



CIVIL ENGINEERING CONSULTANTS, INC. MARIETTA, GEORGIA 30068			
No Exceptions Taken	No Exceptions Taken With Comment	Make Corrections Noted	Rejected
✓			
DATE <b>Aug 03, 2022</b>			
BY <i>CKB</i>			
APPROVED FOR DESIGN ONLY. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND QUANTITIES.			

# SUBMITTAL PACKAGE REVISION A

ECO-TECH

6220 - Jefferson, GA WRF

PO# 22058GA 180

8' x 8' x 8' Freedom Series Enclosure

Wednesday, July 27, 2022

**PLEASE REVIEW CAREFULLY**

- APPROVED AS SUBMITTED
- REVISE & RESUBMIT

*CKB*

08/03/2022

SIGNATURE\*

DATE

ONSITE/SHIPPING CONTACT: Steven Ruble

PHONE/EMAIL: (404) 345-5707 / Sruble@lakeshoreengineering.com

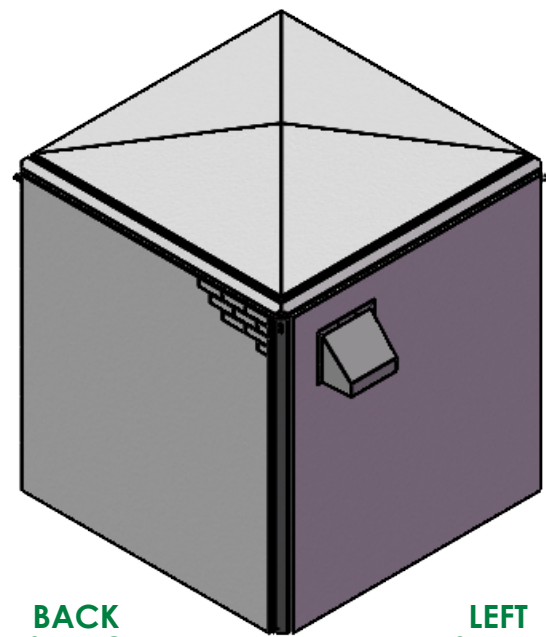
PREFERRED DELIVERY DATE: \_\_\_\_\_

\*BY SIGNING THIS SUBMITTAL PACKAGE, CUSTOMER AGREES THAT THE SUBMITTAL PACKAGE GENERALLY MEETS ALL CUSTOMER REQUIREMENTS OR DESIRES AS SET FORTH AND DETAILED IN THE PURCHASE DOCUMENTS, SPECIFICATIONS, AND/OR STANDARDS FOR CUSTOMER'S ORDER



