

# VIDASHIELD UV24™ Air Purification System

## Assembly and Installation Instructions

### 1. GENERAL

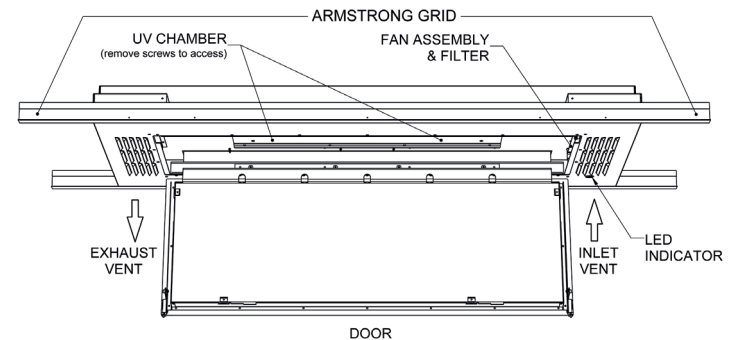
#### 1.1 Included Items:

- 1 VidaShield UV24 Unit, with or without downlight
- 1 UVC lamp
- 4 MERV 6 filters

#### 1.2 Safety Precautions/Warnings

- To avoid the risk of electric shock, disconnect AC power before installation or maintenance.
- Do not expose to water or excessive moisture.
- Installation should be performed by qualified personnel only.
- Consult your local building code for approved wiring & installation.
- Do not use outdoors.
- Do not use equipment for other than intended purpose.
- The use of accessory equipment is not recommended by the manufacturer and may cause an unsafe condition.
- Light from UV lamp may cause eye or skin injury including burns that are not immediately detectable. Do not operate UV lamp when lamp chamber is not sealed light-tight. If UV light exposure is possible, potentially exposed persons should wear UV filtering eye protection, long sleeves and gloves, or similar protective wear to assure no exposure of unprotected skin to UV-C.

**Note:** This device should not be used in buildings that are under construction. Heavy volumes of large particulates like construction dust and debris will clog up the filter and impact the effectiveness of the VidaShield UV24. In the event that construction needs to be conducted in an area where VidaShield UV24 units are already installed, it is recommended that the UV portion of the unit is powered off for the duration of the construction project and new filters are inserted when the VidaShield UV24 units are ready to be started again.



*Component Identification*

## 2. SUSPENDED CEILING INSTALLATION INSTRUCTIONS

### 2.1 Tools Required

- Wire Strippers
- Ladder
- Work gloves and safety glasses
- Hanger wires and fasteners to attach to support structure

### 2.2 Location Selection of units

VidaShield UV24 units should be positioned so that they are evenly spaced within a room. Care should be taken to position the intake side of the unit away from supply grates of the HVAC system. The unit should pull in air already existing in the room, not the fresh air supplied by the HVAC system. Similarly, position the output side of the VidaShield UV24 unit away from any return ducts for the HVAC system so that the clean air coming from the VidaShield unit is not immediately drawn into the HVAC system and taken out of the room.

The air coming out of the VidaShield UV24 unit is directed at a 30° angle from the vertical plane in order to promote air circulation throughout the room. Position the units, taking the airflow from the HVAC system into account, to best promote full room circulation.

### 2.3 Building Power and Hanging Ceiling Requirements

- Universal voltage required; 120VAC – 277VAC, 50/60 Hz
  - Ceiling Panel Unit: required power per unit – 60W
  - LED Panel Unit: required power per unit – 120W
- Requires 1 constant hot circuit for UV-C power, if continuous UV-C protection is desired, and 1 switched circuit for downlight power (for unit with LED light).
- Domestic models are designed to be installed in a standard dimension U.S. suspended ceiling (2' x 4' grid size). Metric models are designed to be installed in a standard dimension Metric suspended ceiling (600mm x 1200 mm grid size).
- The unit must be tethered to secure anchor points that are capable of supporting the fixture's weight in the ceiling.
- Comply with all local, state and federal laws

### Step 1

Remove the LED Panel Unit and/or Ceiling Panel Unit from the packaging.

