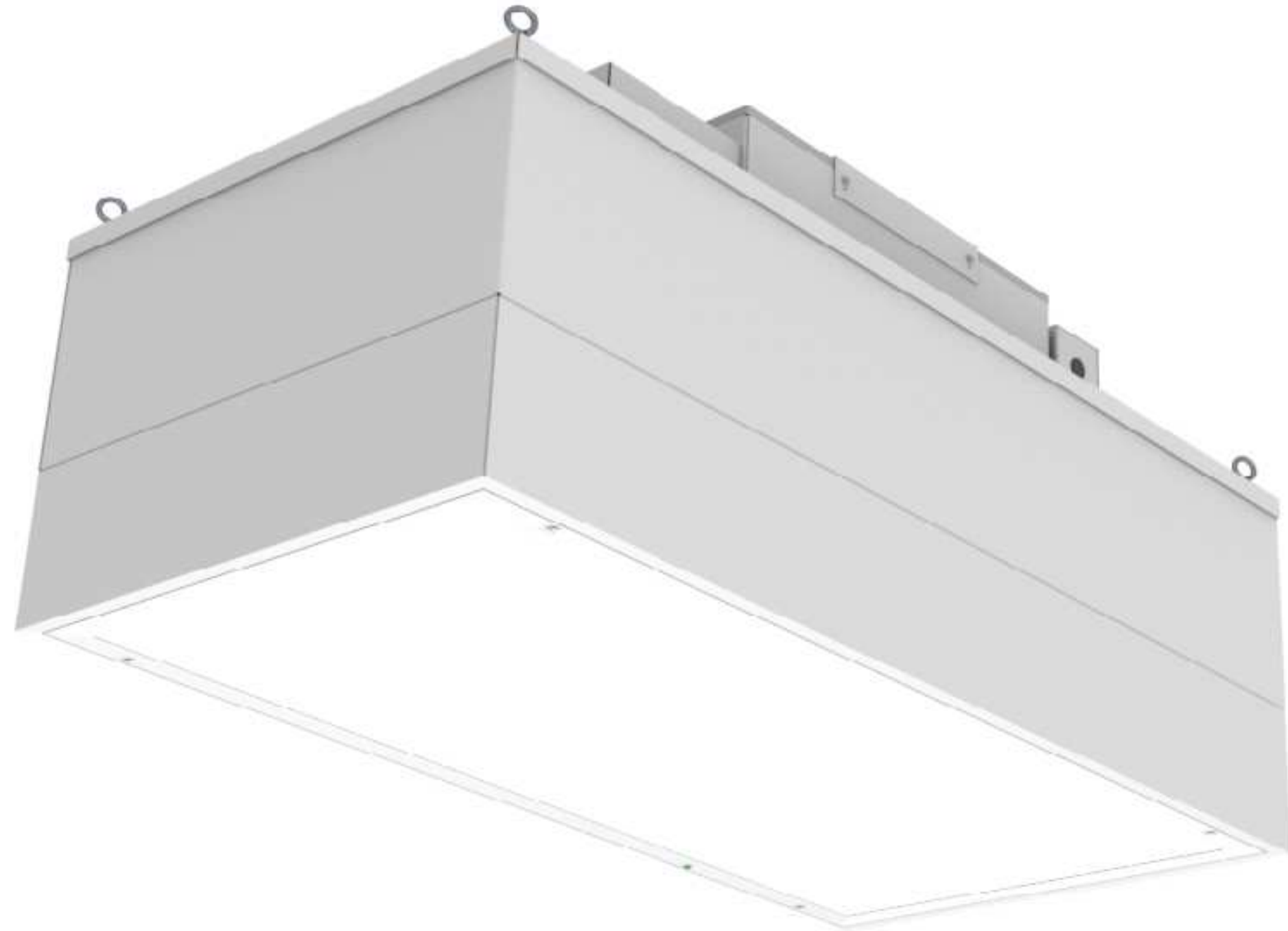


UFFU

ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING

FEATURES:

- FAN FILTER UNIT WITH INTEGRATED HIGH PERFORMANCE LED LIGHTS
- OPTIONAL HGMF - HOSPITAL GRADE MOUNTING FRAME FOR SURFACE MOUNT INSTALLATION
- COMPLETE CONTROL AND MONITORING VIA BACnet



High Efficiency
90+ lm/W LED



L80 > 60,000
hours



IP67 Sealed
LED



90+ CRI

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

272127

Revision: A

06-07-2021

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ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING
3D INTERACTIVE MODELS

PRODUCT CONFIGURATIONS
(CLICK BUTTONS TO TOGGLE VIEWS)

- USE THE SCROLL WHEEL TO ZOOM
- HOLD DOWN THE LEFT MOUSE BUTTON TO ROTATE
- HOLD DOWN CTRL AND LEFT MOUSE BUTTON TO MOVE

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

272127

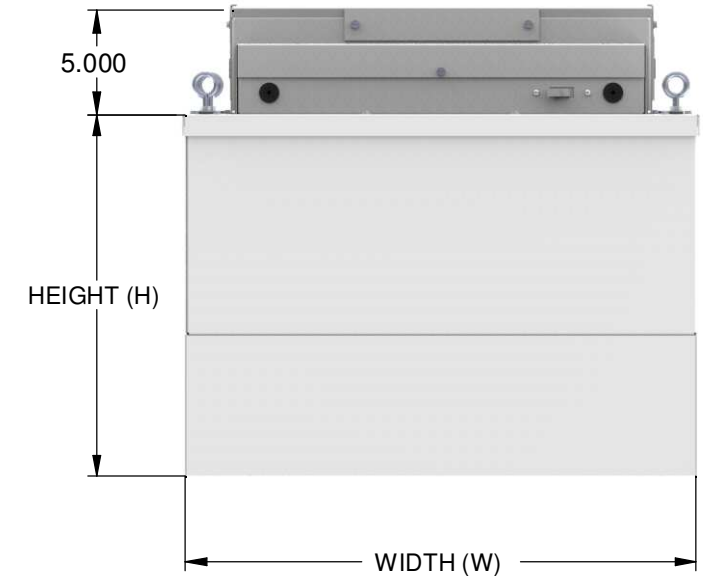
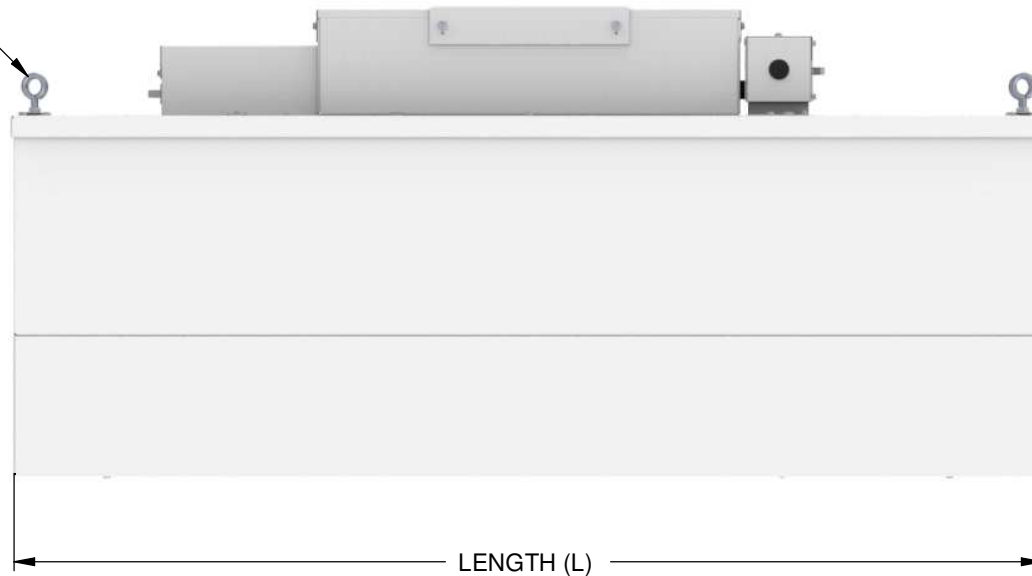
Revision: A

06-07-2021

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ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING CONSTRUCTION DETAILS AND OPTIONS

ZINC PLATED EYEBOLTS FOR HANGING



STANDARD CONSTRUCTION

- EXTRUDED ALUMINUM FILTER FRAME WITH URETHANE GEL
- TWO STAINLESS STEEL RETAINER CABLES PER UNIT
- DIFFUSER FACE SECURED WITH QUARTER TURN FASTENERS
- 14 GA (.064 THICK) ALUMINUM PLENUM
- EXTRUDED ALUMINUM OUTER FRAME AND DIFFUSER FRAME
- ZINC PLATED EYE BOLTS FOR HANGING
- MOTOR/BLOWER ACCESSIBLE FROM ROOMSIDE AND TOPSIDE
- STATIC PRESSURE AND AEROSOL SAMPLE PORT
- EC MOTOR, 50/60 Hz, 1 PHASE

FINISH

- B12 STANDARD WHITE

INLET SIZES

- NONE (UNDUCTED)
- 10" ROUND
- 12" ROUND
- 14" ROUND

PRE-FILTER

- WASHABLE PRE-FILTER
- MERV 8 PRE-FILTER

FILTER

- HEPA - 2" - IEST RP CC001 TYPE J AND TYPE F
- ULPA - 2" - IEST RP CC001 TYPE J AND TYPE F

WHEEL TYPE

- FORWARD CURVE BLOWER WHEEL
- BACKWARD CURVE BLOWER WHEEL (NOT AVAILABLE FOR 2x2)

