

Hydrogen Sulfide Mitigation for Electrical Room



Packaged Filter Unit (PFU)



Basic Information:

- Main Function: protecting mission critical electronics from hardware failure, including in control rooms at wastewater and water treatment plants, refineries and paper plants, and data centers, improving indoor air quality, & commercial odor control
 - ◊Our PFU Mobile and PFU Mini units, explained later in this section, are the smallest versions of the PFU model
- Complete, self contained, vertical airflow configuration
- Free standing and very compact unit which can provide continuous high efficiency purification at airflows between 500 and 3,000 CFM
- Multiple media stages for chemical adsorbent media
- Multiple sizes and customizable options explained later in section

Benefits of PFU System:

- Self contained and compact, especially relative to airflow capacity
- Free standing, energy efficient, and quiet
- Positive seal prevents air bypass for highest filtration efficiency
- Produces pressurization, recirculation, or both
- Easy access to internal parts and adsorbent media for maintenance and changeout
- Integrated particulate filter

Customizable Options:

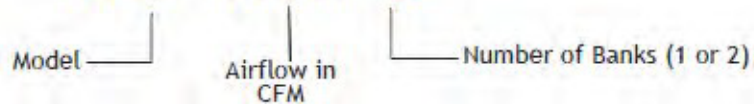
- Multiple power input configurations
- Options for construction material
- Various sizes available depending on footprint, airflow, and other customer requirements- See model selection guide on next page
- Media selection for multiple media cartridges- see adsorbent media section for options
- Further options for pre and final filters, as well as other features- see remainder of this section for full details on customizable options



Packaged Filter Unit (PFU)

Model Nomenclature:

PFU - XXXX - B



PFU MODEL NO	AIRFLOW RANGE CFM (CMH)	MOTOR SIZE HP (KW)	MEDIA VOLUME FT ³ (M ³)	SHIPPING WEIGHT LBS (KG)	OPERATING WEIGHT LBS (KG)
PFU-1000-2	500-1000 (850-1700)	1 (0.75)	4 (0.11)	530 (240)	730 (330)
PFU-2000-2	1000-2000 (1700-3400)	2 (1.5)	8 (0.23)	980 (445)	1380 (625)
PFU-3000-2	1500-3000 (2550-5100)	3 (2.3)	12 (0.35)	1220 (555)	1820 (825)

Two of the PFU Units are Mobile and Have Different Nomenclature:

Mobile PFU MODEL NO	AIR RANGE CFM (CMH)	MOTOR SIZE HP (kW)	MEDIA VOLUME FT ³ (M ³)	SHIPPING WEIGHT LBS (KG)	OPERATING WEIGHT LBS (KG)
PFU-Mobile	500 - 1,000 (850-1700)	0.8 (0.6)	4 (0.11)	280 (127)	440 (200)
PFU-Mini	250 - 500 (425-850)	0.3 (0.2)	1 (0.03)	190 (86)	270 (122)

*Note that these units were previously called the DC-1 and DC-mini. They have been renamed to portray their similarities to the PFU model as well as their many applications.



Packaged Filter Unit (PFU)

Selecting Standard Options

- Construction Material - Painted/coated steel, aluminized steel, FRP, 316 or 304 grade stainless steel, or aluminum options
 - ◊ Painted/Coated Steel Standard
- Particulate Filter Options
 - ◊ Options for First Filter- protects downstream system components and improves life of media
 - Standard- 2", 30% MERV 8 filter
 - Optional 95%+ filters are available to prevent small particulates blinding media
 - Magnehelic or photohelic differential pressure gauges available to determine when or cleaning is necessary
 - ◊ Final Filter - removes any fine dust which may be released during media changeout or initial start-up, standard for industrial customers
 - 6", 95% MERV 13 filter with extruded aluminum tracks and positive air seals to prevent air bypass
 - Magnehelic or photohelic differential pressure gauges available to determine when changeout or cleaning is necessary
- Blower- internal direct drive or belt drive blower standard. Discuss vendor and factory options with PureAir Representative
 - ◊ Redundant blowers available
- Multiple available power configurations
- Adsorbent Media- up to 2 media stages available
 - ◊ Types of Adsorbent Media to fill media banks- see media section



Packaged Filter Unit (PFU)

Additional Features & Options

- Intake Louver
- Intake Hood
- Inlet Isolation Damper
- Insulated / Double Walled
- Internal Plenum Fan or External Scroll Fan
- Sound Enclosure
- Outlet Silencer
- No-Loss stacks

Our team is proud to offer fully customizable solutions with various standard features described- ask our team about any additional options in which you may be interested.