### Step 2

The LED Panel Unit utilizes two (2) LED strips and a polycarbonate lens for general room lighting. The Ceiling Panel Unit does not provide a room light and instead utilizes a standard pattern acoustical ceiling tile.

### Step 3

Prep the ceiling and remove any existing fixture. An electrician will be needed to run power to the appropriate locations.

- The LED Panel Unit will require two circuits if continuous UV-C air purification is desired.
  1. A switched circuit that will operate the downlight
  2. A constant hot circuit operating the UV-C lamp
- The Ceiling Panel Unit (no ceiling light) will require one circuit.
  1. A constant hot circuit operating the UVC lamp

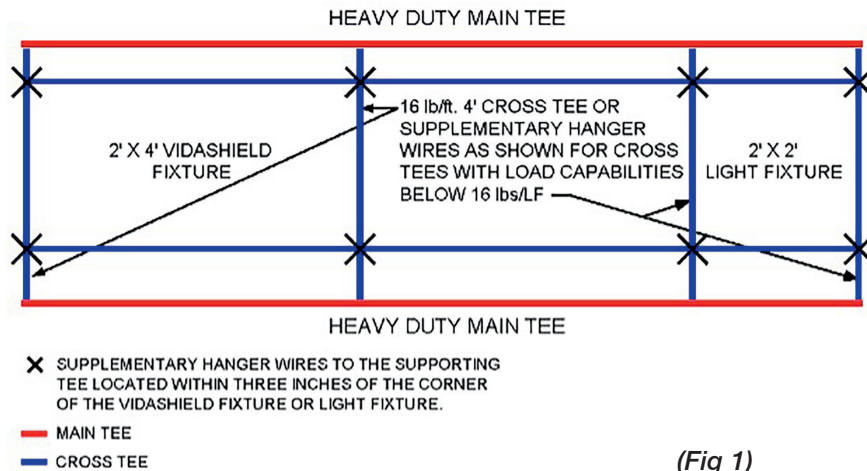
### Step 4

Verify the ceiling grid is adequately supported by hanger wires that will support the weight of the VidaShield UV24 unit. Install 4 separate 12-gauge supplementary hanger wires to the existing supports (not supplied) by following the diagram below from each corner of the unit.

## Step 5

Armstrong recommends utilizing two people to install a single unit since the VidaShield UV24 models weigh approximately 34 pounds for the LED Panel Unit and 31 pounds for the Ceiling Panel Unit.

To install the fixture, place the VidaShield UV24 unit in the ceiling grid as shown in the following diagram. Install 4 hanger wires from the ceiling to the corners of the Vidashield UV24 unit as shown. Assure the 4 wires are adequately secure and taught to support the weight of the Vidashield UV24 unit. (Figs 1 & 2)



(Fig 1)

## Step 6

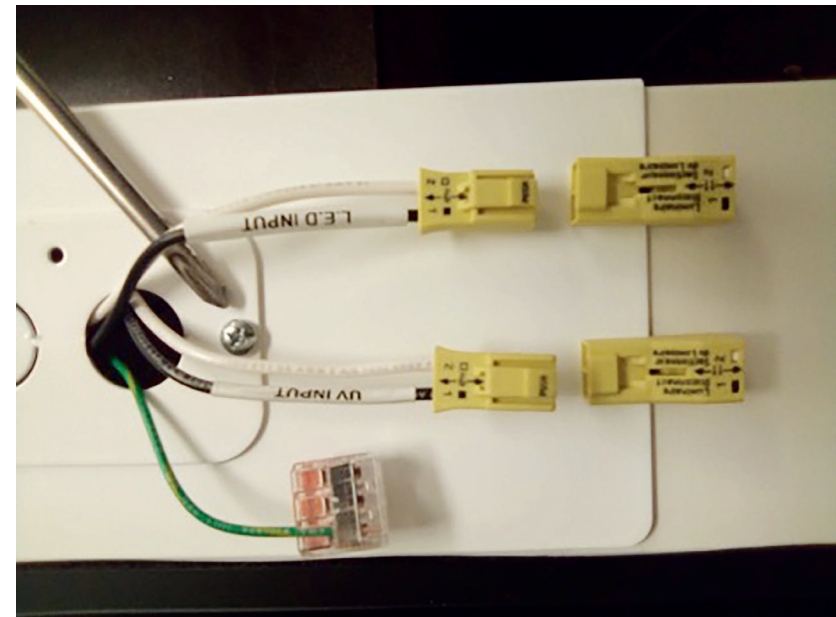
**Caution:** Ensure all power has been turned off to the circuit at the breaker panel.