FAN POWER VOLTAGE

- 115V
- 208V
- 240V
- 277V

FAN CONTROLLER

- EC MOTOR STANDARD SPEED CONTROLLER
- BACnet FLOW CONTROLLER

FILTER AND MOTOR STATUS LIGHTS

- TRI-COLOR FACE MOUNTED LED FILTER AND MOTOR STATUS LIGHT (AVAILABLE WITH BACnet FLOW CONTROLLER ONLY)

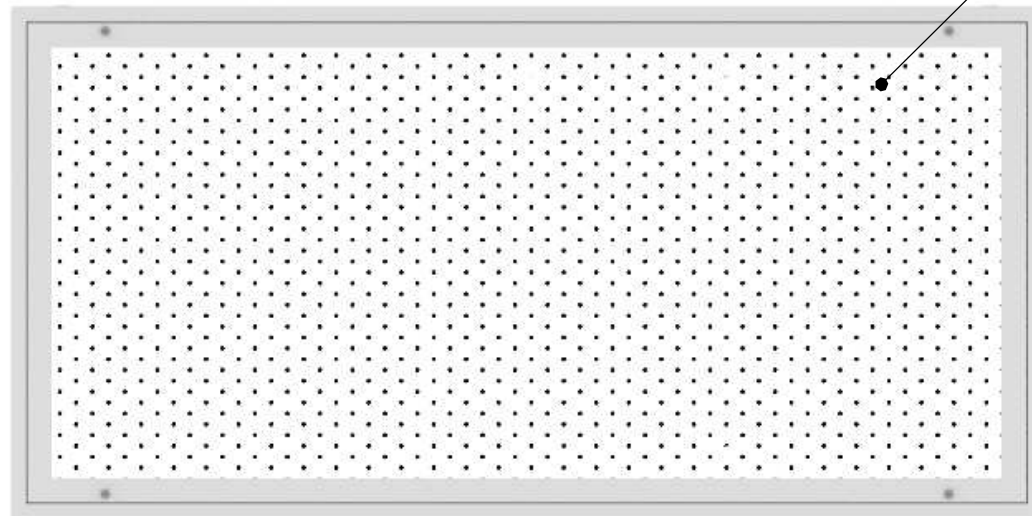
MOTOR PROGRAM

- CONSTANT FLOW (NOT AVAILABLE FOR BACKWARD CURVE BLOWER WHEEL)
- CONSTANT TORQUE

OPTIONS

- WALL MOUNTED SPEED CONTROL (SEE FFUCS SUBMITTAL 269849)
- 3/8" NPT AEROSOL INJECTION PORT (SEE INJ DETAILS ON SHEET 5)

TRANSLUCENT PERFORATED POLYCARBONATE DIFFUSER FACE
13% FREE AREA



FORWARD CURVE BLOWER WHEEL

NOMINAL UNIT SIZE	WIDTH (W)	LENGTH (L)	HEIGHT (H)	MAX AMPS FAN (115/240/277)
24x24	23.625	23.625	17.000	2.7/1.8/1.5
24x36	23.625	35.625	17.000	4.8/2.8/2.8
24x48	23.625	47.625	17.000	5.0/3.3/2.9

BACKWARD CURVE BLOWER WHEEL

NOMINAL UNIT SIZE	WIDTH (W)	LENGTH (L)	HEIGHT (H)	MAX AMPS FAN (115/240/277)
24x36	23.625	35.625	17.000	4.0/2.2/1.8
24x48	23.625	47.625	17.000	4.0/2.0/1.8

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

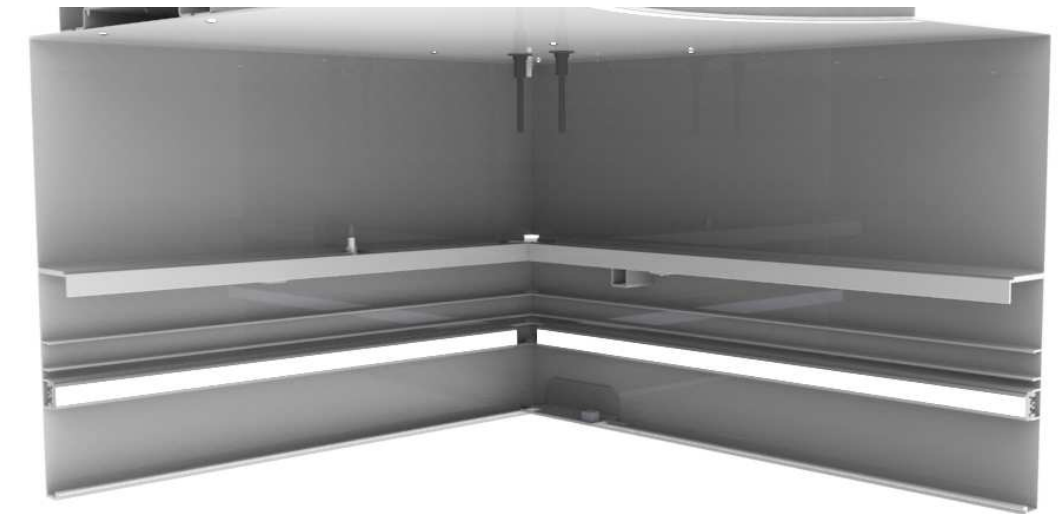
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Revision: A

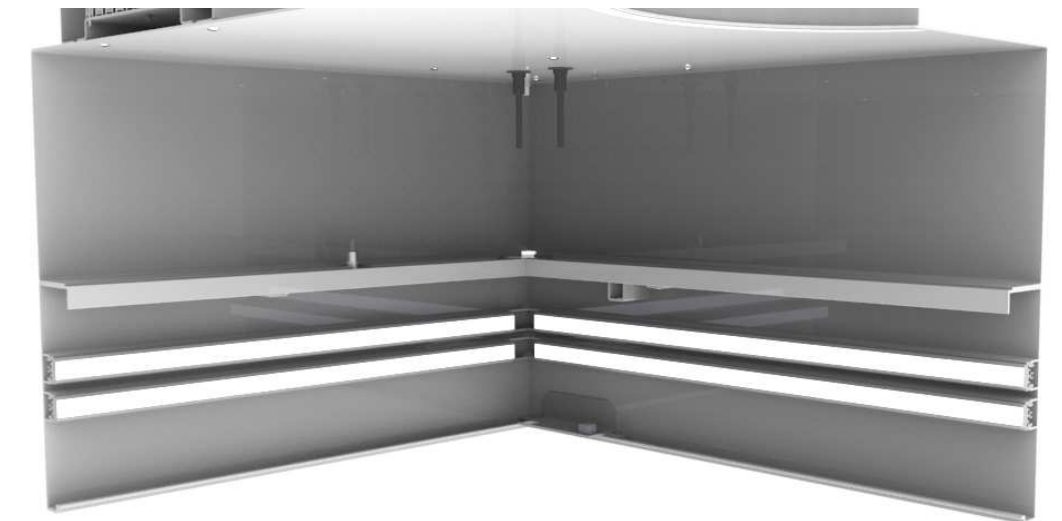
06-07-2021

UFFU

ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING LED LIGHT DETAILS



SINGLE ROW LED LIGHTS



DOUBLE ROW LED LIGHTS

LIGHTING MAXIMUM AMP DRAW

NOMINAL UNIT SIZE	MAX LIGHTING AMPS (115/240/277)	
	SINGLE ROW	DOUBLE ROW
24x24	1.2/0.6/0.5	1.2/0.6/0.5
24x36	1.2/0.6/0.5	2.4/1.1/1.0
24x48	1.2/0.6/0.5	2.4/1.1/1.0

LED LIGHTING SPECIFICATIONS

- LED LIGHTING INTEGRATED INTO EACH DIFFUSER MODULE
- IP67 RATED LED STRIP WITH QUICK CONNECTORS
- COLOR RENDERING INDEX (CRI) 90+
- L80 > 60,000 HRS.
- FOR IES PHOTOMETRIC FILES VISIT:
www.priceindustries.com/criticalenvironments/products/uffu

LED COLOR TEMPERATURE

- 5000K (5000 KELVIN)

LED ROWS

- SINGLE ROW
- DOUBLE ROW

LISTINGS

- **UL 507** STANDARD FOR ELECTRIC FANS
- **UL 2043** FIRE TEST FOR HEAT AND VISIBLE SMOKE RELEASE FOR DISCRETE PRODUCTS AND THEIR ACCESSORIES INSTALLED IN AIR-HANDLING SPACES
- **UL2108** LOW VOLTAGE LIGHTING SYSTEM
- **UL8750** LIGHT EMITTING DIODE (LED) EQUIPMENT FOR USE IN LIGHTING PRODUCTS
- **UL1310** CLASS 2 POWER UNITS
- **UL94** FLAMMABILITY OF PLASTIC MATERIALS FOR PARTS IN DEVICES AND APPLIANCES
- **IP67** RATED INGRESS PROTECTION AGAINST DUST AND LIQUIDS
- **MIL-STD-461** FOR ELECTROMAGNETIC COMPATIBILITY