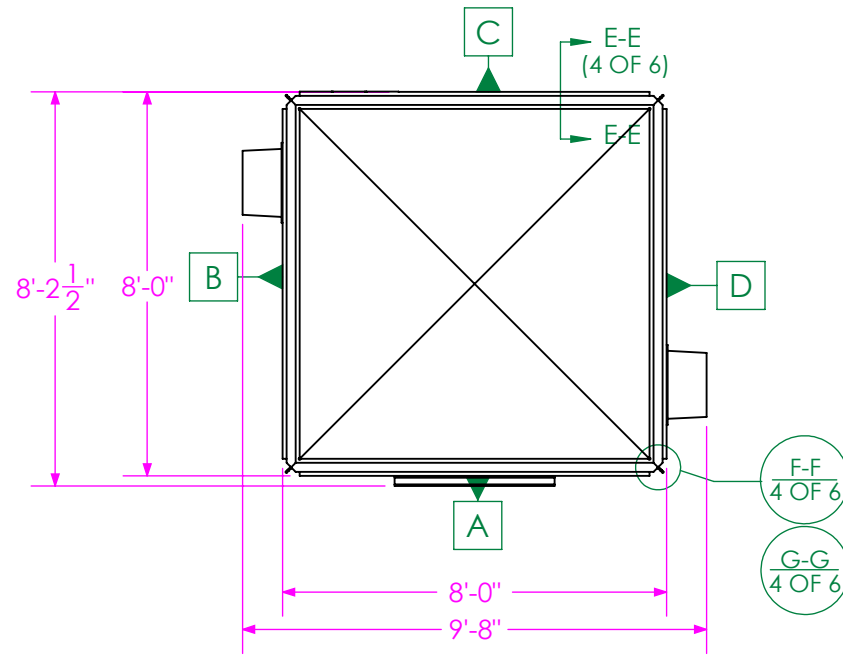
PROUDLY MADE IN AMERICA



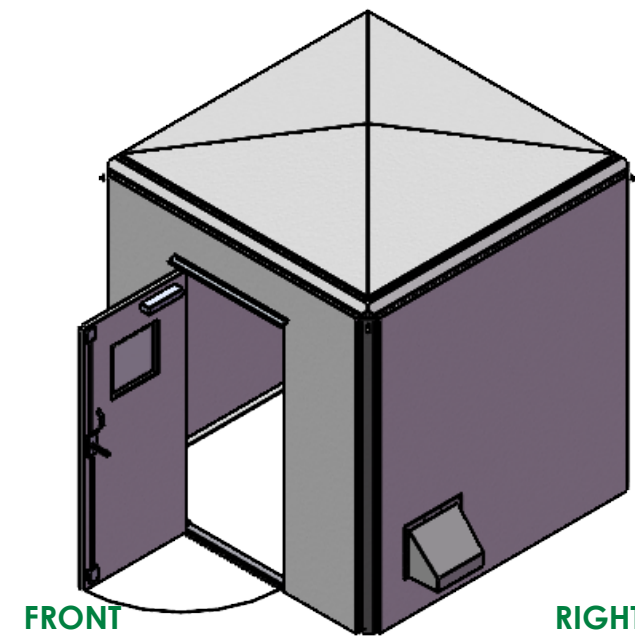


BACK SIDE C  
LEFT SIDE B

REAR ISOMETRIC

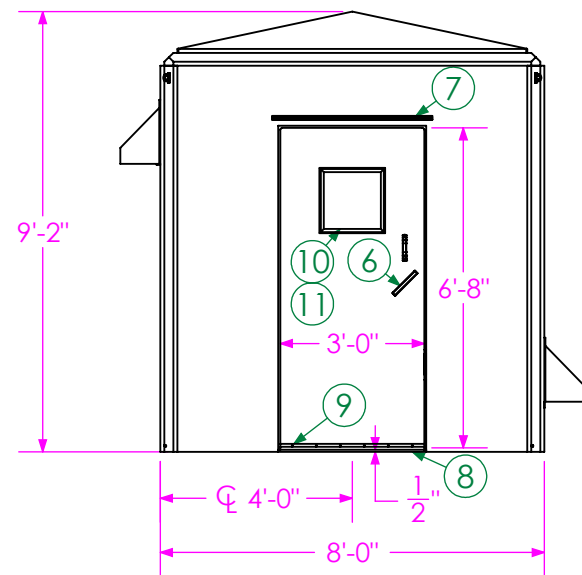


TOP VIEW

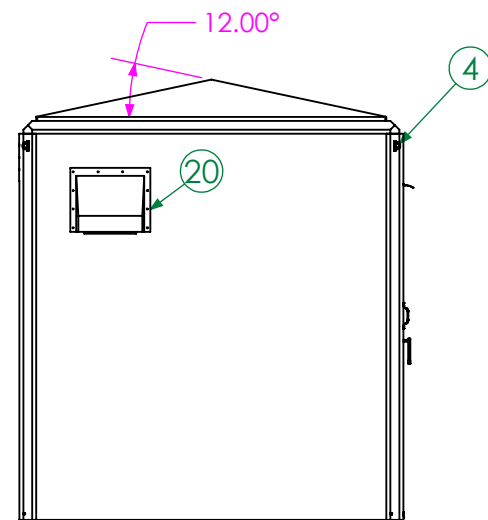


FRONT SIDE A  
RIGHT SIDE D

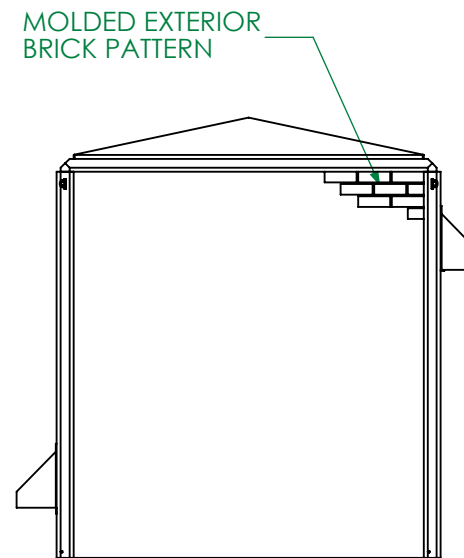
ISOMETRIC VIEW



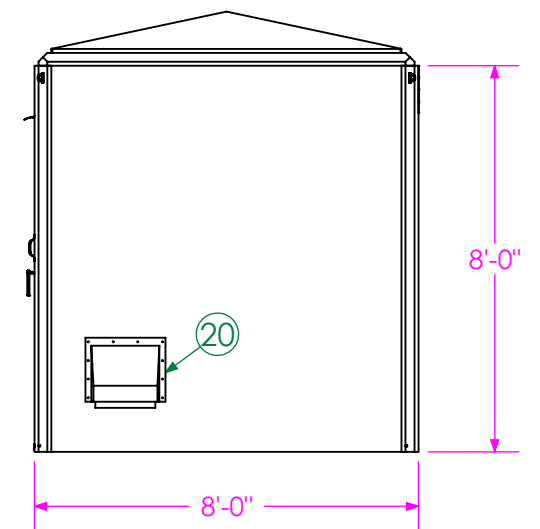
FRONT OUTSIDE VIEW  
SIDE A



LEFT OUTSIDE VIEW  
SIDE B



BACK OUTSIDE VIEW  
SIDE C



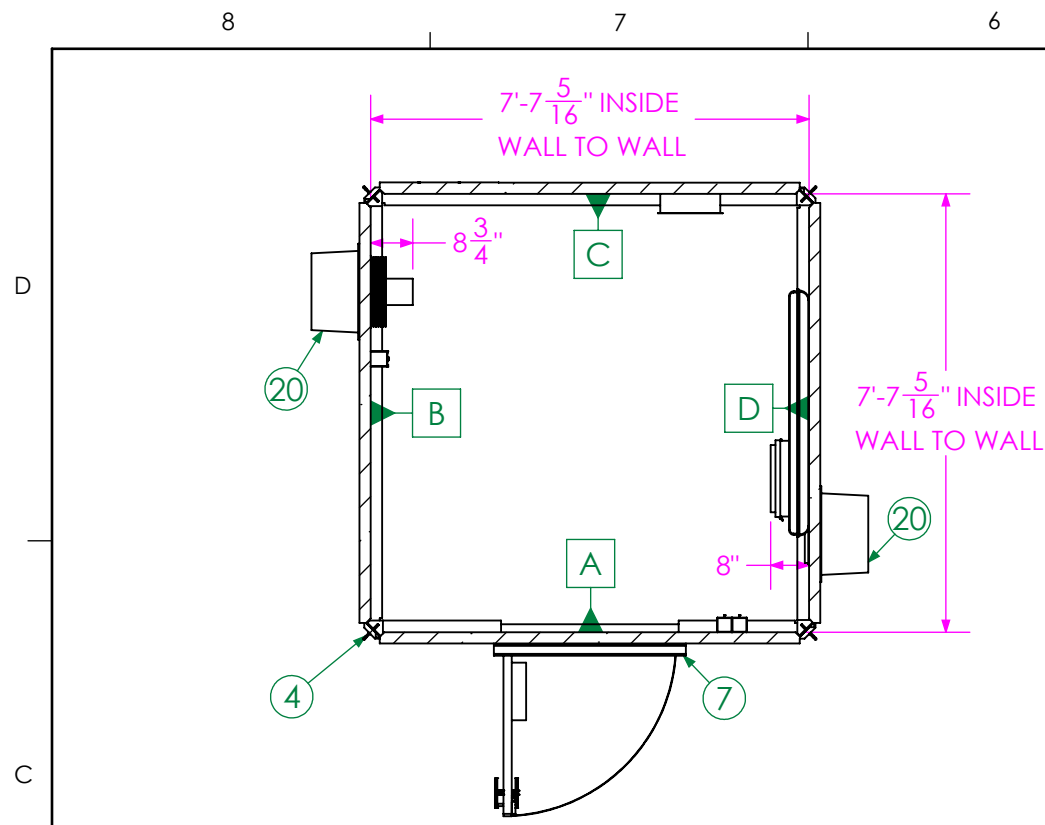
RIGHT OUTSIDE VIEW  
SIDE D

-	-	-	-
A	UPDATED DOOR SWING AND COLOR	7/27/2022	NF
REV.	DESCRIPTION	DATE	APPROVED

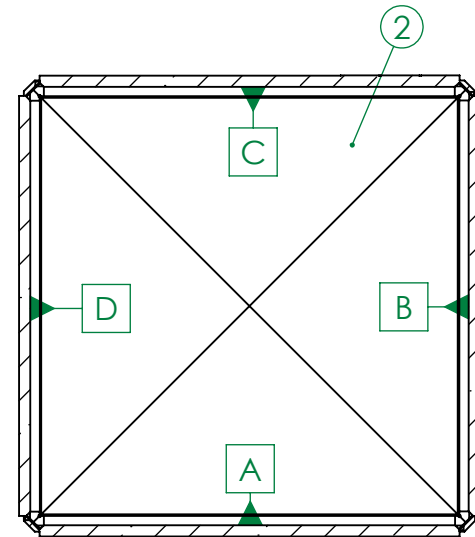


<b>SHELTER WORKS</b> 2616 South Third Street, St. Louis, MO 63118 Phone: (800)794-8037 Fax: (314) 664-9301 www.shelterworks.com		
CUSTOMER: ECO-TECH	PO# 22058GA 180	ORDER #: 6220
PROJECT: Jefferson, GA WRF	SIZE: <b>B</b>	
TITLE: 8' x 8' x 8' Freedom Series Enclosure	SHEET: 2 OF 6	
SCALE: 1:48	DWG #: 6220 Assembly	

<b>RATINGS:</b> 20 PSF ROOF LOAD 114 MPH WIND SPEED APPROX. WEIGHT 2100 LBS	<b>EXTERIOR VIEWS</b>				<b>PROPRIETARY TO SHELTER WORKS</b> This document is confidential and proprietary to Shelter Works and cannot be used, disclosed, copied, or duplicated in any manner without the prior written consent of Shelter Works. 2007 Switzer Industries, Inc, dba Shelter Works. All Rights Reserved.
	MODEL:	6220 Assembly			
	PLOT SCALE:	1:48	BY:	NF	