Packaged Filter Unit (PFU)

PFU-Mobile and PFU-Mini

Protect Critical and Valuable Servers from Polluted Air

PureAir's PFU-mobile and PFU-mini units are self-contained, moveable units that recirculate the air in controlled environments like control rooms and data centers. As the air passes through PureAir's gas adsorbent media, harmful corrosive gases are captured and permanently bound. Purified air is sent out the top of the unit where it is used to cool servers and computer components without harming electrical components. The unit has low energy consumption and noise, and installation is a snap in your existing server cabinets, plugging into standard electrical sockets. The PFU-mobile unit provides protection for up to 5000 square feet (approximately 500 M²). Airflow is variable, controllable up to 1000 cfm (1700 CMH), and differential pressure gauges indicate filter changes for easy maintenance. Other information and details include:

- Variable airflow
- Low EMF brushless AC blower motor
- Low noise and energy consumption
- Available in 110-230 V and 50/60 V options
- MERV 7 (G4) Dust prefilter
- MERV 13 (F7) Dust final filter
- Optional differential pressure gauges to indicate dust filter change
- PureAir chemical adsorbent media filled in low pressure holding frames



Room Air Volume Capacity by Model		
Air Quality	PFU-Mini	PFU-Mobile
G2	20000 ft ³ (600 M ³)	40000 ft ³ (1200 M ³)
G3	10000 (300 M ³)	20000 ft ³ (600 M ³)
GX	5000 ft ³ (150 M ³)	10000 ft ³ (300 M ³)

**Based on ISA S71.4 or ASHRAE TC9.9 recommendations*

Additional Features & Options

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- Intake Hood
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Packaged Filter Unit (PFU)

Case Study - Christie's

The Problem:

Christie's Auction House has sold precious pieces of artwork and estate for hundreds of years. The first US auction was held in 1977 in Rockefeller Center, New York, and since that time, the US Branch has continued to host numerous priceless artifacts for sale. In 2015, sales totaled \$7.4 billion. Needless to say, Christie's must take extra precautions to protect these valuable pieces of artwork. Even the slightest amount of pollution in the air can tarnish delicate artifacts, so it is incredibly important to keep the air inside the auction house free of all contaminants. Christie's looked to the air purification market for a solution to super-purify the air in its facilities.

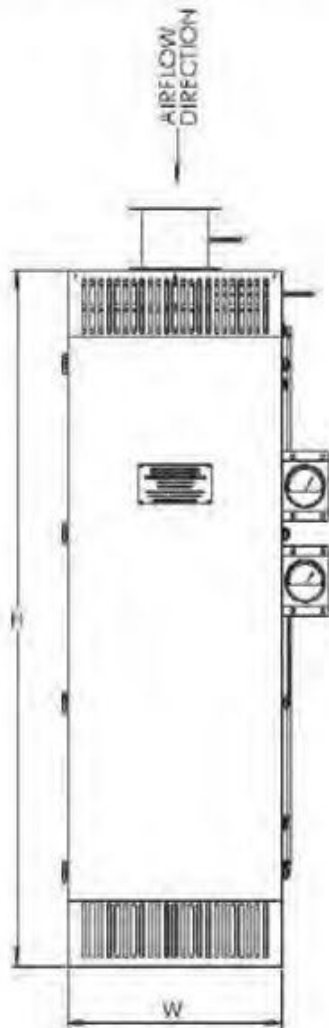


The Solution:

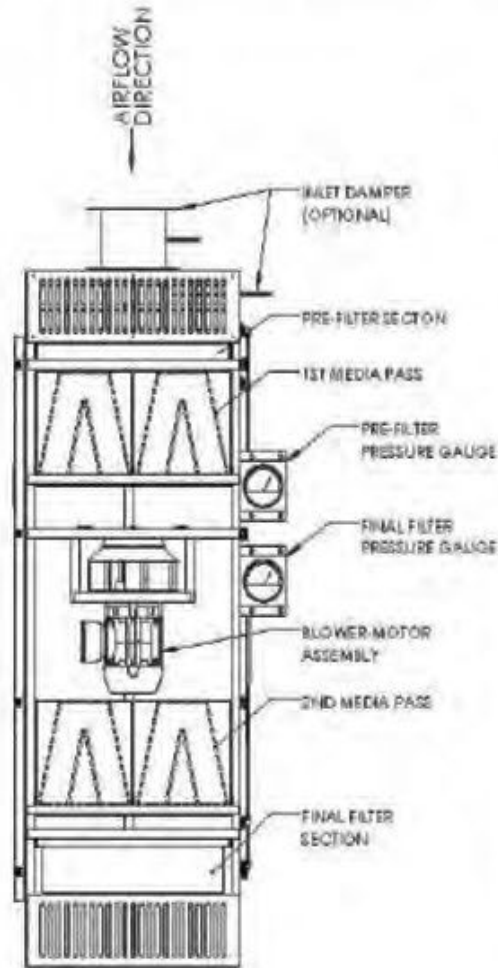
Christie's contacted PureAir Filtration to see if a solution to their problem could be provided. Familiar with applications requiring super purification in an urban commercial environment, the engineers at PureAir recommended four Packaged Filter Units to handle the job. The model chosen was the PFU-6000, and details of the units included:

- Galvanized steel double wall construction
- Internal aluminum plenum fan with 10 Hp
- MERV 6 prefilter and MERV 13 final filter
- PureAir CP blend media in PP12 refillable modules

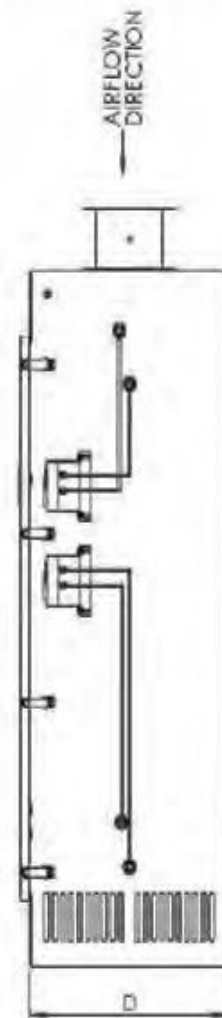
The units and media have been successful in protecting the priceless pieces of artwork from pollutant corrosion.



ELEVATION VIEW



ELEVATION VIEW
(DOOR OPEN FOR CLARITY)



SIDE VIEW


PFU MODEL	H	W	D
1,000	78"	26"	24"
2,000	98"	40"	24"
3,000	98"	52"	36"

NOTES:

- PFU UNITS AVAILABLE IN DOWNFLOW OR UPFLOW CONFIGURATION

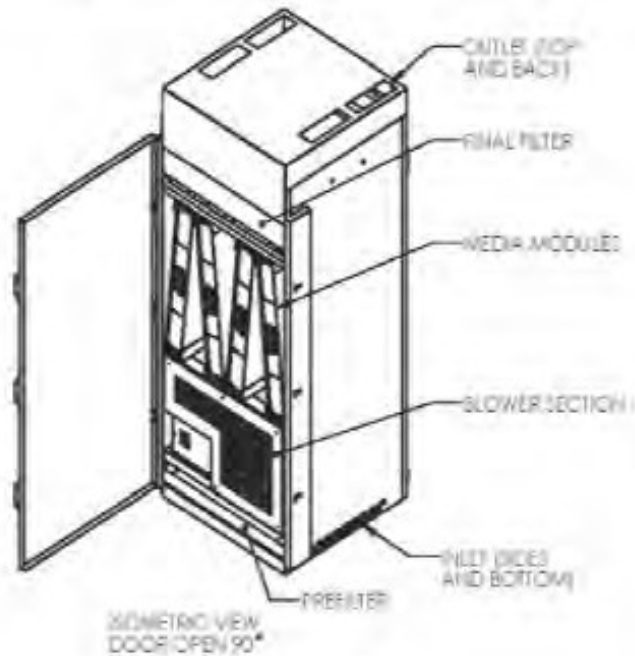
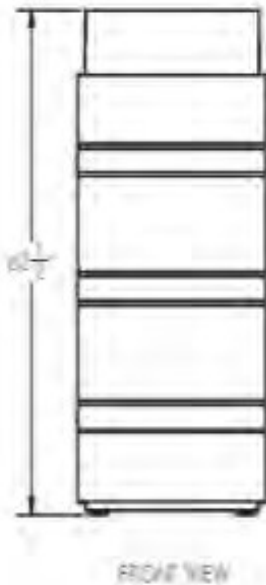
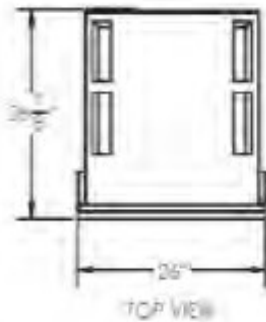
SEE CATALOGUE PAGE #62-63 FOR ADDITIONAL OPTIONS AND FEATURES
UNIT
STANDARD PUREAIR FILTRATION MODELS AND DIMENSIONS ARE LISTS; HOWEVER, DIMENSIONS CAN BE CUSTOMIZED TO MEET SPACE AND OTHER REQUIREMENTS, DISCUSS WITH SALES OR ENGINEERING TEAM.

NAME: _____ DATE: _____
 DRAWN BY: _____ AIRL: _____
 CHECKED BY: _____ TITLE: _____
 DWG. NO.: _____


PFU SYSTEM ASSEMBLY

THIS DRAWING IS THE PROPERTY OF PUREAIR FILTRATION, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND LOCATION SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