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

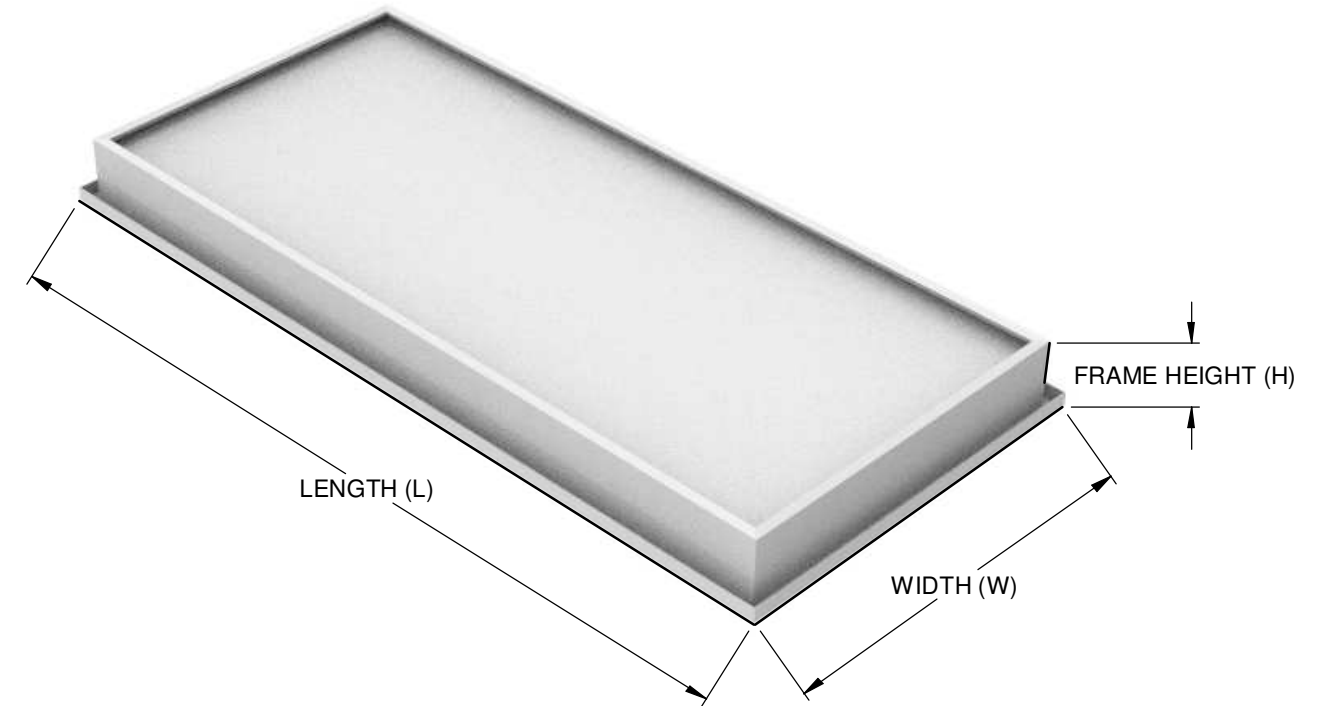
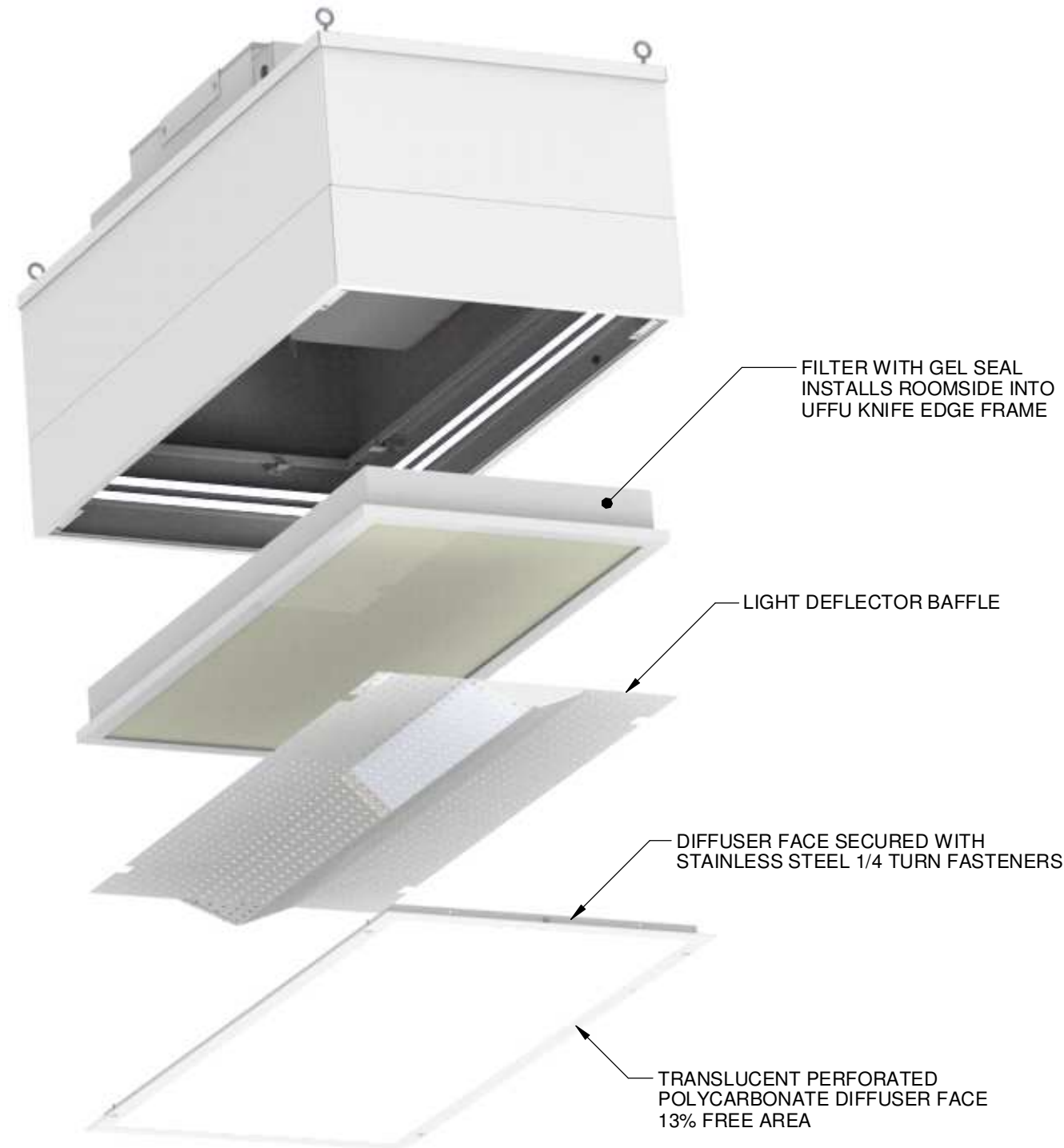
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ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING FILTER DETAILS



NOTES

- FILTER PLEATS RUN PARALLEL TO THE WIDTH (W) DIMENSION
- DIMENSIONS L & W TOLERANCES $\pm \frac{1}{16}$ "
- FILTERS COME WITH GEL SEAL FILLED CHANNEL
- EXPANDED PAINTED WHITE SCREEN ON THE DOWNSTREAM SIDE
- FRAME DETAILS:
 - MATERIAL: ANODIZED EXTRUDED ALUMINUM
 - THICKNESS: $\frac{1}{16}$ " (MINIMUM)
- EFFICIENCY AND LEAK SCAN TESTED TO IEST RP CC001 TYPE J AND TYPE F
- FILTER PACKAGED SEPERATELY FROM DIFFUSER FOR JOB SITE INSTALLATION BY OTHERS

ACTUAL FILTER SIZE		
WIDTH (W)	LENGTH (L)	HEIGHT (H)
20.69	20.69	2.88
20.69	32.69	2.88
20.69	44.69	2.88

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

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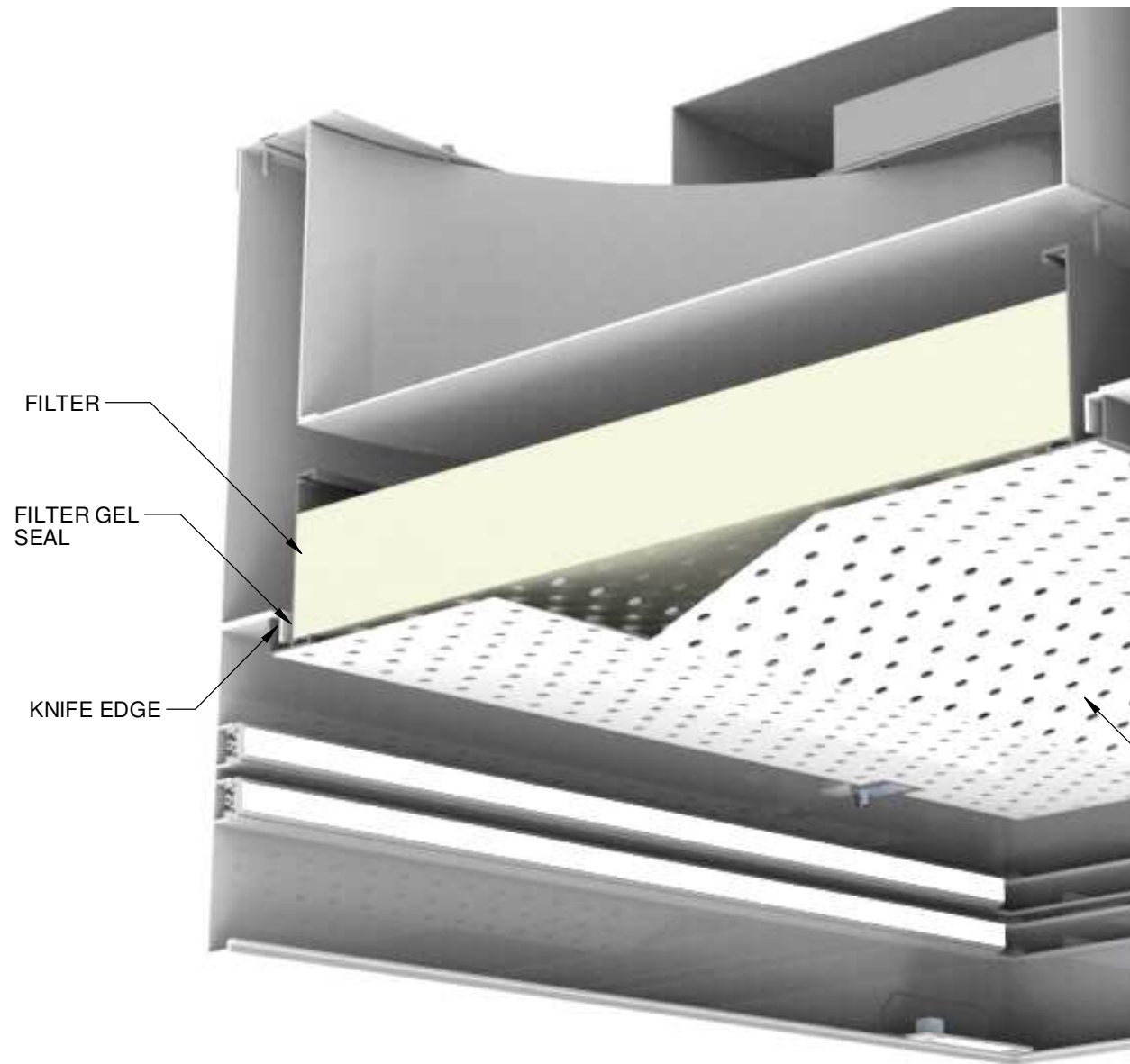
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06-07-2021

