spiked ionizers and an air volume range up to 8,000 CMH.

T2002 specifications	
Dimensions (mm)	560D x 1,103W x 534H
Installation	Suspended, wall, frame, or duct mounted
Unit weight (kg)	70
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	12kV/6kV
Product power (w)	50
Number of cells	2
Airflow (CMH)	8,000 (4,708 CFM)
Pressure drop (Pa)	≤65
Flange size (mm)	959 x 534
Controls	Power switch with an indicator light
Pre-filter	2 x (460L x 460W x 22.2D) Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/ collector cell
After-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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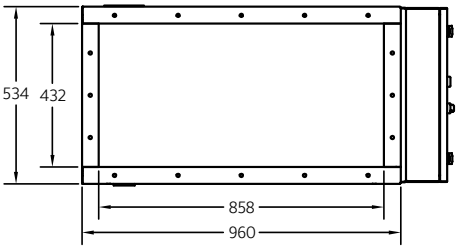

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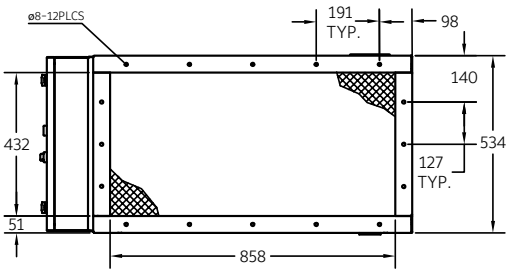
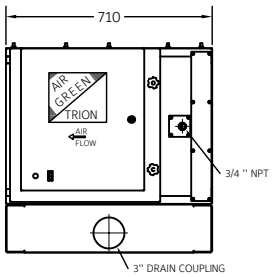


T2002W

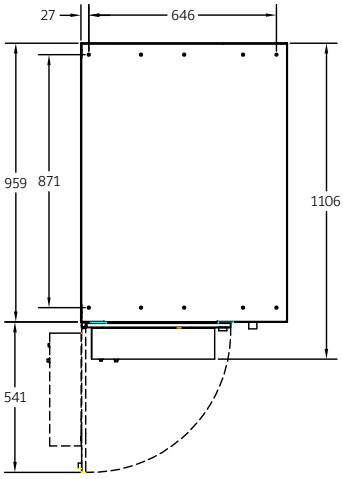
The T2002W is designed for in-duct installation where other external sources provide air movement. It has two combined aluminum ionizers/collector cells with stainless steel spiked ionizers and an air volume range up to 8,000 CMH.

T2002W specifications	
Main unit dimensions (mm)	710D x 1,106W x 702H
Subordinate unit dimensions (mm)	710D x 1,103W x 534H
Installation	Suspended, wall, frame, or duct mounted
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	11.5kV/5.5kV
Product power (w)	60
Number of cells	2
Airflow (CMH)	8,000 (4,708 CFM)
Pressure drop (Pa)	≤95
Flange size (mm)	959 x 534
Detergent consumption (L)	1.8
Water flow (m^3/hr @ 3.5 bar)	1.6
Water inlet connection size	DN20
Controls	Sequenced wash/filtration controller
Pre-filter	2 x (460L x 460W x 22.2D) Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/ collector cell
Post-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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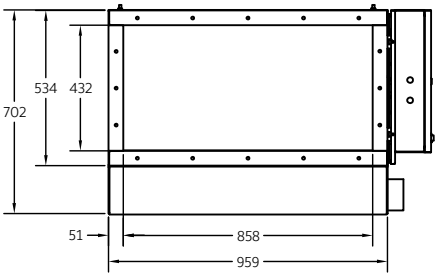

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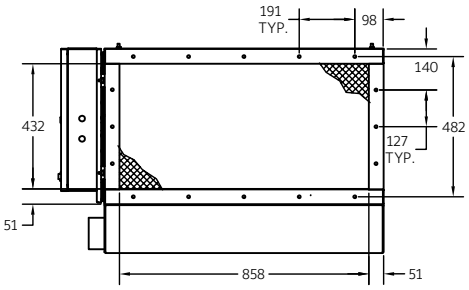
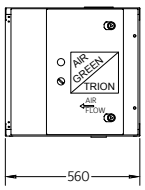


T3003

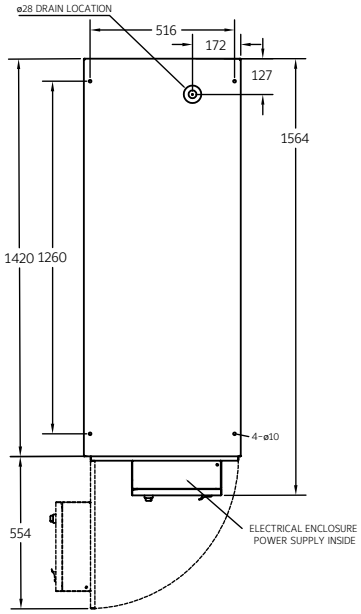
The T3003 is designed for in-duct installation where other external sources provide air movement. It has three combined aluminum ionizers/collector cells with stainless steel spiked ionizers and an air volume range up to 12,000 CMH.

T3003 specifications	
Dimensions (mm)	560D x 1,564W x 534H
Installation	Suspended, wall, frame, or duct mounted
Unit weight (kg)	105
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	12kV/6kV
Product power (w)	70
Number of cells	3
Airflow (CMH)	12,000 (7,062 CFM)
Pressure drop (Pa)	≤65
Flange size (mm)	1,420 x 534
Controls	Power switch with an indicator light
Pre-filter	3 x (460L x 460W x 22.2D) Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/ collector cell
After-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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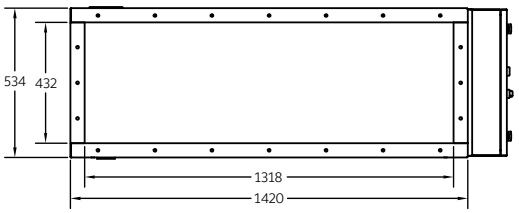

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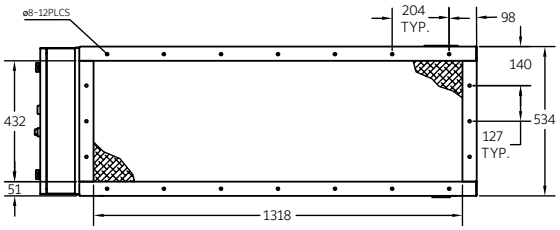
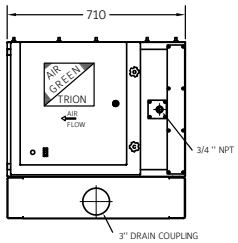


T3003W

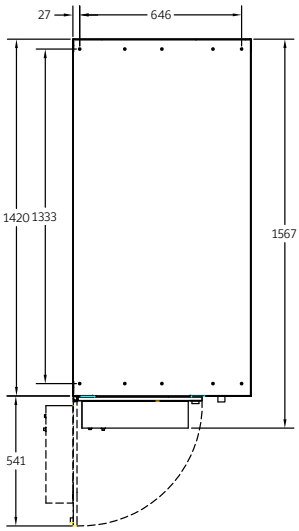
The T3003W is designed for in-duct installation where other external sources provide air movement. It has three combined aluminum ionizers/collector cells with stainless steel spiked ionizers and an air volume range up to 12,000 CMH.

T3003W specifications	
Main unit dimensions (mm)	710D x 1,567W x 702H
Subordinate unit dimensions (mm)	710D x 1,564W x 534H
Installation	Suspended, wall, frame, or duct mounted
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	11.5kV/5.5kV
Product power (w)	75
Number of cells	3
Airflow (CMH)	12,000 (7,062 CFM)
Pressure drop (Pa)	≤95
Flange size (mm)	1,420 x 534
Detergent consumption (L)	2.7
Water flow (m^3/hr @ 3.5 bar)	2.4
Water inlet connection size	DN20
Controls	Sequenced wash/filtration controller
Pre-filter	3 x (460L x 460W x 22.2D) Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/ collector cell
Post-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

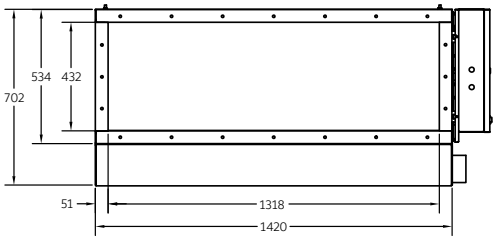
FRONT VIEW



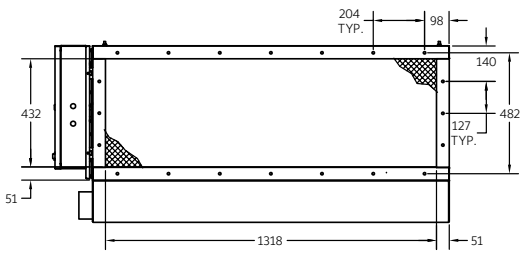
TOP VIEW



DISCHARGE END



INTAKE END

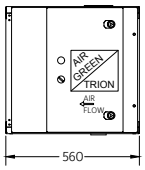


T4004

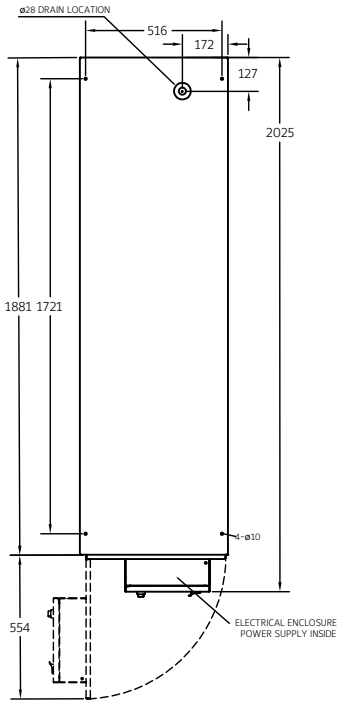
The T4004 is designed for in-duct installation where other external sources provide air movement. It has four combined aluminum ionizers/collector cells with stainless steel spiked ionizers and an air volume range up to 16,000 CMH.

T4004 specifications	
Dimensions (mm)	560D x 2,025W x 534H
Installation	Suspended, wall, frame, or duct mounted
Unit weight (kg)	145
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	12kV/6kV
Product power (w)	90
Number of cells	4
Airflow (CMH)	16,000 (9,417 CFM)
Pressure drop (Pa)	≤65
Flange size (mm)	1,881 x 534
Controls	Power switch with an indicator light
Pre-filter	4 x (460L x 460W x 22.2D) Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/collector cell
After-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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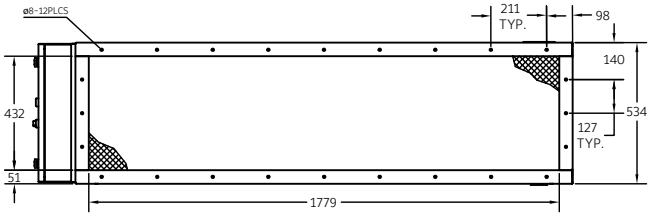

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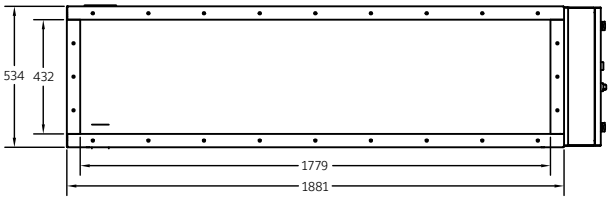
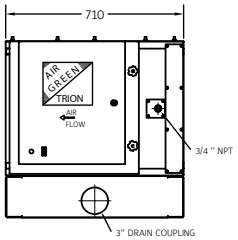


T4004W

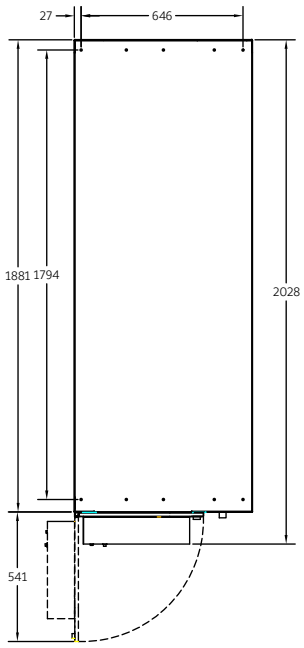
The T4004W is designed for in-duct installation where other external sources provide air movement. It has four combined aluminum ionizers/collector cells with stainless steel spiked ionizers and an air volume range up to 16,000 CMH.

T4004W specifications	
Main unit dimensions (mm)	710D x 2,028W x 702H
Subordinate unit dimensions (mm)	710D x 2,025W x 534H
Installation	Suspended, wall, frame, or duct mounted
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	11.5kV/5.5kV
Product power (w)	85
Number of cells	4
Airflow (CMH)	16,000 (9,417 CFM)
Pressure drop (Pa)	≤95
Flange size (mm)	1,881 x 534
Detergent consumption (L)	3.6
Water flow (m^3/hr @ 3.5 bar)	3.2
Water inlet connection size	DN20
Controls	Sequenced wash/filtration controller
Pre-filter	4 x (460L x 460W x 22.2D) Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/collector cell
Post-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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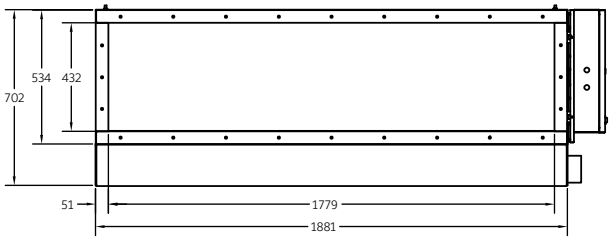

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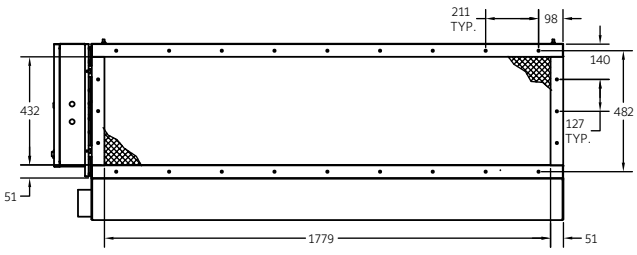
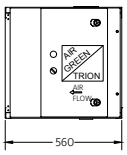


T5005

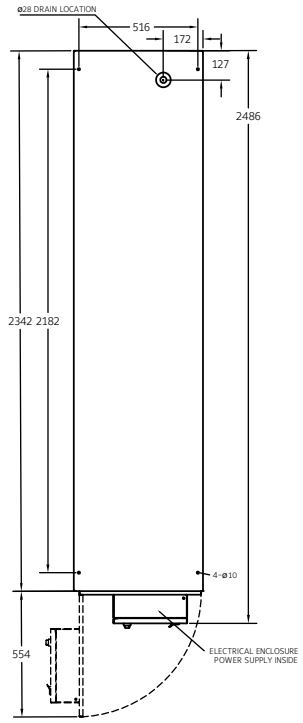
The T5005 is designed for in-duct installation where other external sources provide air movement. It has four combined aluminum ionizers/ collector cells with stainless steel spiked ionizers and an air volume range up to 20,000 CMH.

T5005	
Dimensions (mm)	560D x 2,486W x 534H
Installation	Suspended, wall, frame, or duct mounted
Unit weight (kg)	180
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	12kV/6kV
Product power (w)	110
Number of cells	5
Airflow (CMH)	20,000 (11,771 CFM)
Pressure drop (Pa)	≤65
Flange size (mm)	2,342 x 534
Controls	Power switch with an indicator light
Pre-filter	5 x (460L x 460W x 22.2D) Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/collector cell
After-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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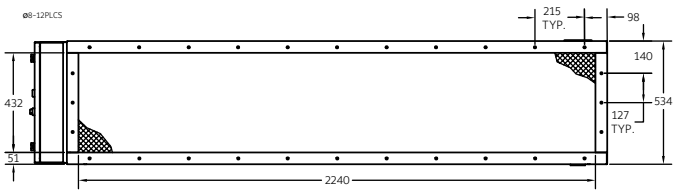

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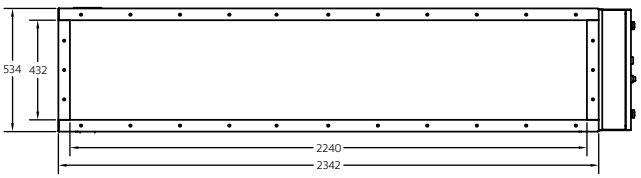
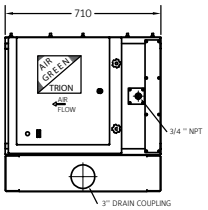


T5005W

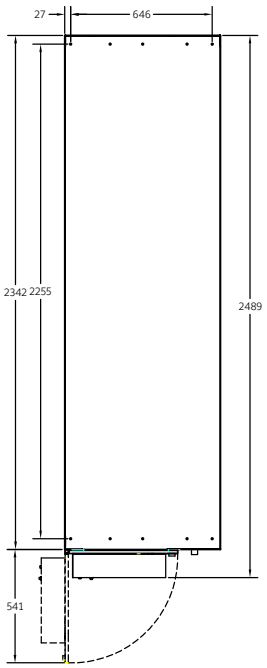
The T5005W is designed for in-duct installation where other external sources provide air movement. It has four combined aluminum ionizers/ collector cells with stainless steel spiked ionizers and an air volume range up to 20,000 CMH.

T5005W	
Main unit dimensions (mm)	710D x 2,489W x 702H
Subordinate unit dimensions (mm)	710D x 2,486W x 534H
Installation	Suspended, wall, frame, or duct mounted
Input voltage	220-240V/50/60Hz/1PH
Ionizer/collector output voltage	11.5kV/5.5kV
Product power (w)	100
Number of cells	5
Airflow (CMH)	20,000 (11,771 CFM)
Pressure drop (Pa)	≤95
Flange size (mm)	2,342 x 534
Detergent consumption (L)	4.5
Water flow (m^3/hr @ 3.5 bar)	3.9
Water inlet connection size	DN20
Controls	Sequenced wash/filtration controller
Pre-filter	5 x (460L x 460W x 22.2D) Standard aluminum mesh Heavy oil filter (optional)
Primary filter	Standard forever filter - electronic ionizer/collector cell
Post-filter	Activated carbon plate filter (optional)
Power supply	High-frequency solid-state design
Efficiency	To 95% based on ASHRAE 52.2 To 99% for double pass (calculated)
Construction	Welded galvanized steel, 1.2mm (18 gauge) top/bottom, 1.5mm (16 gauge) columns
Finish	Blue epoxy powder coating (RAL 5017)
Particle size	0.01 to 10 microns
General	Multiple units can be joined together for increased volume or higher frequency

FRONT VIEW



TOP VIEW



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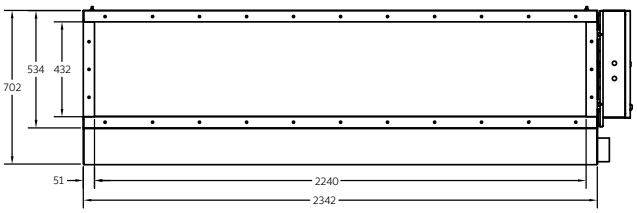
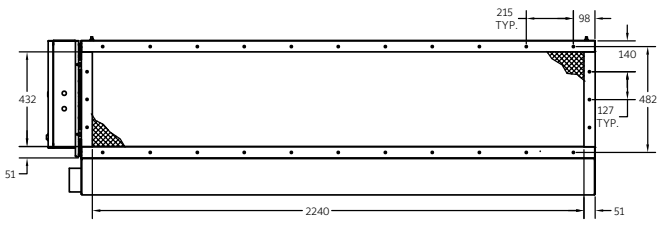


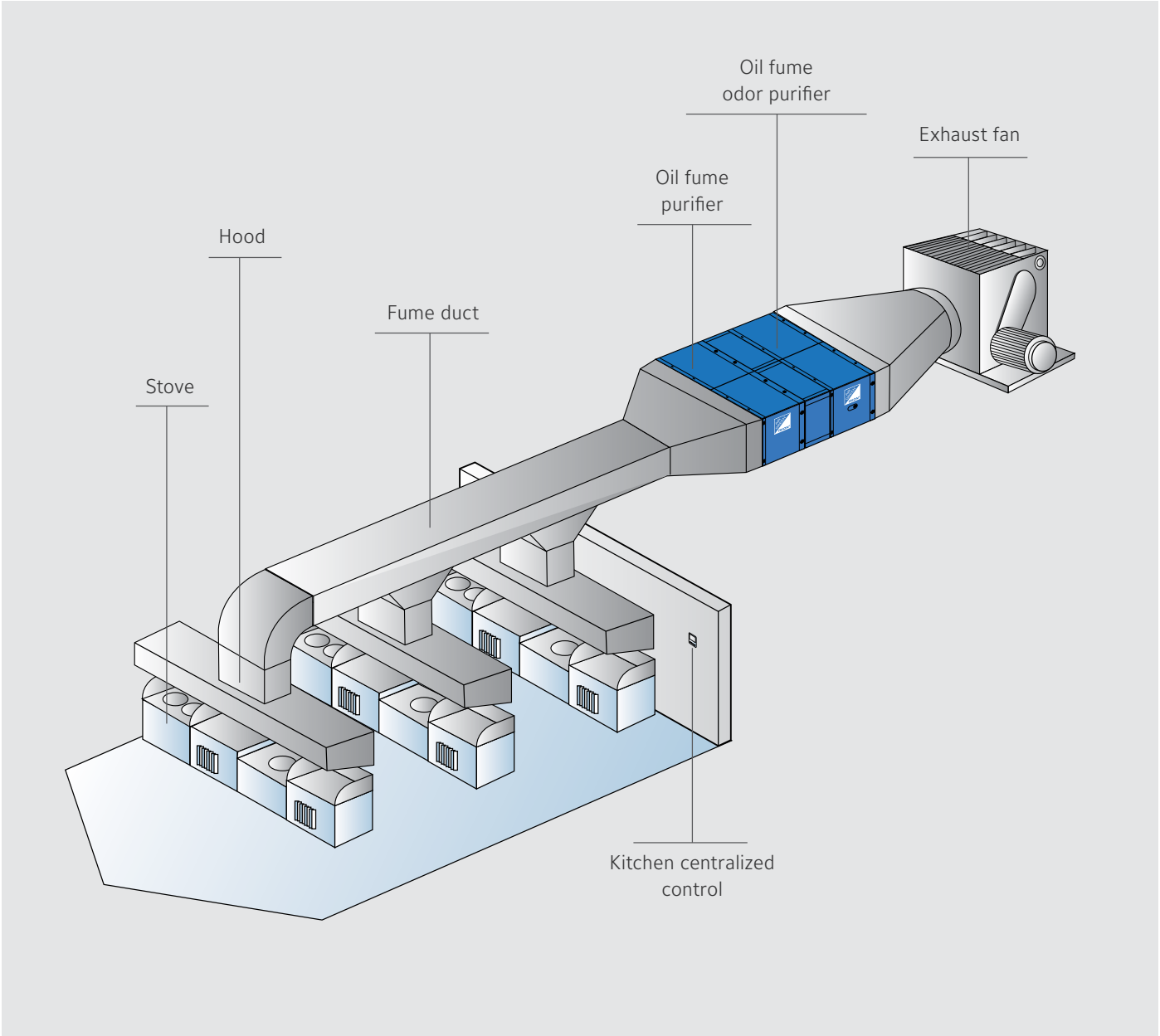
INTAKE END



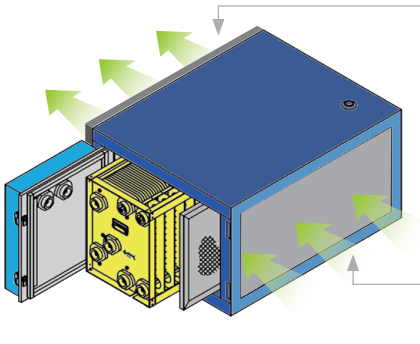
TRION Kitchen Exhaust Purification Systems and Solutions

TRION products have focused on the air purification field since 1947, with advanced technology and rich experience put to work to provide the best for our customers.

Johnson Controls is dedicated to providing customers with high-quality, cutting-edge kitchen purification products and system solutions under the TRION product brand.



Optional accessories



Flat Activated Carbon Filter

The TRION Flat Activated Carbon Filter uses a modular design and can be used with AG series units to remove oil fumes, animal odor, and various volatile odors.

Performance parameters

Size: 460 x 460 x 22mm

Pressure drop: 320Pa @ 2.5m/s

Heavy Oil Filter

The TRION Heavy Oil Filter adopts a wave-like fitting structure, suitable for applications with relatively large oil fumes, effectively intercepting grease, large particles of oil mist and water vapor while prolonging the cleaning cycle of the ionizer.

Performance parameters

Size: 460 x 460 x 22mm

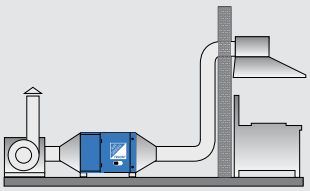
Pressure drop: 320Pa @ 2.5m/s

Purification system application and installation

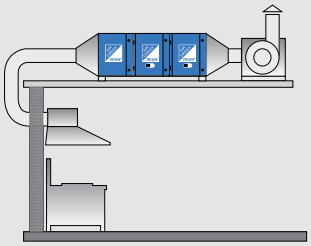
TRION products can provide system solutions based on our customers' kitchen oil fume volume, emission requirements and required installation location.

These solutions will solve the cooking fume problem, meet emission standards and create a clean and healthy environment.

Application

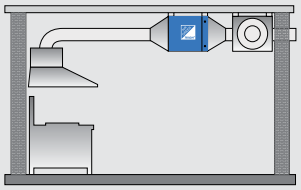


Single-pass and odor purifier

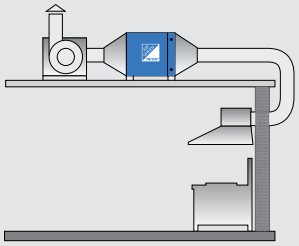


Double-pass and odor purifier

Installation

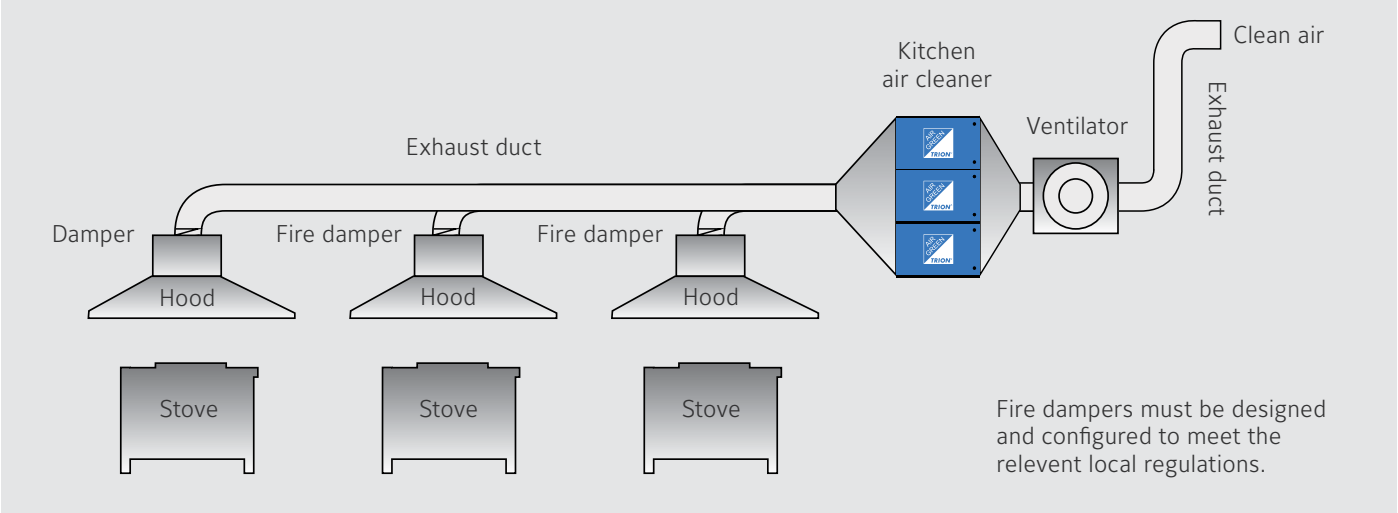


Indoor suspending installation



Outdoor floor-standing installation

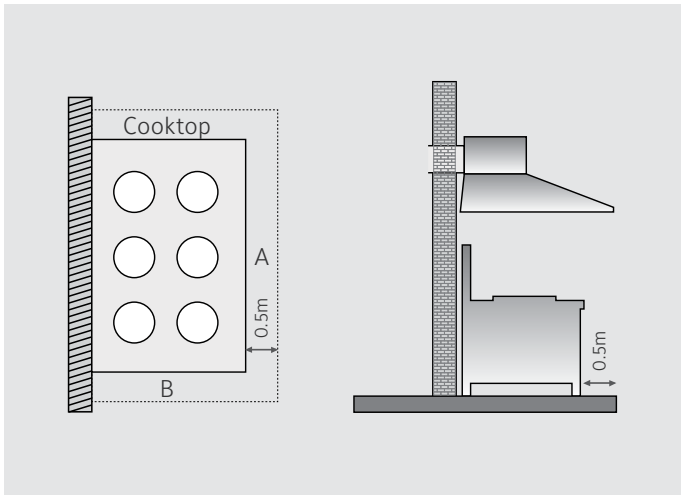
TRION Kitchen Exhaust Air Cleaners



Methods for calculating air volume

First method

Calculated according to the amount of fume exhaust generated by the stoves. Generally, each stove's amount of fume exhaust is calculated at 2,000m³/h (cmh). As shown in the figure, there are three stoves, so the total amount of exhaust fumes is 6,000m³/h (cmh).



Second method

Calculate the air volume based on the exhaust speed of the kitchen hood and the projection area of the stove. The airspeed of the hood is generally 2:0.5m/s. Then the exhaust air volume is equal to the air velocity of the hood multiplied by the projection area of the cooktop.

Cooktop projection surface calculation method

When calculating the projected area of the cooktop, it is not simply the area obtained by multiplying the length of the cooktop by the width, but the length and width of the hood projection. Therefore, in general, the projection distance of 0.5 meters should be increased.

Calculation method of the cooktop projection area

The size of the cooktop is measured by the length A(m) and the width B(m). The projection area of the cooktop is then calculated as **(A+0.5×2)×(B+0.5)m**. After the air volume calculation, consider the kitchen type and emission purification effect to select each model's series and standard and air volume, quantity and installation.

Installation and maintenance

Suspending installation

Use an angle steel frame and lifting bolts to install and fix the equipment. Pay attention to ensure the reliability and safety of the connection between the angle steel and equipment and pay attention to the tightness of fixings.

Note: If you are using a suspended installation, a drain nozzle needs to be installed and connected to a liquid collection cup or a drain hose.

Floor-standing installation

With the exception of the TRION AG Series Air Cleaner, other air cleaners need to be equipped with weather-proof canopies to protect the units from water ingress.

Description:

- To facilitate the drainage, it is recommended that the unit be tilted by lifting the front end of the unit by 13mm and fitting a rubber wedge (Smart Auto-Clean series may not be tilted).
- A maintenance distance of at least 100cm should be left for the access door, and a maintenance distance of at least 55cm should be left in front of other auxiliary equipment (such as pumps and motors).
- Wherever it is connected to the air duct/chassis flange, it should be sealed with a sponge, rubber strip, or sealant.

About Johnson Controls:
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The power behind **your mission**