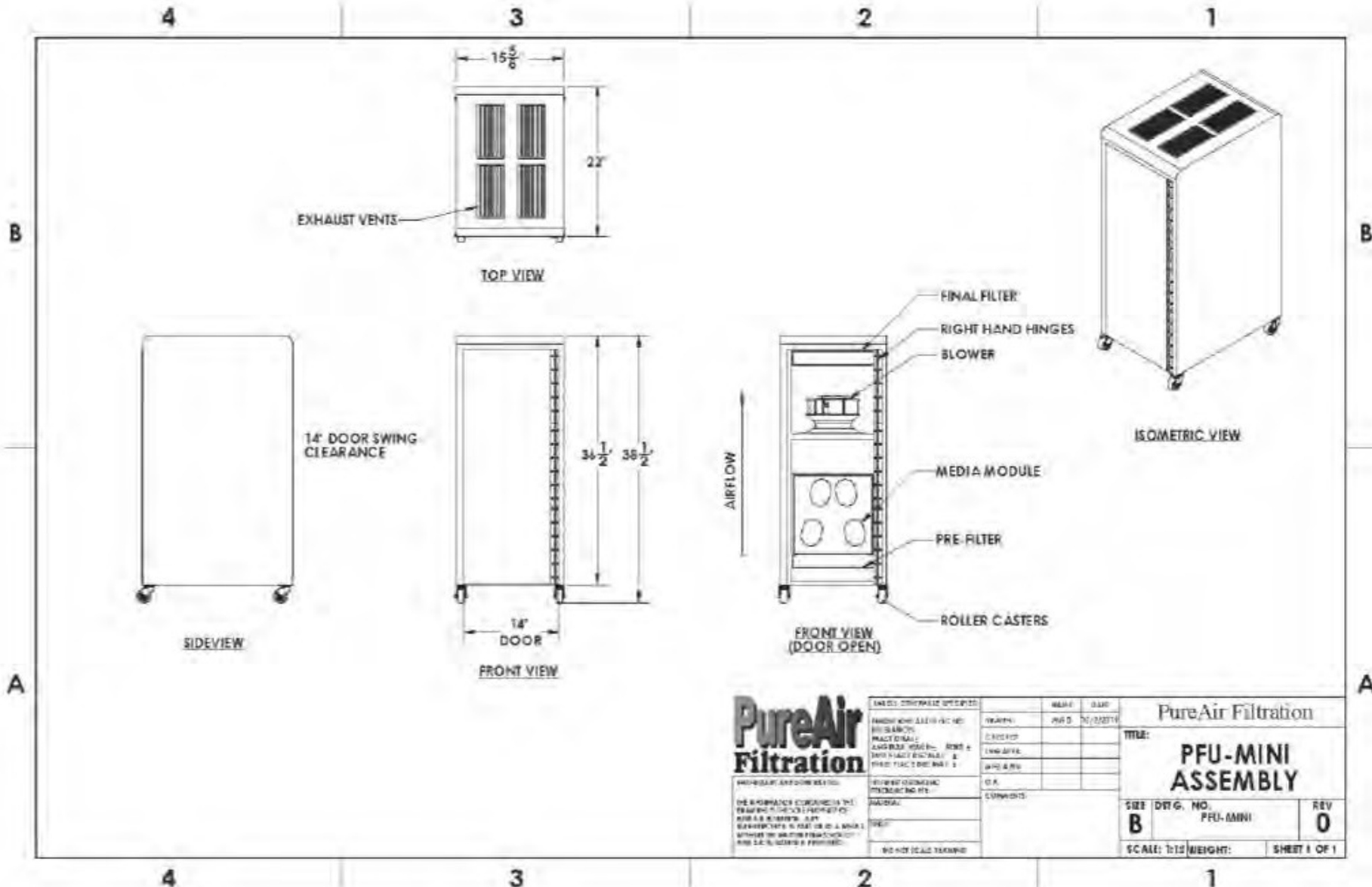
SET DWG. NO.: _____ REV: _____
B PFU-XXX **1**
 SCALE: (1/8"=1'-0") SHEET 1 OF 1



NOTES:

1. AIRFLOW: 1500 CFM
2. 1.5 HP MOTOR
3. 2" PREFILTER 35%
4. 4" FINAL FILTER 95%
5. 4X MEDIA CARTRIDGES, 1 CUFT EA
6. Part Numbers:
120V: PFUmobile120
230V: PFUmobile230

APPROVED BY: [Signature] DATE: [Date] TITLE: [Title]		SPECIFICATIONS SPECIFIED MANUFACTURED AND ASSEMBLED IN THE U.S.A. ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED FINISHES AND MATERIALS TO BE AS SPECIFIED BY THE ARCHITECT OR AS SHOWN ON THE DRAWING	DATE: [Date] DRAWN BY: [Name] CHECKED BY: [Name] APPROVED BY: [Name]	DATE: 07/02 07/02	TITLE PFUmobile
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**PureAir
Filtration**

UNITS: DIMENSIONS SPECIFIED		MATERIAL		DATE	
DESCRIPTION	QTY	PART NO.	REV	DATE	BY
FRONT PANEL					
DOOR					
CHASSIS					
WHEELS					
CASTERS					
SCREWS					
GLASS					
OTHER					

PureAir Filtration		
TITLE: PFU-MINI ASSEMBLY		
SIZE B	DTG. NO. PFU-MINI	REV 0
SCALE: 1:1		WEIGHT:
		SHEET 1 OF 1

NEVER REMOVE COVER FROM THE FRONT PANEL OR THE DOOR. ALWAYS USE THE HANDLE TO OPEN THE DOOR. NEVER TOUCH THE FILTERS OR THE BLOWER. NEVER TOUCH THE DOOR OR THE HANDLE WHEN THE UNIT IS RUNNING. ALWAYS USE THE HANDLE TO OPEN THE DOOR.

REVISIONS:
REV. NO. DATE DESCRIPTION

COMMENTS: