

3-Stage Indoor Air Quality System (IAQ-1)



The air inside a climate controlled home can become laden with indoor contaminants such as dust, animal dander, air borne microbials, and food and tobacco odors. EPA studies show that the air inside can be 2-5 times, and up to 100 times, more polluted than the outside air. The tighter the home is (proper weather stripping, good installation, storm windows) the more likely a whole house air cleaning system is needed to continually remove these potentially harmful contaminants.

The **PROTECH™ 3-Stage Indoor Air Quality (IAQ-1) System** utilizes the latest in contamination control technology to reduce indoor pollution. It attacks all three classes of airborne contaminants: particulates, microbial and chemicals (volatile organic compounds). These include small dust particles, airborne mold spores, bacteria, viruses and chemical based odors.

The PROTECH IAQ-1 is installed in the HVAC system. Air in the home then passes through

- 1** A high efficiency pleated particulate filter (MERV11) removing over 95% of particles down to 1 micron including pollen, dust and pet dander.
- 2** Two UV-C ultraviolet lights remove bio-aerosols by penetrating the microbe's cell preventing reproduction. These include viruses, bacteria, mold spores and fungi.
- 3** The UV-C light reacts with a patented Quartzel® felt material containing titanium dioxide. The photocatalytic oxidation (PCO) process effectively destroys volatile organic compounds (VOCs) that create unpleasant odors including paints, cleaning supplies, cooking smells and other gases.

SOURCES OF COMMON HOUSEHOLD POLLUTANTS



PARTICLES including pollen, dust mites, dirt and pet dander



COMBUSTION PRODUCTS including cigarettes



BIOAEROSOLS such as certain mold spores and bacteria, viruses and fungi.



VOLATILE ORGANIC COMPOUNDS from building materials, such as upholstered furnishings, carpeting, adhesives, fresh paint, new paneling and pesticides.

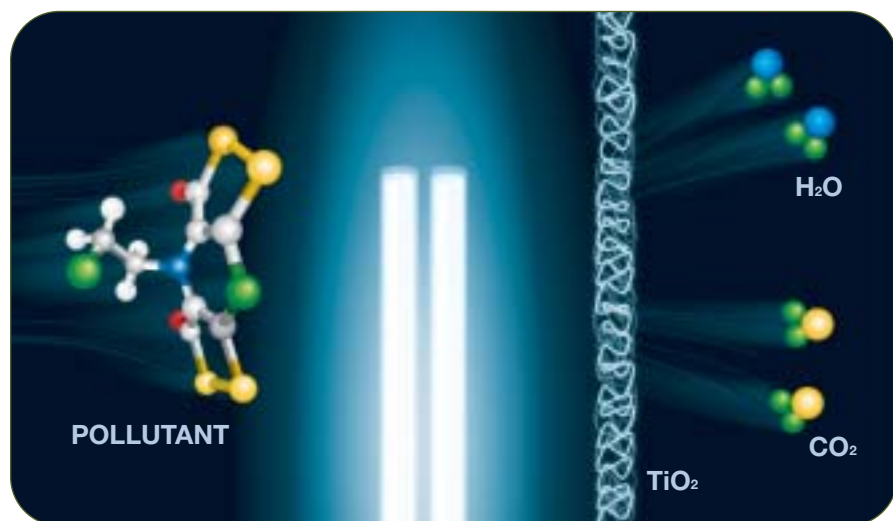


HOUSEHOLD PRODUCTS such as cleaning products, hobby supplies, solvents, adhesives, paints and dry-cleaned clothing

Three stage purifications attacks all contaminant types

- 1 MERV 11 Filter traps airborne particles such as dust and pet dander
- 2 UV-C light destroys airborne pathogens like viruses, bacteria and mold.
- 3 Photocatalytic Oxidation (PCO) removes odor causing volatile organic compounds such as cooking odors and cigarette smoke.

WHAT IS PHOTOCATALYSIS?