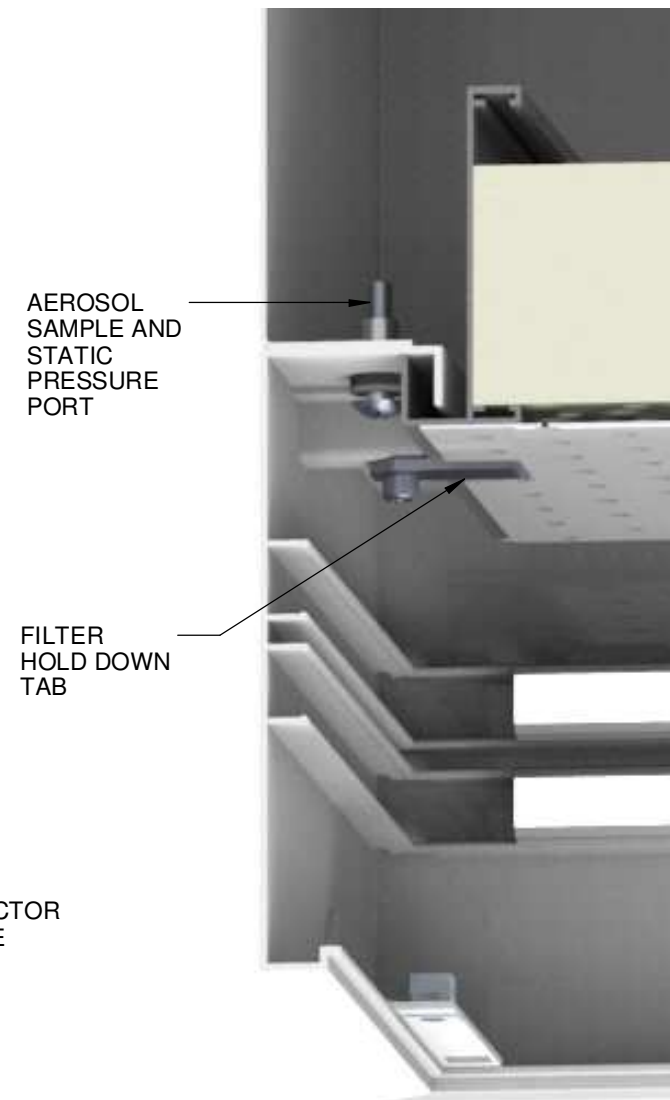
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ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING

DETAIL VIEWS



AEROSOL/STATIC PORT DETAIL



INJ - AEROSOL INJECTION PORT DETAIL



- LED LIGHTS BELOW INJ PORT MUST BE REMOVED TO ACCESS THE PORT. FOR DETAILS ON REMOVING LEDs, SEE UCA MANUAL [HERE](#)

- SEE INJ - AEROSOL INJECTION PORT MANUAL [HERE](#)

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

272127

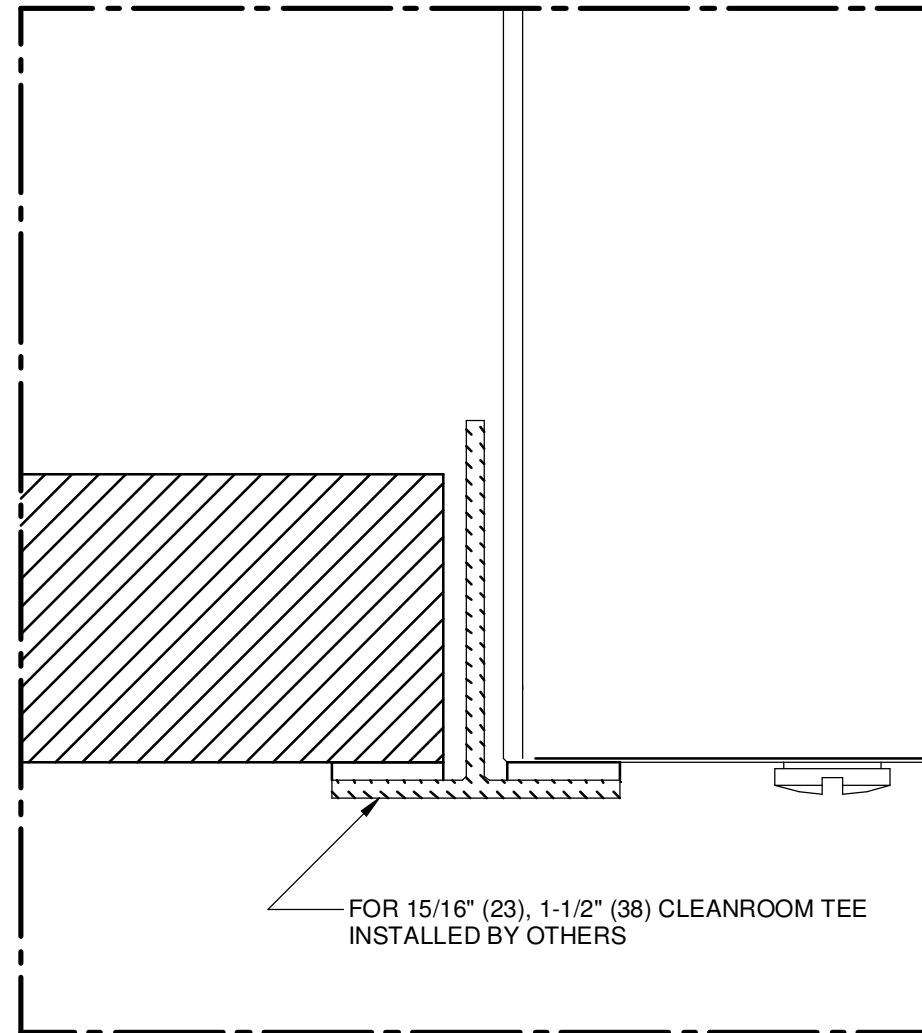
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06-07-2021

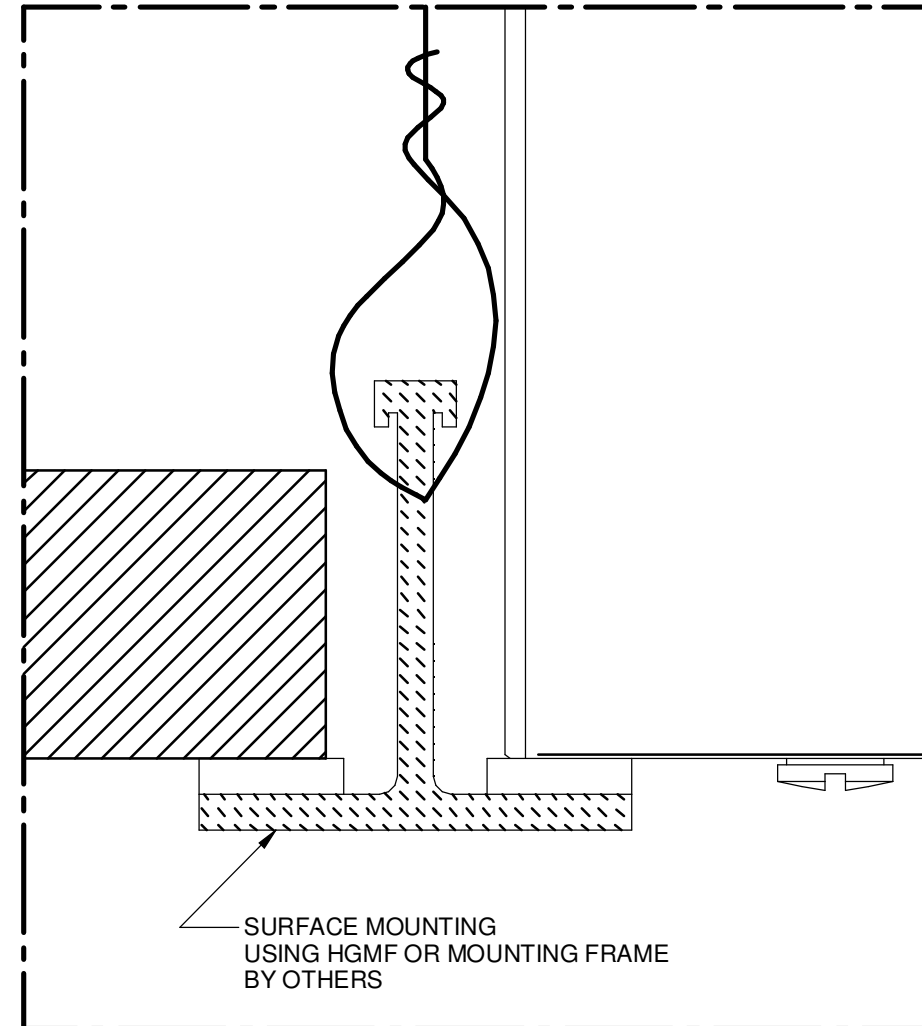
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ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING MOUNTING DETAILS