All VidaShield UV24 models will require one constant hot circuit for the UVC input power, if continuous air purification is desired. If it is not necessary to run the unit 24/7 for a particular location, the power input can be run to a switch. The LED Panel Unit model will require an additional switched circuit to power the down light.

First, remove the access plate & determine if the remaining knock out tab should be removed (for second circuit on LED Panel Units, or if multiple units will be connected in series). (Fig 3).



(Fig 2)



(Fig 3)

LED Downlight

### Step 7

With the proper knock out tabs removed, install the wiring conduit through the access plate and secure with lock ring. Be sure to take note of which circuit is switched and which is constant. If dimming is desired, run the dimming wires from the LED downlight power supply to a suitable wall dimmer.

### Step 8

It is important to connect the ground wires from all power connectors to the ground connector on the fixture before connecting the fixture to any power source.

Remove the male portion of the power connectors and connect one to each of the incoming power circuits. (Fig 4)

**IMPORTANT:** For **North American VidaShield UV24 Models**, the black power wire (Line) should always be connected to terminal one of the power connector. The white power wire (Neutral) should always be connected to terminal two.

For **other VidaShield UV24 Models**, the brown power wire (Line) should always be connected to terminal one of the power connector. The blue power wire (Neutral) should always be connected to terminal two.

### Step 9

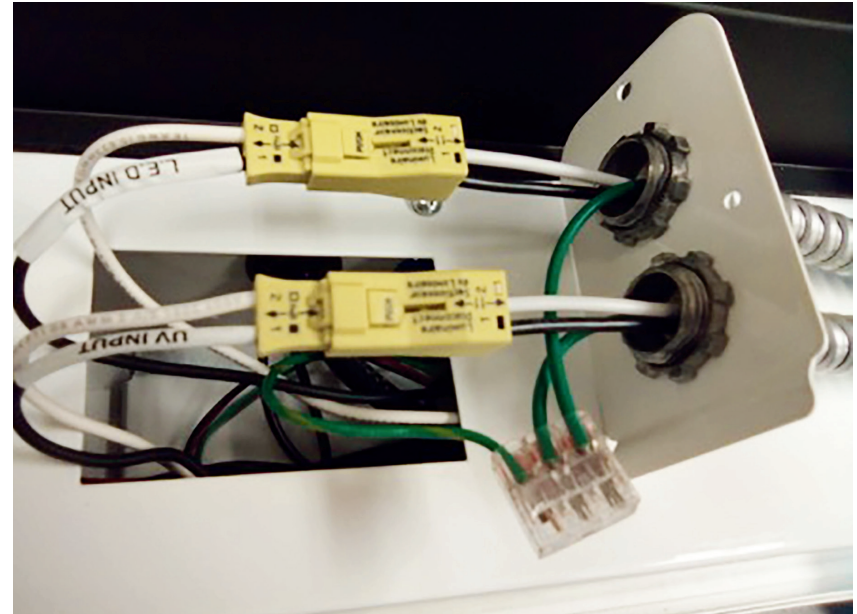
Once the power is connected, all the connectors will need to be placed within the housing. The access plate will now be screwed down. (Fig 5)

### Step 10

Suspended Ceiling Installation is complete.

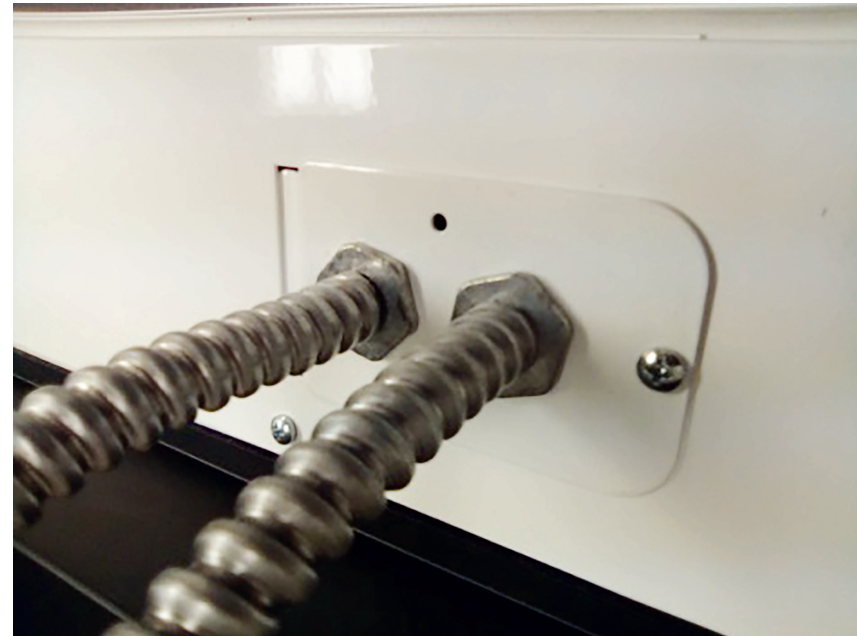
## 4. OPERATING INSTRUCTIONS

If installed as instructed, the VidaShield UV24 runs autonomously 24/7 even if the LED lamps in the LED Panel Unit are turned off at a wall switch. The VidaShield UV24 is an engineering control system that requires minimal quarterly maintenance and treats the air with no human intervention necessary when the UV lamp and fans are operating. Follow these steps to keep it operating as intended. The VidaShield UV24 system is to be operated indoors, in a temperature and humidity-controlled environment between 41-104° Fahrenheit and 10-90% humidity. When operating, a green indicator light on the front of the unit will illuminate to indicate the unit is functioning normally. The storage temperature should be between 4-122° Fahrenheit and 10-90% humidity.



(Fig 4)

LED Downlight



(Fig 5)

LED Downlight



## Normal Operation

When functioning normally, a green LED indicator on the front of the unit will be illuminated. If the indicator LED turns to red, the UV-C lamp must be replaced. (Fig 6)

## UV Lamp Maintenance

The VidaShield UV24 is designed to treat the air 24 hours a day/ 7 days a week. In order to assure that the UV lamp in each unit works as expected, we recommend that you change it annually. The intensity of UV lamps continuously degrades during use and will start to depreciate to a significant degree after 9,000 hours (375 days) of constant use. If the lamp fails or the intensity of the lamp falls below an acceptable level for pathogen elimination, the indicator light on the front of the unit will turn red. This indicates that the lamp needs to be replaced.

The UV lamp used in this unit is a special lamp. Please contact your Armstrong VidaShield UV24 distributor or Techline at (877) 276-7876 or [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com).

## UV-C Lamp Replacement Procedure

Disconnect the VidaShield UV24 from main power. Lower the front door assembly by sliding the 2 door latches. Be careful to support the weight of the door during this process. The door will swing open approximately 90°. Slowly lower the door to the fully opened position. (Fig 7)

Wearing eye and skin protection appropriate for UVC light protection, open the UV Chamber door by rotating the 2 door latch fasteners counter-clockwise. Slowly lower the door to its fully opened position. A safety switch below the UV Chamber door will deactivate when the door is opened to prevent accidental UV exposure during servicing. Remove the old UV lamp by grasping the lamp by the white plastic end (opposite of the end that plugs into the unit) and pull the UV lamp end from the clip. Then carefully pull the UV lamp out from the socket. To install the new lamp, carefully plug the UV lamp into the socket and push the white plastic end into the clip. Close the UV Chamber door and secure the 2 door latch fasteners. Close the front door assembly. Reconnect to main power and verify the indicator LED is illuminated green.

## MERV 6 Filter Maintenance

We recommend changing the MERV 6 filter every 3 months or every 2,200 hours of use. Dust and debris gather on the filter as the fans draw air into the system so keeping the filter clean is critical to the operation of the unit. The filter used in this unit is a special filter designed for the VidaShield UV24. The VidaShield UV24 comes with one filter installed and 3 replacement filters to last the first year of use. Please contact your Armstrong VidaShield UV24 distributor or Techline at (877) 276-7876 or [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com) for replacement parts.



Normal Operation

Replace UV-C lamp

(Fig 6)



(Fig 7)

## Filter Replacement Procedure

Lower the front door assembly by sliding the 2 door latches in the direction shown. Be careful to support the weight of the door during this process. The door will swing open approximately 90°. Slowly lower the door to the fully opened position. *(Fig 8)*

Grasp the knob on the Service Panel and slide the knob in the direction shown and then pull back the Service Panel from filter cage. *(Fig 8)*  
Remove the filter by grasping the Filter Grip Bracket on the filter and carefully sliding out the old filter. Remove the Filter Grip Bracket from the old filter and dispose of the old filter. Position the Filter Grip Bracket on the new filter and install it so that it is not seen through the vents. Replace the Service Panel cover with the tabs in their original position. Ensure that the Service Panel is secure and close the front door assembly. Please contact your Armstrong VidaShield UV24 distributor or Techline at (877) 276-7876 or [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com) for replacement parts.

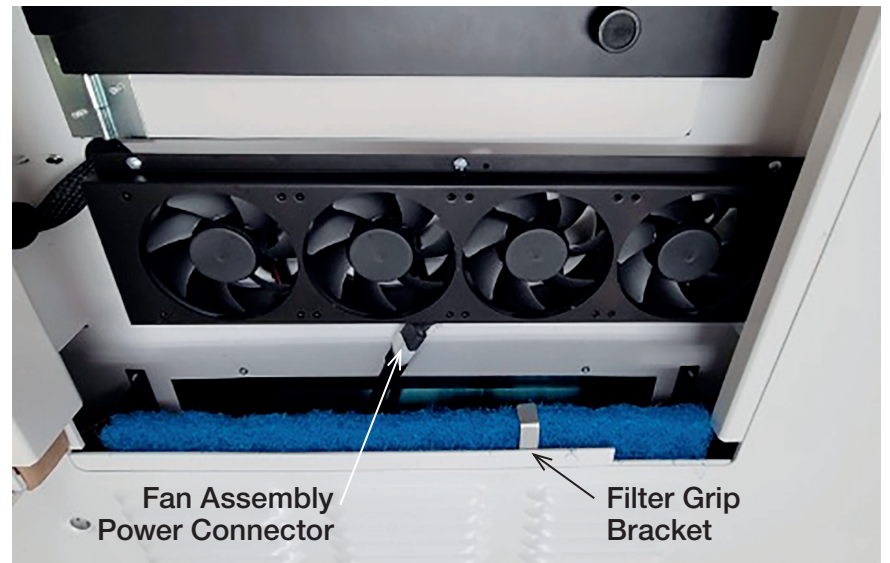
## Fan Assembly Replacement Procedure

To replace the Fan Assembly, remove the Service Panel as described above. Then grasp the lip on the front of the Fan Assembly and then slowly and carefully pull the entire Fan Assembly out of the unit. It is connected to the unit power so it will be necessary to unplug the power cable at the connector before removing the Fan Assembly from the unit. *(Fig 9)*

To replace the Fan Assembly, position the Fan Assembly and connect the power connector and then slide the assembly into the slot. Replace the Service Panel cover with the tabs in their original position. Ensure that the Service Panel is secure and close the front door assembly. Please contact your Armstrong VidaShield UV24 distributor or Techline at (877) 276-7876 or [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com) for replacement parts.



*(Fig 8)*



*(Fig 9)*

## Tile Replacement Procedure

In the event that the ceiling tile needs to be replaced (Ceiling Tile Unit only), lower the front door assembly by sliding the two (2) door latches. The door will swing open approximately 90°. Slowly lower the door to the fully opened position. (Fig 10)

Using a small flat blade screw driver, gently pry up the four (4) metal spring clips from the unit. Gently push out the Ceiling Tile from the front and replace with a new tile. Replace the four (4) metal spring clips.

**NOTE:** use the appropriate notched positions for different tile thickness.

Gently swing the Front Door back into place and slide the two white latch buttons to the latch position.

Be careful to support the weight of the door during this process.

## Cleaning Procedure

Occasional cleaning of the unit may be necessary. Clean only the exposed painted surfaces using mild soap and water mixture. Apply this mixture to a clean cloth and wipe down the painted surfaces. Never spray the cleaning fluid directly onto the vents, the LED Panel Unit or the UV-C Lamp, but instead spray onto clean cloth and then wipe the exposed painted surfaces.

Do not use harsh cleaners, solvents, or detergents. To do so, could result in equipment damage.

Do not expose the unit to excessive moisture. To do so, could result in personal injury and/or property damage.

## Managing Spent UV Lamps

In 1999, the US Environmental Protection Agency (EPA) added a provision for mercury-containing lamps to the Universal Waste Rule (UWR, 40 CFR Part 273). The UWR was developed to encourage recycling and proper disposal of these wastes, which meet the Federal criteria for hazardous waste but are widely generated and typically do not pose an immediate and undue risk. Here is a list of lamp recyclers you can contact for services near you: <http://www.lamprecycle.org/commercial-lighting-lamp-recyclers>.



(Fig 10)

## Troubleshooting

1. If the indicator light is red, there is a possible issue with the UV lamp and/or UV ballast.
  - Lower the front door assembly by sliding the 2 latches and slowly lowering the door assembly.
  - Wearing eye and skin protection appropriate for UVC light protection, unscrew the two (2) panel fasteners (about 3-4 turns) and open the UV chamber access panel. When the UV chamber lid is removed, the safety switch will be automatically disengaged, shutting off the UV lamp.
  - Inspect UV Lamp and Socket and replace items if necessary. After a “known good” (new) lamp is installed, the indicator LED should turn from Red to Green.
2. If no light is seen at the indicator LED
  - Verify the UV Chamber is fully closed and secured
  - Verify there is incoming power to the “UV Input” connector
  - Replace UV ballast if necessary
3. If the fan assembly stops spinning
  - Verify the indicator LED is illuminated
  - Verify the fan assembly is securely plugged into its mating connector
4. For additional trouble shooting assistance, please contact Techline at (877) 276-7876 or [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com).

## Consumable Replacements

To order replacement UV lamps, MERV 6 filters, ballasts, and other components, contact us by phone at Techline at (877) 276-7876 or [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com).

Maintenance Kit (4 filters & 1 UV-C Bulb) Part # BP51MK

## Warranty:

Manufacturer offers a 3-year limited warranty on the VidaShield panel.

- Manufacturer warrants VidaShield fixtures to be free from defects in materials and workmanship for the specified period beginning on the date of purchase (or date of manufacture when purchase date is in question).
- Warranted for a full year – UV lamp and fans
- Warranted for 3 years – fixture construction, including ballasts, photo cell and failure indicator lamp

This warranty does not cover:

- Damages to products for reasons beyond Manufacturer’s control, including, but not limited to: power surge, water infiltration, abuse, misuse, accidental damage, vandalism, fire, natural disaster and lighting;
- Incompatibility with products not supplied by Manufacturer, or other issues not related to materials and manufacture;
- Installations not in accordance with the latest National Electrical Code, Underwriters Laboratory Bulletins, and ANSI Specifications; or these instructions
- Labor costs associated with removing, re-packaging for shipment, or reinstalling product.

See warranty accompanying your unit for full details. If you need to submit a claim for a warranty, contact us by phone at Techline at (877) 276-7876 or [techline@armstrongceilings.com](mailto:techline@armstrongceilings.com).

## MORE INFORMATION

For more information, or for an Armstrong Ceilings representative, call 1 877 276 7876.

For complete technical information, detail drawings, CAD design assistance, installation information, and many other technical services, call TechLine customer support at 1 877 276 7876 or FAX 1 800 572 TECH.

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