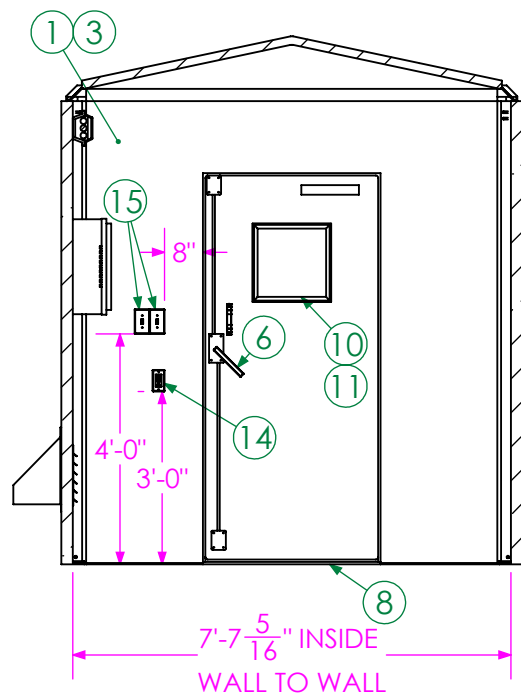


**PLAN VIEW**

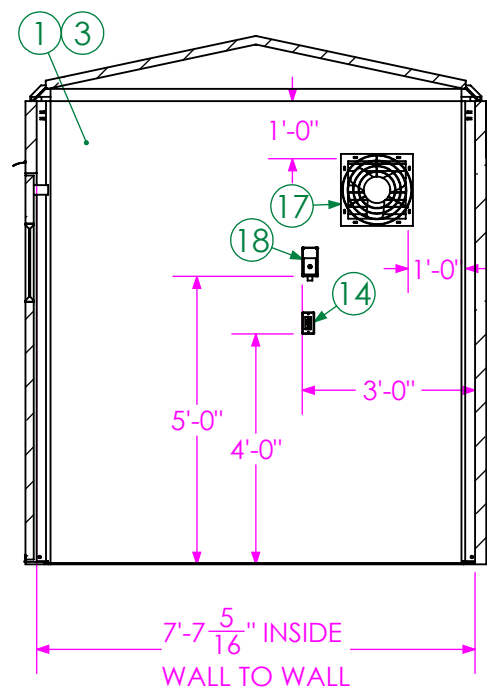


**CEILING INTERIOR VIEW**

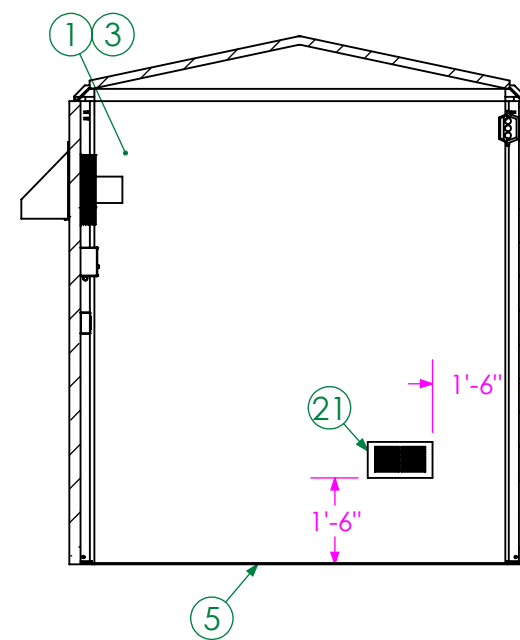
INTERIOR COLOR:		White		EXTERIOR COLOR:		Storm Gray	
<b>ITEMS LIST</b>							
ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES	SHIPPED LOOSE		
1	-	POLYISO-W	1-1/2" FOAM CORE INSULATION ~R-12	ALL WALLS TYPICAL	-		
2	-	POLYISO	1-1/2" FOAM CORE INSULATION ~R-12	ROOF ONLY	-		
3	-	59OSB	19/32" OSB REINFORCEMENT	ALL WALLS TYPICAL	-		
4	4	01970375	3/8" SS U-BOLT	FOR OFFLOADING	-		
5	3	CS-102B	SEALANT	14'-6" PER ROLL	X		
6	1	3068-3PSSW	3' X 6'-8" SINGLE DOOR, RIGHT HAND	SS 3-POINT HARDWARE, WITH 2-1/2" STEP OVER THRESHOLD, (3) HINGES, CONTINUOUS EPDM GASKET, WITH OPENING FOR 15" WINDOW	-		
7	1	810S 40"/MIL	DRIP EDGE	ALUMINUM, FOR 3' DOOR	-		
8	1	410S	TRIP-PROOF DOOR THRESHOLD	ALUMINUM, FOR 3' DOOR	-		
9	1	770S	DOOR SWEEP	3' ALUMINUM	-		
10	1	LEXAN	LEXAN WINDOW	15" X 15" X 1/2", RESISTS ETCHING	-		
11	1	D60	WINDOW FRAME	FRAME ONLY	-		
12	1	NA2016P	ENCLOSURE	NEMA 4X, FRP, FOR LOAD CENTER	-		
13	1	BR1020B100S11	LOAD CENTER	RATED 100A, Ø1, 120/240V, 10 SPACE, 20 CIRCUIT, 100A MAIN, BREAKERS: (1) 100A/2P, (5) 20A, 1P	-		
14	2	HUBGFRST20W	GFCI RECEPTACLE	20A, 120V, NEMA 5-20R GFCI DUPLEX	-		
15	2	HUB1221W WEATHERPROOF	SINGLE POLE SWITCH	WHITE, INTERIOR MOUNTED, (1) FOR INTERIOR LIGHT, (1) FOR EXHAUST FAN; ENERGIZES FAN WHEN IN "UP" POSITION REGARDLESS OF T-STAT OR TEMP SETTING	-		
16	1	VSA4A332ASEMV000001	FLUORESCENT LIGHT FIXTURE	VAPORPROOF 4', (3)32W LAMPS, 0.8A	-		
17	1	1BLH8	12" CORROSION RESISTANT SHUTTER MOUNT EXHAUST FAN	CORROSION RESISTANT, 115V, 60HZ, TØ, 1.9A, 1100CFM	-		
18	1	4LZ94	THERMOSTAT	WALL MOUNT, 30-110 DEG. CONTROL RANGE; FOR FAN, WITHIN 5' OF FAN	-		
19	1	5C211	12" FIBERGLASS GRAVITY INTAKE LOUVER	WITH FELTED LOUVERS, & SCREEN	-		
20	2	RH-16	16" FRP RAIN HOOD	FIBERGLASS, FASTENERS WILL BE THREADED INTO MOUNTING HOLES IN THE WALL	X		
21	1	PAW1215-SS	FAN FORCED WALL HEATER	SS, TØ, 1500 WATTS, 120V, WITH PAWS-SS FRAME & TKIT-2BW DP	-		



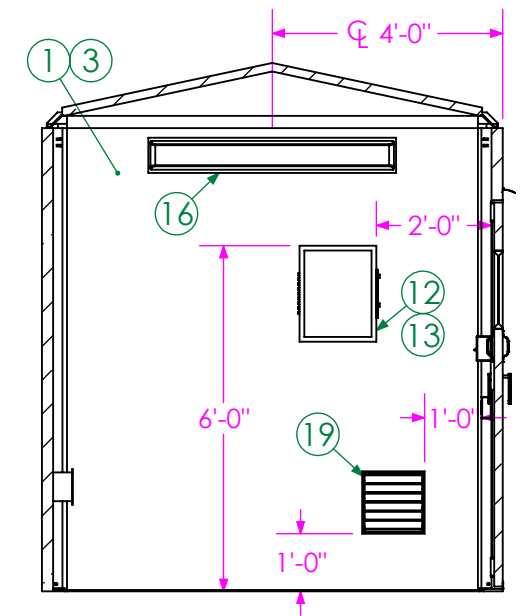
**SECTION A-A  
SIDE A INSIDE VIEW**



**SECTION B-B  
SIDE B INSIDE VIEW**



**SECTION C-C  
SIDE C INSIDE VIEW**



**SECTION D-D  
SIDE D INSIDE VIEW**

REV.	DESCRIPTION	DATE	APPROVED
A	UPDATED DOOR SWING AND COLOR	7/27/2022	NF

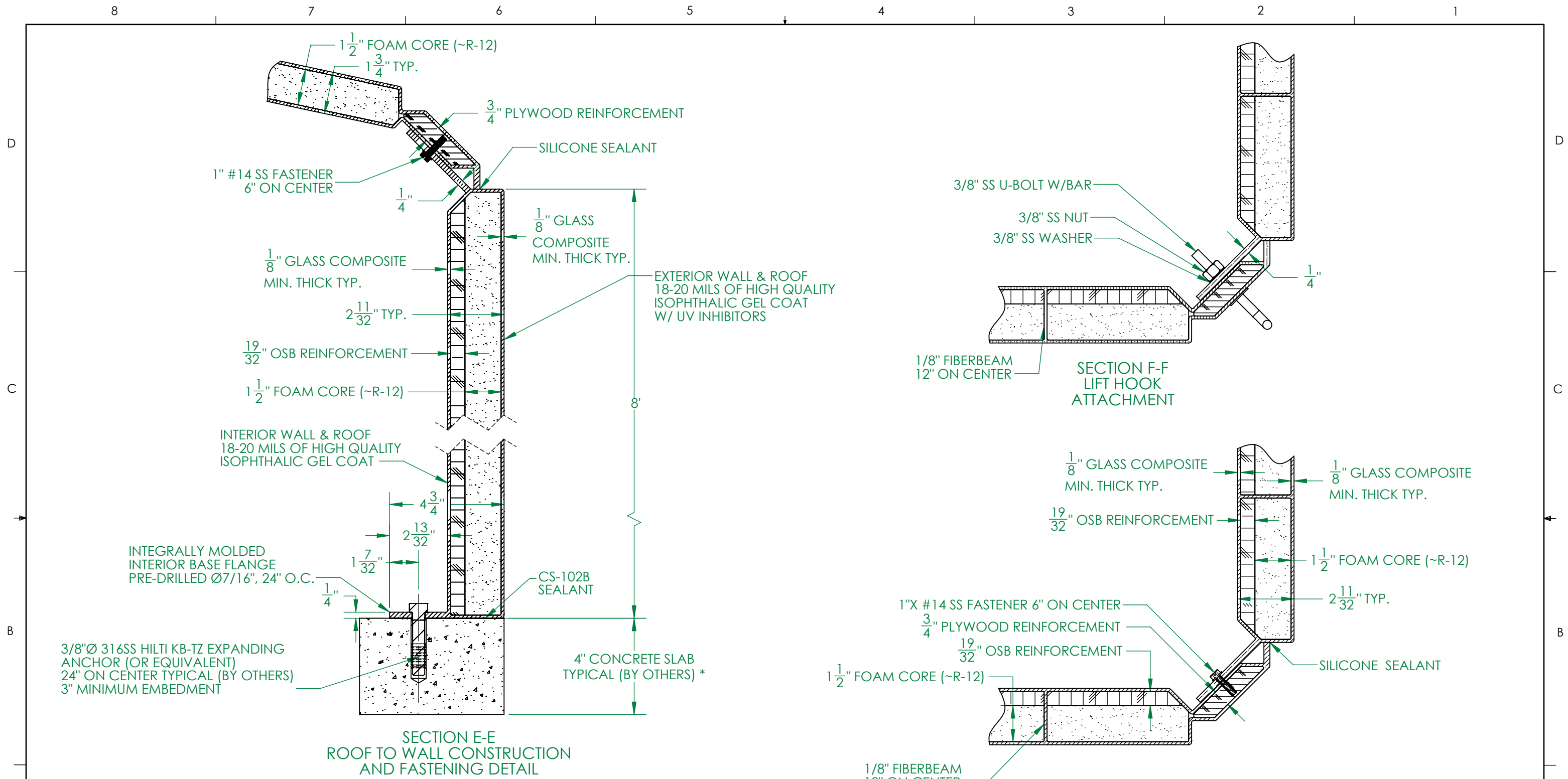
**RATINGS:**  
20 PSF ROOF LOAD  
114 MPH WIND SPEED  
APPROX. WEIGHT 2100 LBS

INTERIOR & PLAN VIEWS					
MODEL:	6220 Assembly				
PLOT SCALE:	1:40	BY:	NF	DATE:	6/9/2022

**PROPRIETARY TO SHELTER WORKS**  
This document is confidential and proprietary to Shelter Works and cannot be used, disclosed, copied, or duplicated in any manner without the prior written consent of Shelter Works  
2007 Switzer Industries, Inc, dba Shelter Works. All Rights Reserved.



<b>SHELTER WORKS</b>		
2616 South Third Street, St. Louis, MO 63118 Phone: (800)794-8037 Fax: (314) 664-9301 www.shelterworks.com		
CUSTOMER: ECO-TECH	PO# 22058GA 180	ORDER #: 6220
PROJECT: Jefferson, GA WRF	TITLE: 8' x 8' x 8' Freedom Series Enclosure	SIZE: <b>B</b>
SCALE: 1:40	DWG #: 6220 Assembly	SHEET: 3 OF 6



\*SHELTER WORKS ASSUMES NO RESPONSIBILITY FOR ACTUAL FOUNDATION DESIGN AND CONSTRUCTION. THE SITE CONTRACTOR IS TO VERIFY THE FINAL DIMENSIONS BASED UPON ACTUAL SITE CONDITIONS AND REQUIREMENTS. CONCRETE SLAB SHALL BE TRUE AND LEVEL TO A TOLERANCE OF NOT MORE THAN 3/16" WHERE THE BUILDING IS TO ATTACH. ALL PAVED OR GRADED SURFACES SURROUNDING THE SHELTER SHALL BE PITCHED TO PROMOTE PROPER DRAINAGE OF PRECIPITATION.

REV.	DESCRIPTION	DATE	APPROVED
A	UPDATED DOOR SWING AND COLOR	7/27/2022	NF

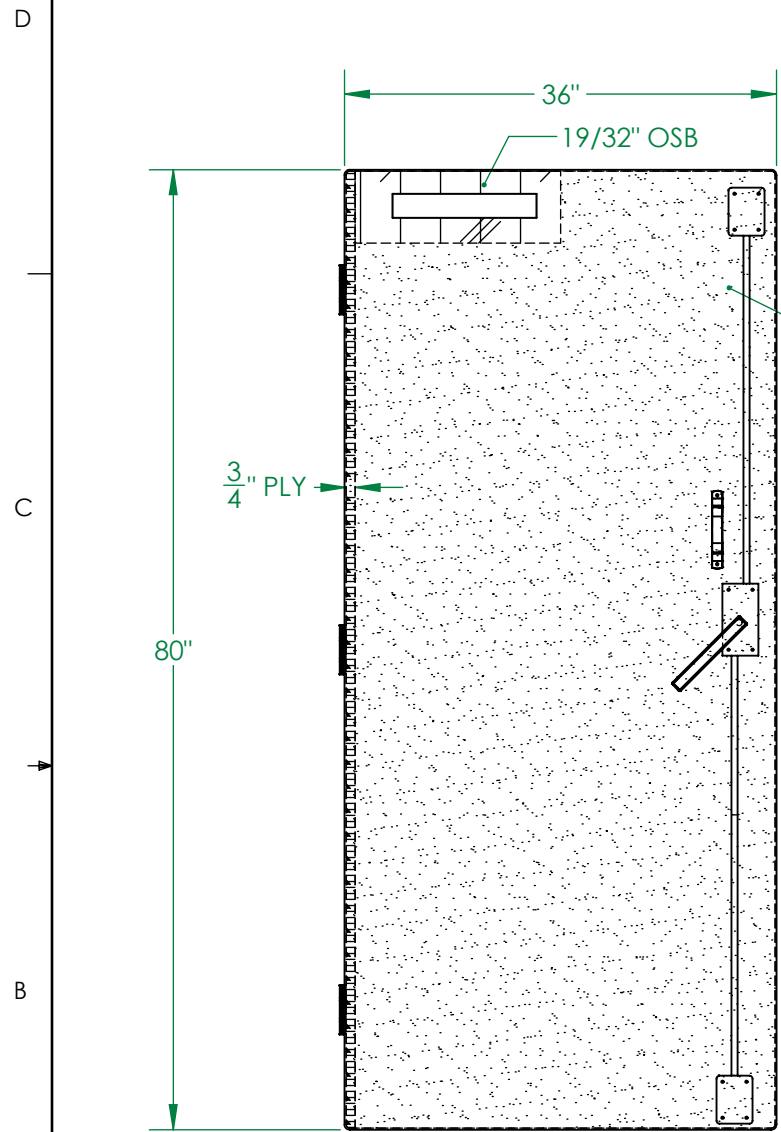
  

<b>RATINGS:</b>		<b>FASTENING &amp; CONSTRUCTION DETAILS</b>				<b>PROPRIETARY TO SHELTER WORKS</b>	
20 PSF ROOF LOAD 114 MPH WIND SPEED APPROX. WEIGHT 2100 LBS		MODEL:	1.5 F .59 OSB PLY Walls & Roof Wall Section			This document is confidential and proprietary to Shelter Works and cannot be used, disclosed, copied, or duplicated in any manner without the prior written consent of Shelter Works	
		PLOT SCALE:	-	BY:	NF	DATE:	6/9/2022
						2007 Switzer Industries, Inc, dba Shelter Works. All Rights Reserved.	

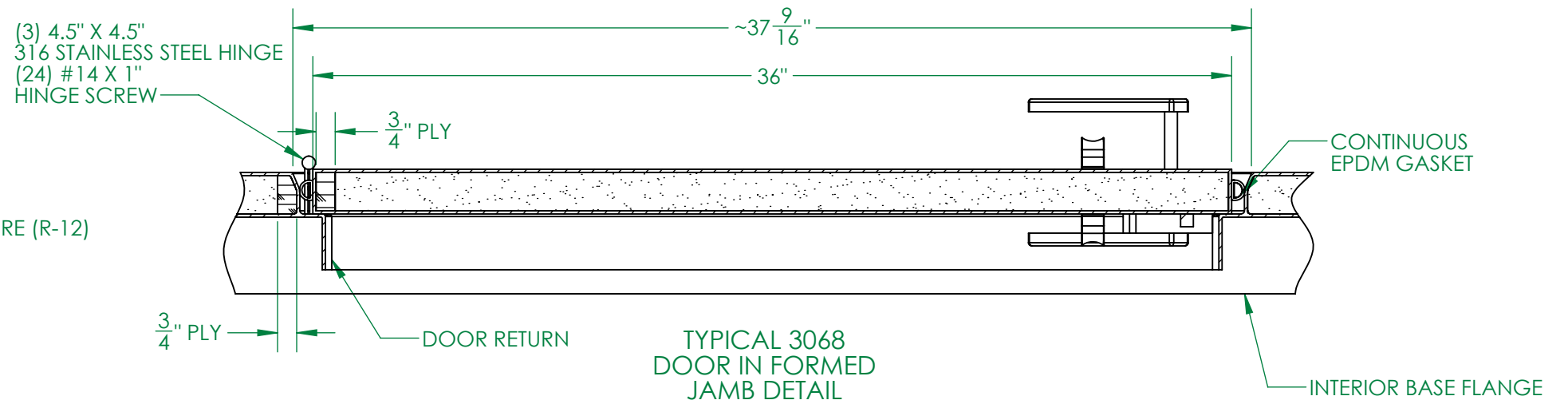


<b>SHELTER WORKS</b>			
2616 South Third Street, St. Louis, MO 63118 Phone: (800)794-8037 Fax: (314) 664-9301 www.shelterworks.com			
CUSTOMER: ECO-TECH		PO# 22058GA 180	ORDER #: 6220
PROJECT: Jefferson, GA WRF		SIZE: <b>B</b>	
TITLE: 8' x 8' x 8' Freedom Series Enclosure		SHEET: 4 OF 6	
SCALE:	DWG #: 6220 Construction Detail		

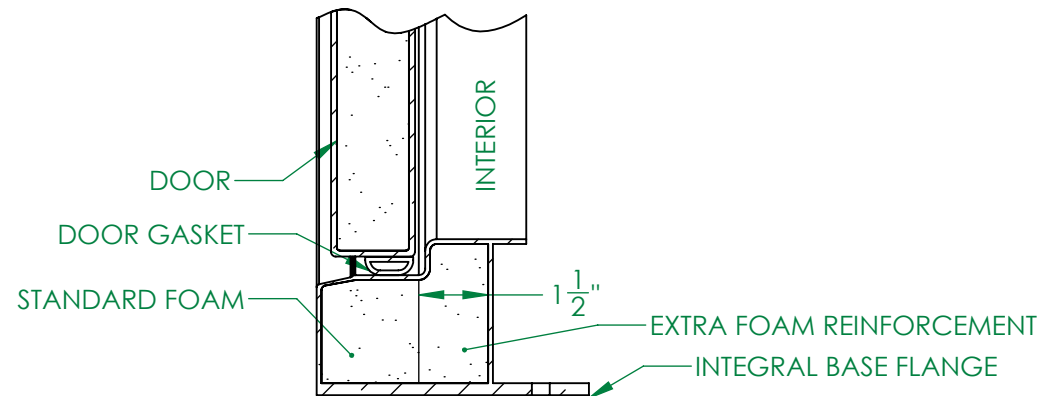
NOTE: ADJUSTABLE DOOR CLOSER TO BE FIELD ADJUSTED TO SUIT LOCAL WIND SPEED



DOOR CONSTRUCTION DETAIL



TYPICAL 3068 DOOR IN FORMED JAMB DETAIL



REINFORCED DOOR THRESHOLD DETAIL

-	-	-	-
A	UPDATED DOOR SWING AND COLOR	7/27/2022	NF
REV.	DESCRIPTION	DATE	APPROVED
<b>RATINGS:</b> 20 PSF ROOF LOAD 114 MPH WIND SPEED APPROX. WEIGHT 2100 LBS		<b>DOOR DETAILS</b> MODEL: PLOT SCALE: - BY: NF DATE: 6/9/2022	
<b>PROPRIETARY TO SHELTER WORKS</b> This document is confidential and proprietary to Shelter Works and cannot be used, disclosed, copied, or duplicated in any manner without the prior written consent of Shelter Works. 2007 Switzer Industries, Inc, dba Shelter Works. All Rights Reserved.			



<b>SHELTER WORKS</b> 2616 South Third Street, St. Louis, MO 63118 Phone: (800)794-8037 Fax: (314) 664-9301 www.shelterworks.com		
CUSTOMER: ECO-TECH	PO# 22058GA 180	ORDER #: 6220
PROJECT: Jefferson, GA WRF	SIZE: <b>B</b>	
TITLE: 8' x 8' x 8' Freedom Series Enclosure	SHEET: 5 OF 6	
SCALE: -	DWG #: 6220 Construction Detail	

INTERIOR COLOR: WHITE

EXTERIOR COLOR: STORM GRAY

**6220 REV A ITEMS LIST**

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTES	SHIPPED LOOSE
1	-	POLYISO-W	1-1/2" FOAM CORE INSULATION ~R-12	ALL WALLS TYPICAL	-
2	-	POLYISO	1-1/2" FOAM CORE INSULATION ~R-12	ROOF ONLY	-
3	-	59OSB	19/32" OSB REINFORCEMENT	ALL WALLS TYPICAL	-
4	4	01970375	3/8" SS U-BOLT	FOR OFFLOADING	-
5	3	CS-102B	SEALANT	14'-6" PER ROLL	X
6	1	3068-3PSSW	3' X 6'-8" SINGLE DOOR, RIGHT HAND	SS 3-POINT HARDWARE, WITH 2-1/2" STEP OVER THRESHOLD, (3) HINGES, CONTINUOUS EPDM GASKET, WITH OPENING FOR 15" WINDOW	-
7	1	810S 40"MIL	DRIP EDGE	ALUMINUM, FOR 3' DOOR	-
8	1	410S	TRIP-PROOF DOOR THRESHOLD	ALUMINUM, FOR 3' DOOR	-
9	1	770S	DOOR SWEEP	3' ALUMINUM	-
10	1	LEXAN	LEXAN WINDOW	15" X 15" X 1/2", RESISTS ETCHING	-
11	1	D60	WINDOW FRAME	FRAME ONLY	-
12	1	NA2016P	ENCLOSURE	NEMA 4X, FRP, FOR LOAD CENTER	-
13	1	BR1020B100S11	LOAD CENTER	RATED 100A, Ø1,120/240V, 10 SPACE, 20 CIRCUIT, 100A MAIN. BREAKERS: (1) 100A/2P, (5) 20A,1P	-
14	2	HUBGFRST20W	GFCI RECEPTACLE	20A, 120V, NEMA 5-20R GFCI DUPLEX	-
15	2	HUB1221W WEATHERPROOF	SINGLE POLE SWITCH	WHITE, INTERIOR MOUNTED, (1) FOR INTERIOR LIGHT, (1) FOR EXHAUST FAN; ENERGIZES FAN WHEN IN "UP" POSITION REGARDLESS OF T-STAT OR TEMP SETTING	-
16	1	VSA4A332ASEMV000000I	FLUORESCENT LIGHT FIXTURE	VAPORPROOF 4', (3)32W LAMPS, 0.8A	-
17	1	1BLH8	12" CORROSION RESISTANT SHUTTER MOUNT EXHAUST FAN	CORROSION RESISTANT, 115V, 60HZ, 1Ø, 1.9A, 1100CFM	-
18	1	4LZ94	THERMOSTAT	WALL MOUNT, 30-110 DEG. CONTROL RANGE; FOR FAN, WITHIN 5' OF FAN	-
19	1	5C211	12" FIBERGLASS GRAVITY INTAKE LOUVER	WITH FELTED LOUVERS, & SCREEN	-
20	2	RH-16	16" FRP RAIN HOOD	FIBERGLASS, FASTENERS WILL BE THREADED INTO MOUNTING HOLES IN THE WALL	X
21	1	PAW1215-SS	FAN FORCED WALL HEATER	SS, 1Ø, 1500 WATTS, 120V , WITH PAWS-SS FRAME & TKIT-2BW DP	-

SHELTER WORKS ASSUMES NO RESPONSIBILITY FOR ACTUAL FOUNDATION DESIGN AND CONSTRUCTION. THE SITE CONTRACTOR IS TO VERIFY THE FINAL DIMENSIONS BASED UPON ACTUAL SITE CONDITIONS AND REQUIREMENTS. CONCRETE SLAB SHALL BE TRUE AND LEVEL TO A TOLERANCE OF NOT MORE THAN 3/16" WHERE THE BUILDING IS TO ATTACH. ALL PAVED OR GRADED SURFACES SURROUNDING THE SHELTER SHALL BE PITCHED TO PROMOTE PROPER DRAINAGE OF PRECIPITATION. SOME ITEMS MAY SHIP LOOSE FOR SHIPPING EFFICIENCY.



Shelter Works  
2616 S. 3rd St.  
St. Louis, MO 63118  
P: (314) 664-9300 / F: (314) 664-9301  
www.shelterworks.com

## FREEDOM SERIES™ SHELTER 25-YEAR LIMITED WARRANTY

1. Subject to the limitations below, **Shelter Works**® warrants to the original purchaser only that the shelter will be free from manufacturing defects in workmanship and will not appreciably deteriorate under conditions of normal use and regular service and maintenance when installed properly, for a period of twenty five (25) years from the original date of purchase.
2. What is covered: The entire surface of the fiberglass shelter is covered under this warranty, including fiberglass awnings and vent hoods.
3. Component parts, which are incorporated into the design of our shelter, are purchased from reputable manufacturers and may carry their own warranties which are independent of the **Shelter Works** warranty. Labor and shipping costs to replace defective parts will be the responsibility of the customer. Those items that are normally consumed in service, such as light bulbs, anchor bolts, gasket material, etc. are not covered by this warranty.
4. If your shelter fails to perform pursuant to product specifications, **Shelter Works**® will, at its sole option, perform repairs to or provide replacement parts for your shelter on site or at our plant facility. In those instances in which **Shelter Works**® determines that only a portion of the shelter manifests a defect, **Shelter Works**® reserves the right to limit any replacement to the portion of the shelter that manifests the defect. If repairs or replacements are determined to be performed at the plant, then the transit costs to and from the plant are the obligation of the customer.
5. The **Shelter Works**® warranty is not transferable, except that the warranty will pass through to the original purchaser from an authorized **Shelter Works** sales representative or dealer, There are certain conditions or applications over which **Shelter Works**® has no control and therefore the warranty does not cover defects or problems as a result of such conditions or applications. What is not covered:  
**A.** Damage caused by: i. improper lifting or installation, use, applications or maintenance; ii. environmental conditions, natural disasters including, without limitation, earthquakes, floods, hail, or lightning, or use that exceeds design standards; iii. misuse, unreasonable use, negligence, accidents, Acts of God, flying or falling objects, collisions with animals or vehicles, abuse, vandalism or any other external forces; iv. mishandling in transit if within customer's control. **B.** Normal weathering, chalking, fading, atmospheric pollutants or mildew buildup, other conditions representative of normal wear and tear. **C.** Equipment supplied or installed by the customer or damage caused by, or arising from customer's installation of such other equipment. **D.** Installation or labor costs.
6. This 25-year Limited Warranty is deemed null and void under the following circumstances: **A.** If the shelter is discarded, destroyed or altered before **Shelter Works**® has performed final inspection and approved installation; **B.** If the shelter is purchased from anyone other than an authorized Shelter Works® sales representative or dealer; **C.** If the **Shelter Works**® serial number is not on the shelter.
7. **Shelter Works** shall have no obligation under this warranty unless the original purchaser establishes that the following conditions have been met. This 25-year limited warranty extends to the original purchaser and is subject to your full compliance with terms of our Installation Instructions, including, without limitation, proper transportation, lift, support and installation methods. A copy of the Installation and Maintenance Instructions are provided to you upon purchase. In addition to proper installation, you must ensure that electrical connections are performed by a qualified, licensed professional electrician familiar with the types of installed equipment and service provided. You must maintain your shelter on a regular basis (minimum of 2 year intervals) to ensure proper sealing. Failure to maintain your shelter in accordance with recommended guidelines may void your warranty.
8. THIS 25-YEAR LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED BY **SHELTER WORKS**®, AND IS IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW OR OTHERWISE, BY **SHELTER WORKS** OR ANY OTHER PARTY, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHETHER OR NOT THE PURPOSE HAS BEEN DISCLOSED AND WHETHER OR NOT THE SHELTER HAS BEEN SPECIFICALLY DESIGNED OR MANUFACTURED FOR YOUR USE OR PURPOSE. No person has been authorized to provide any other warranty or assume any other liability with respect to the shelter except by written statement from an authorized officer of **Shelter Works**®.
9. **Limitation of Liability:** UNDER NO CIRCUMSTANCES SHALL **SHELTER WORKS**® OR ANY OF ITS AUTHORIZED DEALERS OR REPRESENTATIVES BE LIABLE FOR LOSSES OR DAMAGES ARISING FROM DELAY IN PERFORMANCE, OR USE OR INABILITY TO USE THE SHELTER, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), OR FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, OR PUNITIVE DAMAGES ARISING OUT OF THE PURCHASE OR USE OF THE SHELTER OR RESULTING FROM THE BREACH OF THIS LIMITED WARRANTY, OR ANY IMPLIED WARRANTY. IN NO EVENT SHALL THE CUMULATIVE LIABILITY OF **SHELTER WORKS**® AND ITS AUTHORIZED DEALERS OR REPRESENTATIVES EXCEED THE PURCHASE PRICE OF THE SHELTER. The term "consequential damages" shall include, but not be limited to, loss of use and loss or damage to property.
10. This 25-year limited warranty is governed by and construed in accordance with the laws of the State of Missouri, applicable and enforceable in the United States and Canada.