T-BAR MOUNTING



SURFACE MOUNTING



NOTES:

- LAY IN CEILING INSTALLATION ONLY. UNIT SIZE DESIGNED FOR 1" WIDE T-BAR OR 1.5" WIDE T-BAR.
- FOR SURFACE MOUNT INSTALLATION ORDER SEPARATE HOSPITAL GRADE MOUNTING FRAME. SEE HGMF SUBMITTAL HERE.

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

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06-07-2021

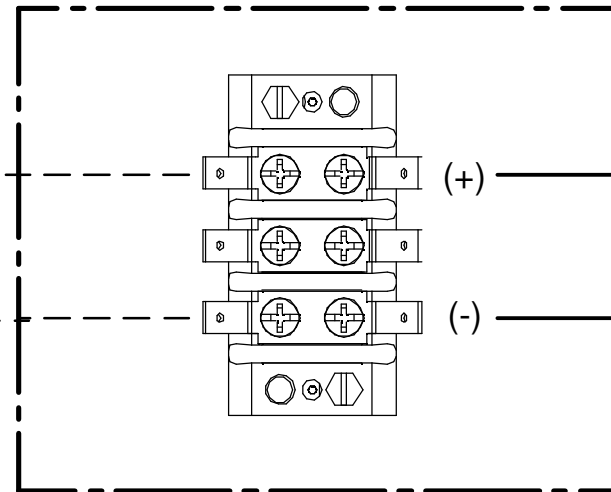
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ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING

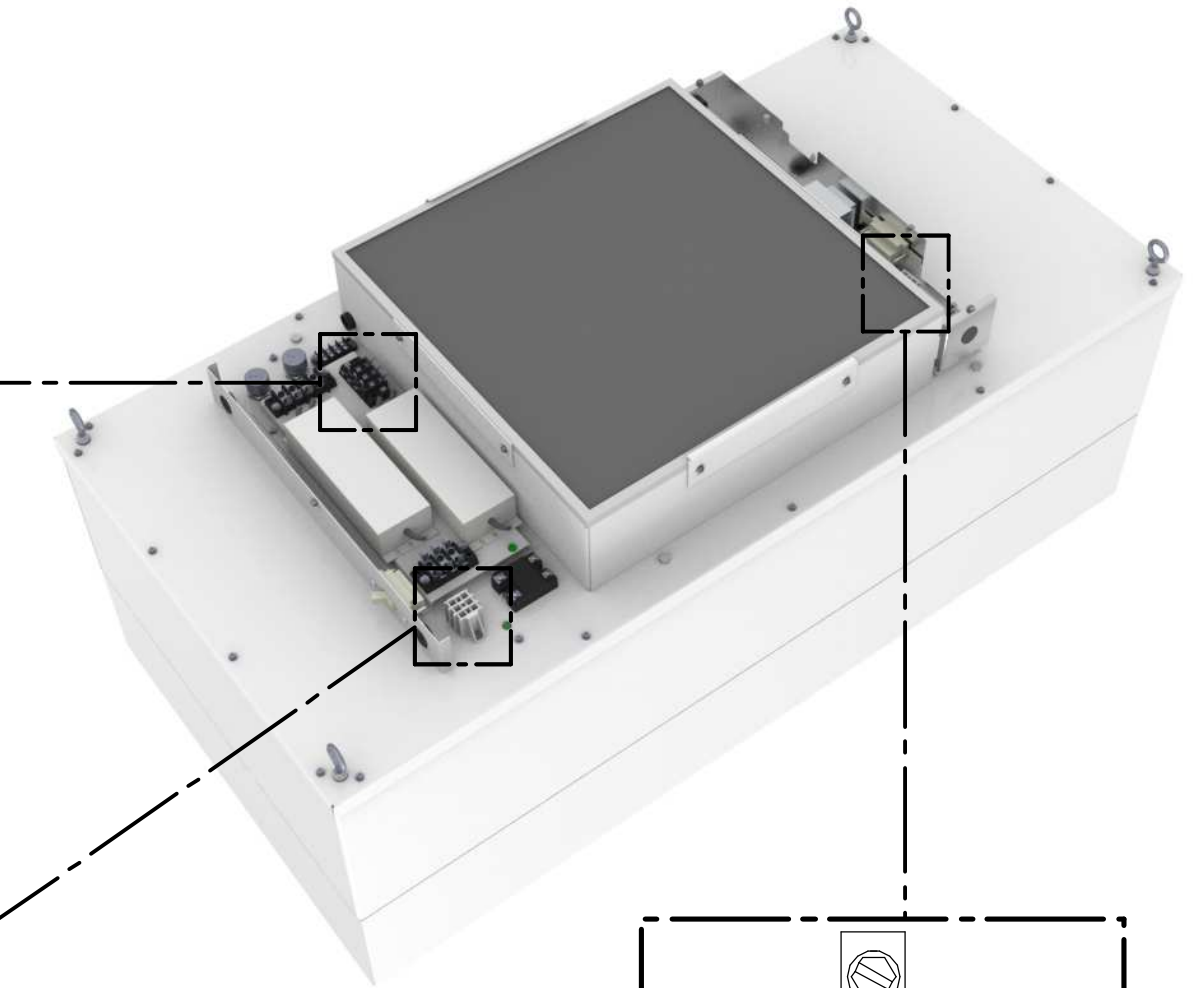
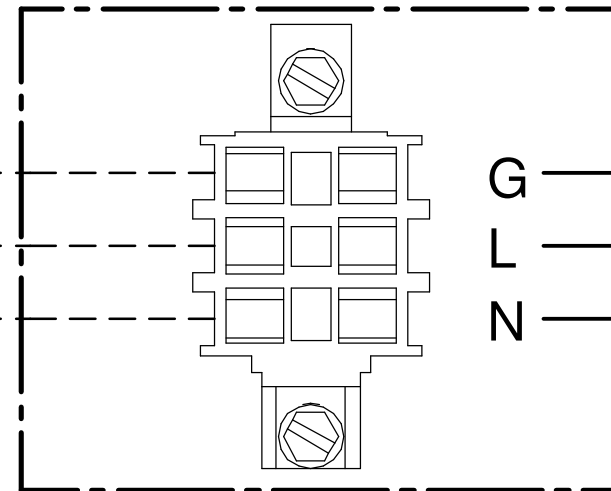
□ DIMMER - TYPICAL WIRING DETAILS

— PRE-WIRED FACTORY CONNECTION
 - - - FIELD CONNECTION
 G GROUND
 N NEUTRAL
 L LINE CONNECTION

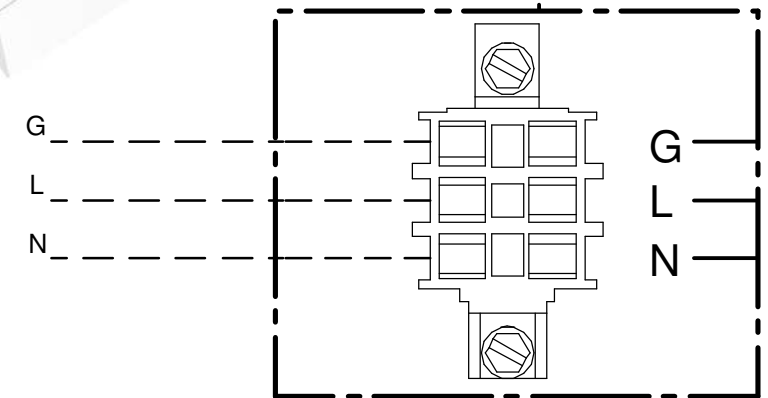
LOW VOLTAGE 0-10V
FIELD CONNECTIONS



HIGH VOLTAGE FIELD CONNECTIONS



FAN
HIGH VOLTAGE
FIELD CONNECTIONS



- 0-10V DIMMER SHIPS LOOSE. THE TOTAL 0-10V CONTROL SIGNAL WIRING FOR THIS CONTROL SHOULD NOT EXCEED 500 ft. DO NOT USE WIRE SMALLER THAN 20 AWG.
 - SEE UCA (ULTRA COMPONENTS AND ACCESSORIES) SUBMITTAL HERE

- REFERENCE LED WIRING DIAGRAMS HERE
 - REFERENCE FAN WIRING DIAGRAMS HERE

INSTALLATION WORK AND ELECTRICAL WIRING MUST BE COMPLETED BY A CERTIFIED ELECTRICIAN AND/OR QUALIFIED PERSON(S) IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES AND STANDARDS

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

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Revision: A

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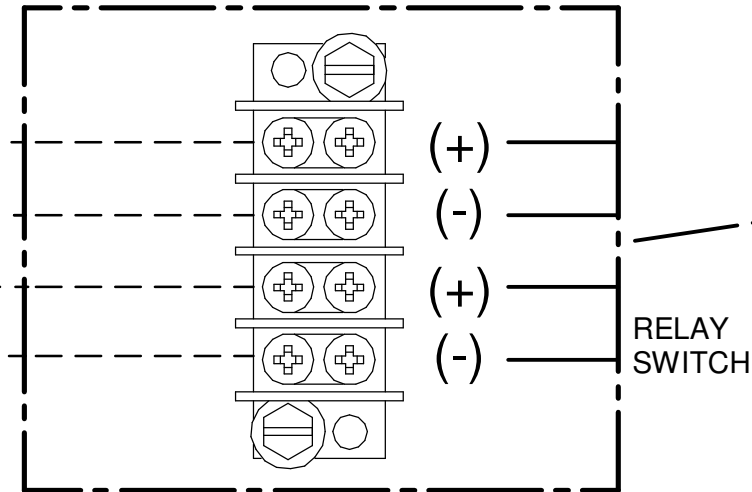
ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING

□ BAS - BUILDING AUTOMATION SYSTEM - TYPICAL WIRING DETAILS

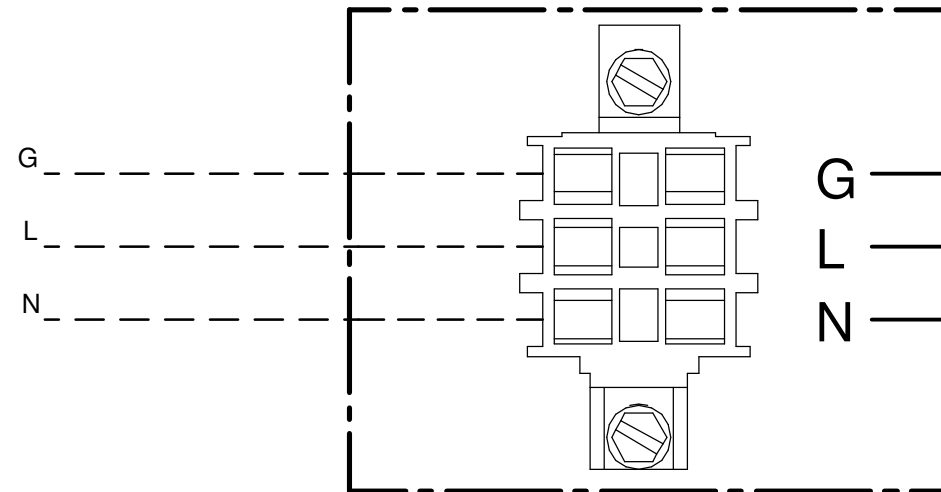
— PRE-WIRED FACTORY CONNECTION
 - - - FIELD CONNECTION
 G GROUND
 N NEUTRAL
 L LINE CONNECTION

B.A.S. 0-10V DIMMING SIGNAL

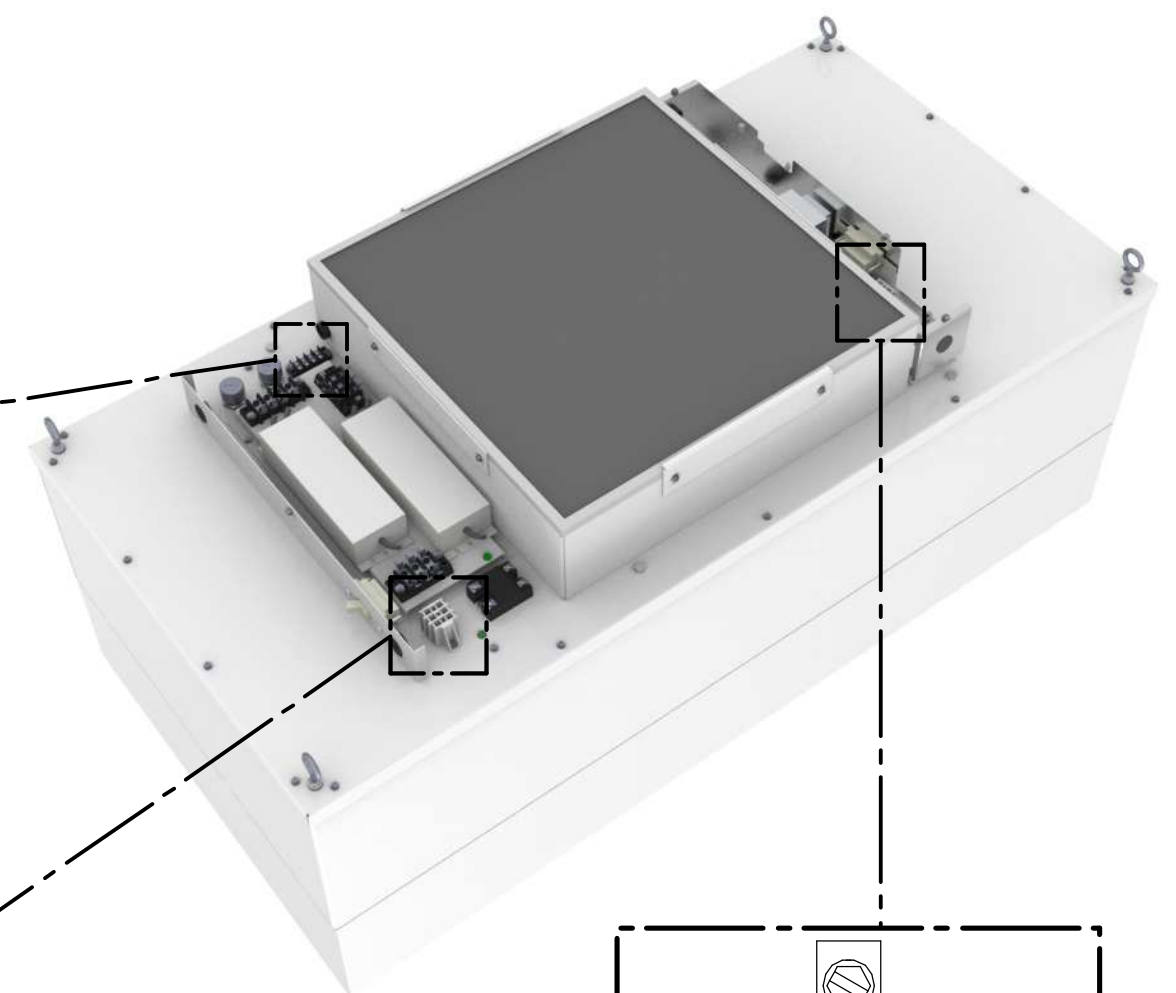
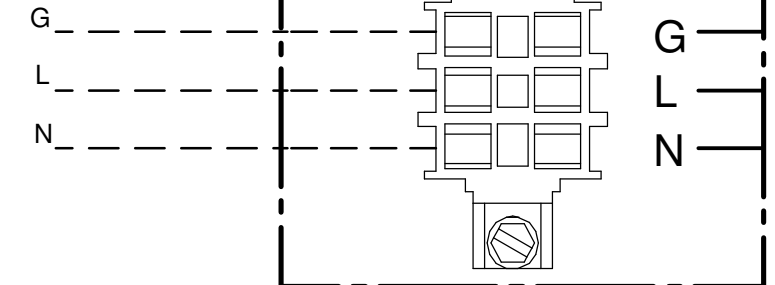
B.A.S. ON/OFF SIGNAL



HIGH VOLTAGE FIELD CONNECTIONS



FAN HIGH VOLTAGE FIELD CONNECTIONS



- SEE UCA (ULTRA COMPONENTS AND ACCESSORIES) SUBMITTAL HERE

- REFERENCE LED WIRING DIAGRAMS HERE
 - REFERENCE FAN WIRING DIAGRAMS HERE

INSTALLATION WORK AND ELECTRICAL WIRING MUST BE COMPLETED BY A CERTIFIED ELECTRICIAN AND/OR QUALIFIED PERSON(S) IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES AND STANDARDS