The combined action of the UV ray and the Titanium Dioxide in the Quartzel felt acts as a catalyst producing reactive radicals from the H_2O present in the air. These radicals have an oxidation power twice that of chlorine and decompose organic elements into basic molecules such as CO_2 and H_2O reducing odors as a result. Effectively treats: formaldehyde, aldehyde, ethylene, alcene family and phenolic compounds, and sulfur.

PROTECH™ 3-STAGE SYSTEM OFFERS COMPLETE INDOOR POLLUTION CONTROL

	3-STAGE IAQ SYSTEM	ACTIVE CARBON FILTER	HEPA FILTER	HIGH-ENERGY UVC LIGHT	ELECTRONIC AIR CLEANERS	STANDARD BOX FILTER
captures small, breathable particles down to 1 micron	■		■		■	■
captures airborne mold and other bioaerosols down to .01 micron	■		■			
captures and destroys odors (cooking fumes, pet odors)	■	■		■		
captures and destroys chemical vapors (paint, adhesives, solvents)	■	■		■		
does not generate ozone	■	■	■	■*		■
low operating cost	■		■	■	■	■

*With use of non-ozone lamps

FEATURES

- UV-C light vs competitors UV-A
- Patented Quartzel felt from Saint Gobain
- Phillips Ultraviolet Lights
- Advance Ballast
- Dual Safety Switches
- Viewport
- UL classified for air duct mounting
- Mounts Vertically or Horizontally
- Only Ten Inches in Height
- Front Access Door
- Low Static Pressure .24"WG

BENEFITS

- UV-C controls microbes
- Superior PCO process
- Best performance available anywhere
- Worry-free electrical performance
- Safe Handling
- Safe Lamp Inspection
- Quality assurance
- Adapts to any application
- Saves Space
- Easy to service
- Will not Restrict Airflow



STAGE 3 – GASES AND ODORS

The **PCO** (photocatalytic oxidation) **TiO₂ Saint Gobain Quartzel® Felt** removes volatile organic compounds, including tobacco smoke, pet smells, chemical fumes and most common household odors.



STAGE 2 – MICROBES

Two **Philips Ultraviolet Germicidal Sterilamps,®** powered by the **Advance Ballast**, destroy viruses and bacteria.



STAGE 1 – PARTICULATES

The **5" Pleated Merv11 Filter** traps mold, dust, pet dander, and a host of other allergens.

The **PROTECH™ Advanced 3-Stage Indoor Air Quality (IAQ-1) System** combines three proven technologies in one compact, easy-to-install unit. As contaminated air passes through the system, clean, fresh air is then passed into the air handler or furnace unit. Clean, fresh air is then distributed throughout the house.

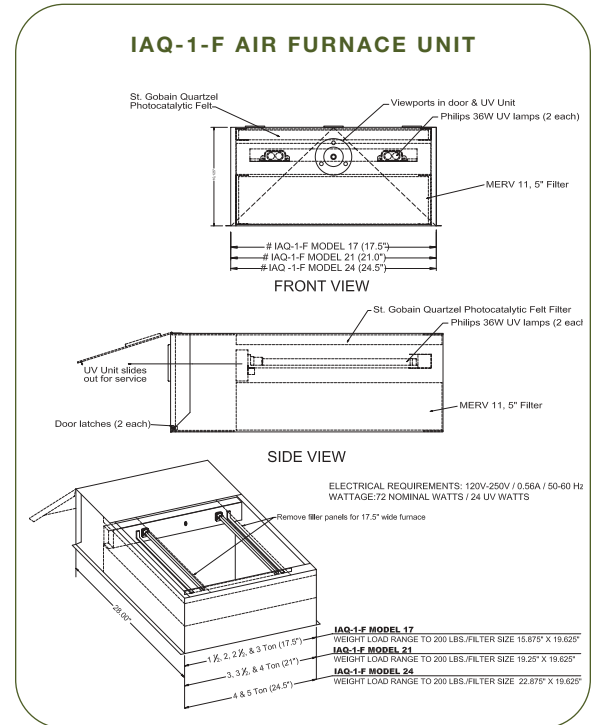
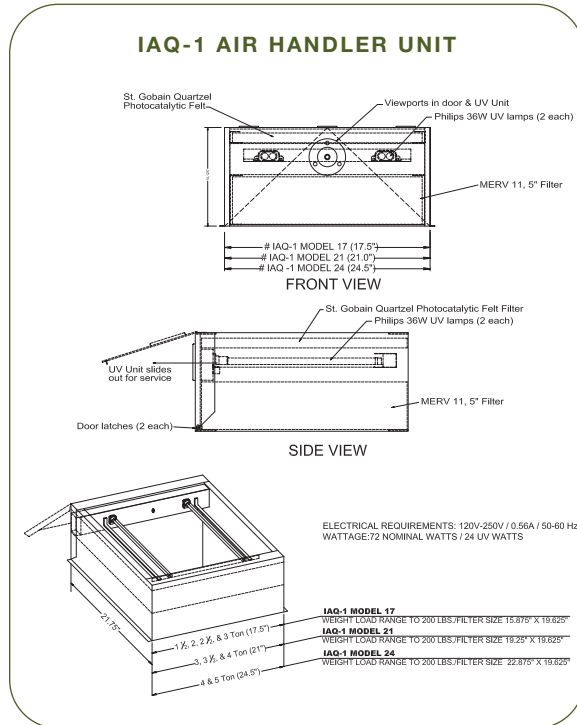


PROTECH™ IAQ-1 COMPLETE SYSTEMS

PART NO.	STYLE	DESCRIPTION	DIMENSIONS
IAQ17AH	IAQ17AH	IAQ System - 17 Inch Air Handler	21.75 x 17.5 x 10
IAQ17F	IAQ17F	IAQ System - 17 Inch Furnace	28 x 17.5 x 10
IAQ21AH	IAQ21AH	IAQ System - 21 Inch Air Handler	21.75 x 21 x 10
IAQ21F	IAQ21F	IAQ System - 21 Inch Furnace	28 x 21 x 10
IAQ24AH	IAQ24AH	IAQ System - 24 Inch Air Handler	21.75 x 24.5 x 10
IAQ24F	IAQ24F	IAQ System - 24 Inch Furnace	28 x 24.5 x 10

ACCESSORIES & REPLACEMENT PARTS

PART NO.	STYLE	DESCRIPTION	DIMENSIONS
540001	5/11 Filter 17	Filter - Pleated 17 Inch (4/Cartron)	19.6 x 15.9 x 5
540002	5/11 Filter 21	Filter - Pleated 21 Inch (4/Cartron)	19.6 x 19.3 x 5
540003	5/11 Filter 24	Filter - Pleated 24 Inch (4/Cartron)	19.6 x 22.9 x 5
540004	PCO17	Filter - PCO Quartz 17 Inch (10/Cartron)	19.6 x 15.9 x 1
540005	PCO21	Filter - PCO Quartz 21 Inch (10/Cartron)	19.6 x 19.3 x 1
540007	PCO24	Filter - PCO Quartz 24 Inch (10/Cartron)	19.6 x 22.9 x 1
864026	TUVPL-L36W/4P	Lamp - Phillips 36W (25/Cartron)	16.5 x 1.7 x .8
864027	MAINTPACK17	Maintenance Pack (2 Yr) - 17 In.	
864028	MAINTPACK21	Maintenance Pack (2 Yr) - 21 In.	
864029	MAINTPACK24	Maintenance Pack (2 Yr) - 24 In.	



PROTECH™
Professional Quality HVAC Parts and Supplies

Because of continuing improvements, actual product may differ slightly from photo.
Specifications are subject to change without notice.
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4744 Island Ford Road
Randleman, NC 27317
336.495.6800 336.495.6867 fax