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

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Revision: A

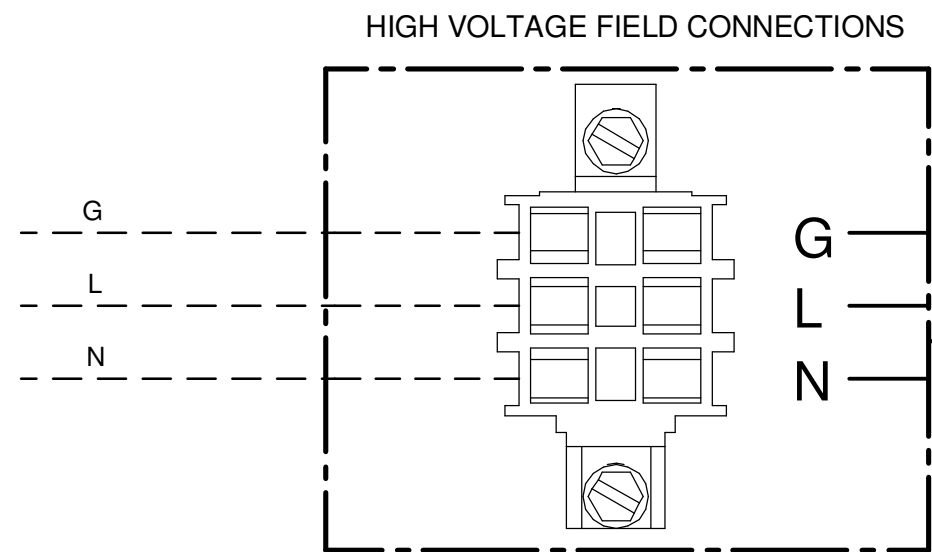
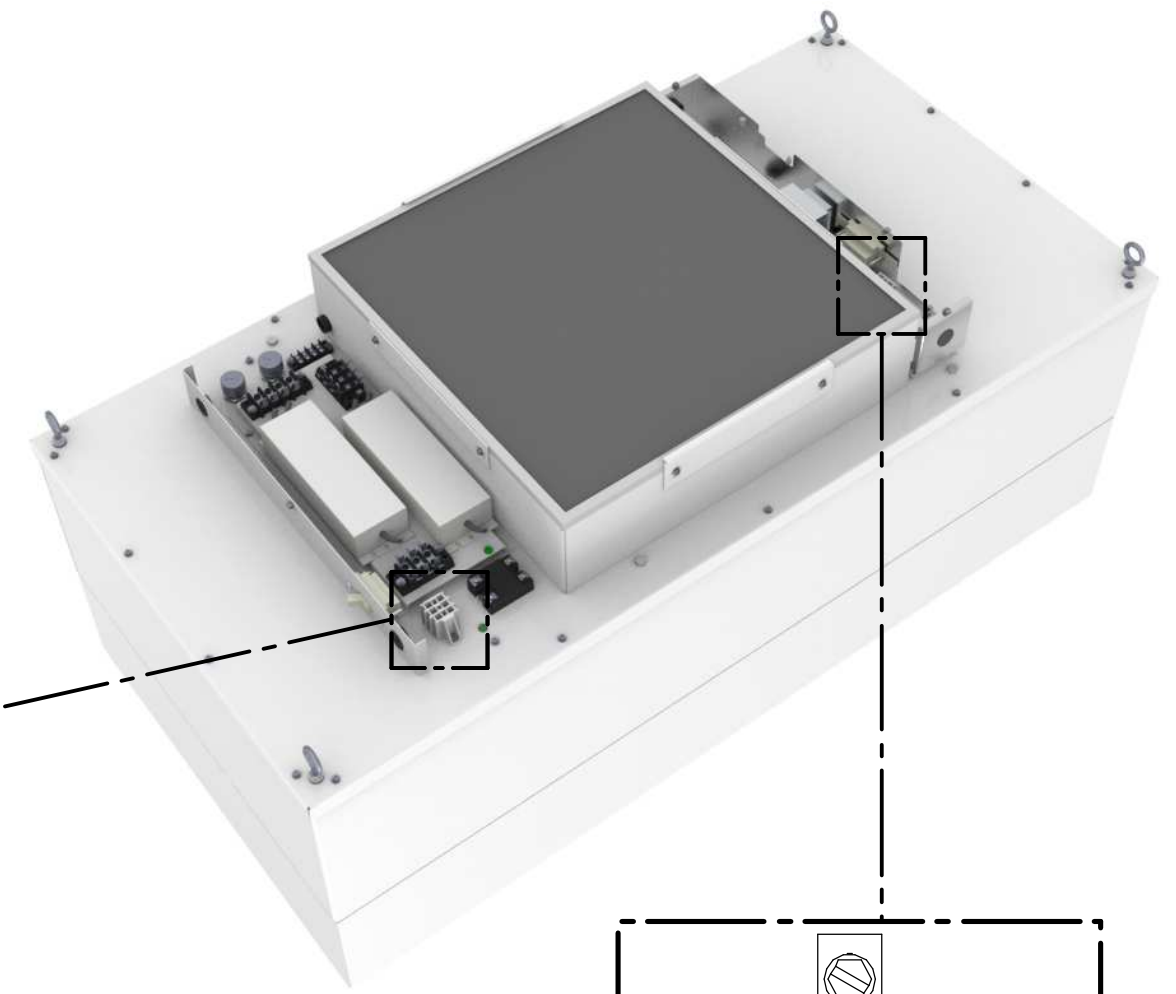
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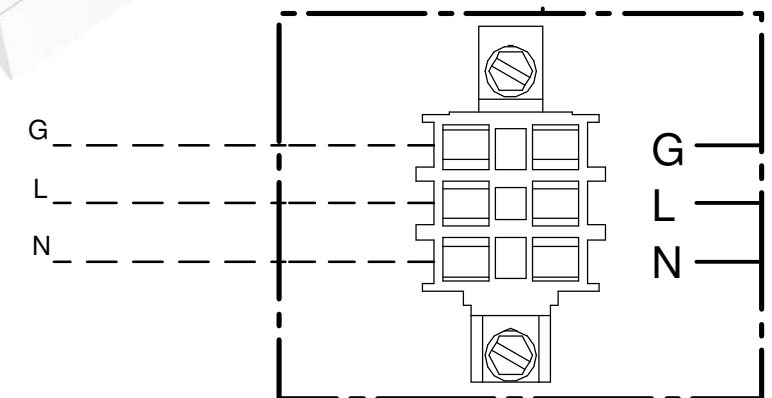
ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING

□ BACNET - TYPICAL WIRING DETAILS

——— PRE-WIRED FACTORY CONNECTION
 - - - - - FIELD CONNECTION
 G GROUND
 N NEUTRAL
 L LINE CONNECTION



FAN
HIGH VOLTAGE
FIELD CONNECTIONS



- SEE UCA (ULTRA COMPONENTS AND ACCESSORIES) SUBMITTAL HERE

- REFERENCE LED WIRING DIAGRAMS HERE
 - REFERENCE FAN WIRING DIAGRAMS HERE

INSTALLATION WORK AND ELECTRICAL WIRING MUST BE COMPLETED BY A CERTIFIED ELECTRICIAN AND/OR QUALIFIED PERSON(S) IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES AND STANDARDS

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

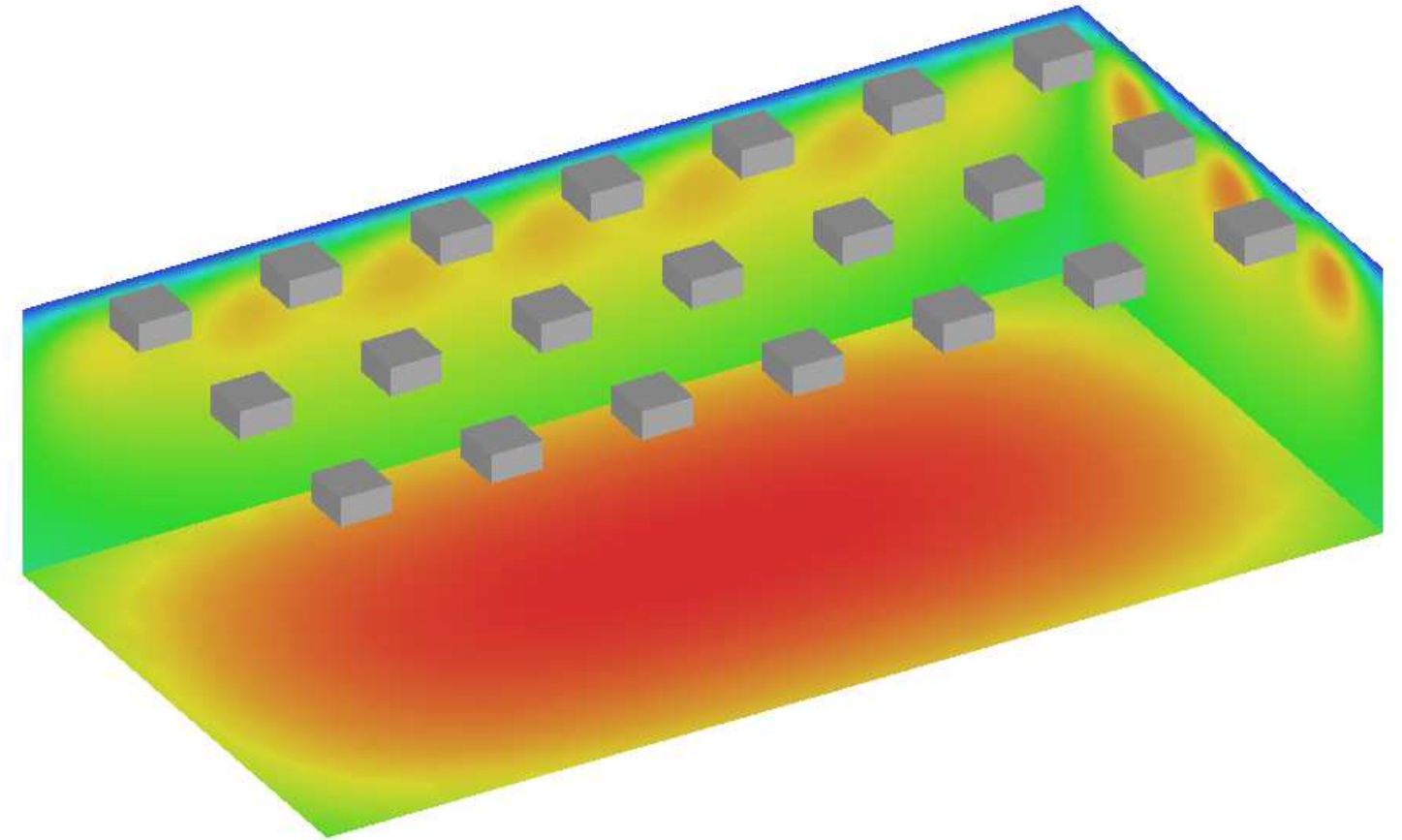
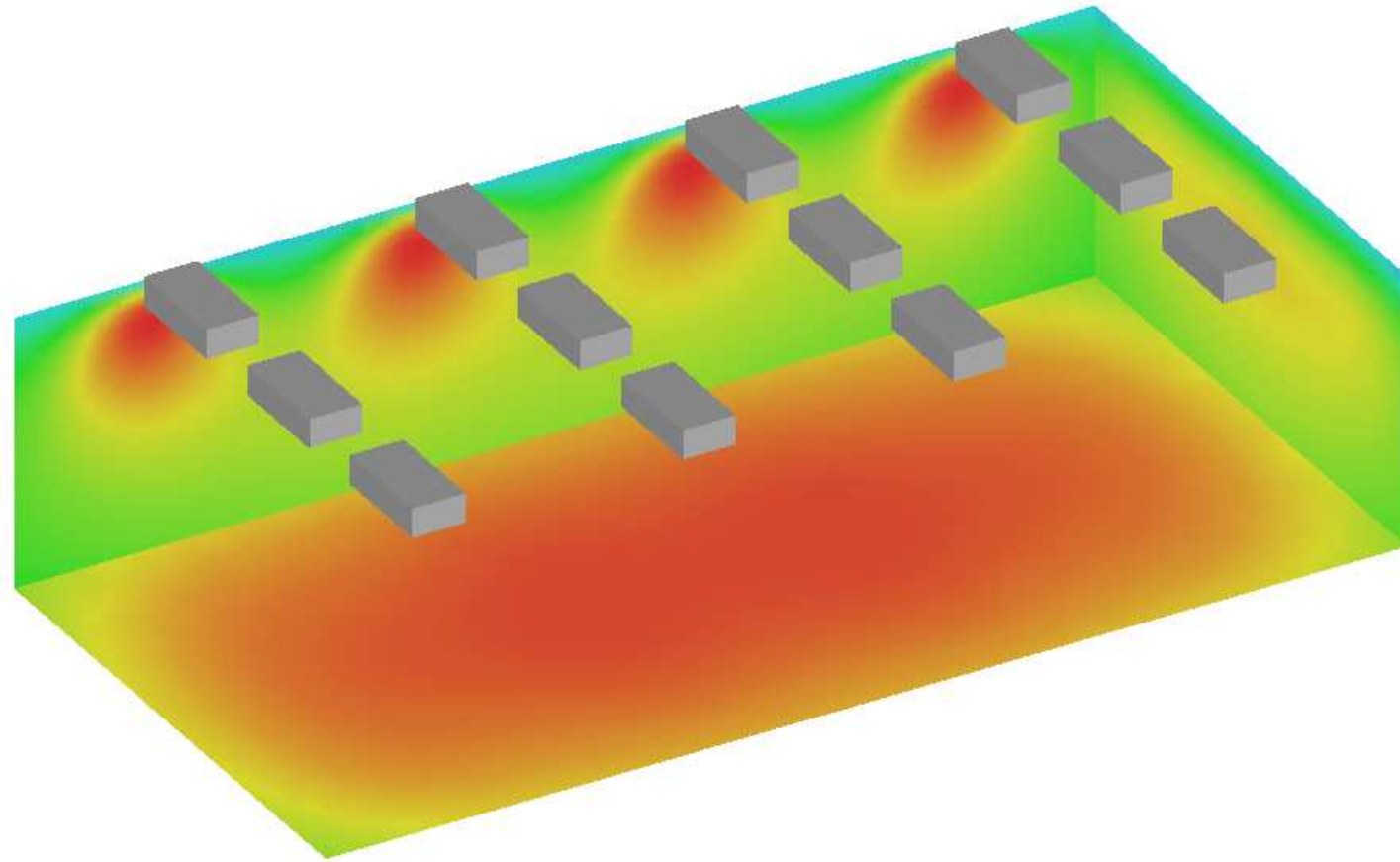
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ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING PHOTOMETRIC ANALYSIS - EXAMPLE LAYOUTS



% CEILING COVERAGE REQUIREMENT		
24 x 48 UFFU MODULES		
TARGET AVERAGE ILLUMINANCE (FC)	NUMBER OF ROWS OF LED LIGHTS PER MODULE	
	SINGLE ROW	DUAL ROW
50 FC	21%	12%
75 FC	32%	18%
100 FC	45%	24%

% CEILING COVERAGE REQUIREMENT		
24 x 24 UFFU MODULES		
TARGET AVERAGE ILLUMINANCE (FC)	NUMBER OF ROWS OF LED LIGHTS PER MODULE	
	SINGLE ROW	DUAL ROW
50 FC	39%	21%
75 FC	57%	32%
100 FC	78%	42%

ROOM DIMENSION PARAMETERS:

800 SQ FT
10 FT CEILING HEIGHT
3 FT WORKPLANE

ROOM REFLECTANCES:

CEILINGS: 80%
WALLS: 50%
FLOORS: 20%

- THE TABLES REFLECT THE PERCENTAGE OF UFFU CEILING COVERAGE REQUIRED TO MEET AVERAGE ILLUMINANCE (FC) REQUIREMENTS
- 50 FC AVERAGE ILLUMINATION WITH 2 ROWS OF LEDS PER MODULE SHOWN

THE CALCULATED VALUES DO NOT INCLUDE OR ACCOUNT FOR ADDITIONAL LIGHTING.
LIGHTING ANALYSIS HAS BEEN PERFORMED USING LAB TESTED .IES FILES AND STANDARD ROOM REFLECTANCE VALUES.
LIGHTING CALCULATIONS ARE ESTIMATED USING BEST PRACTICE AND MAY DIFFER SLIGHTLY FROM ACTUAL FIELD CONDITIONS.

PRICE | **CRITICAL ENVIRONMENTS**

PROJECT:

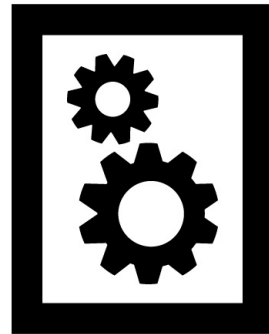
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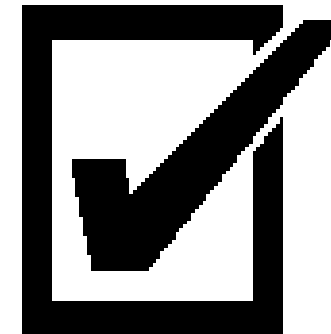
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ULTRA FAN FILTER UNIT WITH INTEGRATED LED LIGHTING SUPPORTING CONTENT



MANUALS

FFU/PURAFLO INSTALLATION MANUAL
FFU/PURAFLO WIRING DIAGRAMS
BACnet WIRING GUIDELINES FOR PRICE CONTROLS MANUAL
BFC BACnet FLOW CONTROLLER MANUAL
FTR ROOM-SIDE REPLACEABLE FILTER (RSR) QUICK START GUIDE
INJ AEROSOL INJECTION PORT USER MANUAL
INJ REMOTE AEROSOL INJECTION PORT INSTALLATION MANUAL
LEDK FILTER STATUS INDICATOR KIT INSTALLATION MANUAL
UCA ULTRA COMPONENTS AND ACCESSORIES MANUAL
URDC ULTRA DRIVER CABINET MANUAL



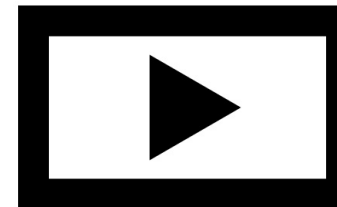
SUBMITTALS

FFU FAN FILTER UNIT CONTROLS SUBMITTAL
FTR REPLACEMENT FILTER SUBMITTAL
HGMF HOSPITAL GRADE MOUNTING FRAME SUBMITTAL



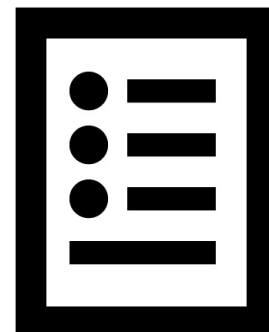
CATALOG / PERFORMANCE

FFU FAN FILTER UNIT CATALOG
FFU FAN FILTER UNIT PERFORMANCE DATA



VIDEOS

FFU FAN FILTER UNIT FUNDAMENTALS
FFU FAN FILTER UNIT SYSTEM DESIGN
FFU FAN FILTER UNIT CONTROL OPTIONS
BFC BACnet FLOW CONTROLLER START-UP GUIDE AND BASICS
FILTER TESTING & AEROSOL INJECTION
HIGH PERFORMANCE MANUFACTURING ON CRITICAL ENVIRONMENTS PRODUCTS
LIGHTING STANDARDS IN OPERATING ROOMS & CLEANROOMS



SPECIFICATIONS

FFU FAN FILTER UNIT SPECIFICATION
FFU FAN FILTER UNIT EXHAUST FLOW SPECIFICATION



FOR MORE INFORMATION ON PRICE FAN FILTER UNITS, VISIT
PRICEINDUSTRIES.COM

PRICE | **CRITICAL ENVIRONMENTS**

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