Any and all warranty claims must be submitted in writing through the **Shelter Works**® Service Department, and must be authorized and approved solely by the acting Service Manager. You must be able to provide proof of purchase and original owner information at the time that warranty service is requested, either through prior warranty registration or owner documentation.

**Built for  
Life.**





# FIBERGLASS REINFORCED POLYMER (FRP)

**FRP**

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>AVERAGE</u>
Tensile Strength (psi)	ASTM D638	16,000 psi
Tensile Elongation (%)	ASTM D638	1.9%
Tensile Modulus (psi)	ASTM D638	1,300,000 psi
Flexural Strength (psi)	ASTM D790	33,700 psi
Flexural Modulus (psi)	ASTM D790	1,160,000 psi
Barcol Hardness	ASTM D2583	45
Izod Impact	ASTM D256	
Shear Strength	ASTM D 732	
Traverse/Racking/Comp. Load	ASTM E72-05	
Flexural Properties	ASTM C393-00	

## FIBERGLASS LAMINATE

Burning Characteristics	ASTM E 84 < 150 Flame Spread < 1000 Smoke Density
-------------------------	---

## FOAM CORE

Burning Characteristics	ASTM E 84 < 75 Flame Spread <-450 Smoke Development
-------------------------	---

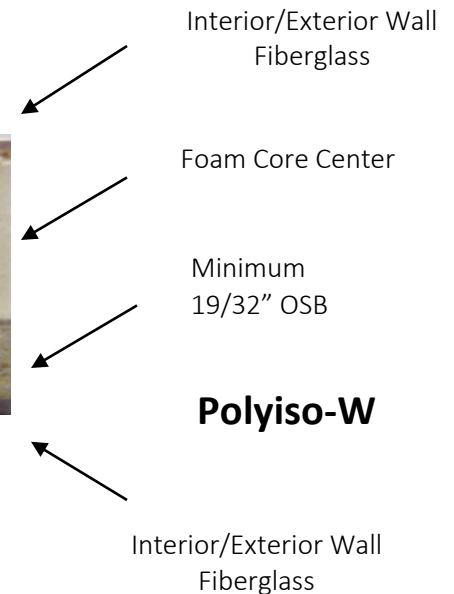
## DOORS

## ROOF DECK

	ASTM E330 ASTM E108 (2011) (Class C) CAN/ ULC S107 (2010) (Class C)
--	---



# FOAM CORE WITH WOOD



- Interior and Exterior Wall:** Fiberglass
- Wood:** Minimum 19/32" OSB
- Foam: Core** Rigid Polyisocyanurate Foam Core
- Foam: Density:** 2.0 PCF
- Foam: Flame Spread (ASTM E84):** <75
- Foam: Smoke Development (ASTM E84):** <450
- Foam: Moisture Vapor Transmission (ASTM E96):** 1.2 Perm at 1-inch
- Foam: Water Absorption (ASTM C209):** <1% by Volume
- Foam: Dimensional Stability (ASTM D2126):** <2% Linear Change
- Foam: Service Temperatures:** -100°F to +250°F
- Foam: Facings** Non-reflective coated glass-mat on both sides

### Foam Thermal Data:

STANDARD FOAM THICKNESS	R-VALUE (As A Finished Composite)
1 ½"	12
2"	15
2 ½"	18
3"	21
3 ½"	24
4"	28

### Compliance with:

- ASTM C1289 Type II, Class 2
- ASTM E84 Flame Spread, less than 75
- ASTM E84 Smoke Development, less than 450
- International Building Code (IBC), Section 2603
- International Residential Code (IRC), Section R316
- ASHRAE 90.1 / ASHRAE 189.1 / IECC
- ASTM E2178 Air Barrier Material – 2) @ 75 Pa
- Water Resistive Barrier ICC-ES ESR-1375
- Miami-Dade County Approved
- Class III Vapor Retarder at 1 inch (> 1.0 perm)
- California Approved Insulation Registry T 1231
- UL2824 resistant to mold growth
- Has achieved GREENGUARD GOLD Certification

Foam Manufactured by: Atlas Roofing Corp.



## FOAM CORE



Exterior Wall Fiberglass

Foam Core

Interior Wall Fiberglass

## POLYISO

EnergyShield CGF (formerly Rboard®) is composed of a closed cell polyisocyanurate (polyiso) foam core, faced with a non-reflective coated glass-mat facer on both sides. The blowing agent used to produce the polyiso foam core does not contain any CFCs, HCFCs or HFCs. EnergyShield CGF has zero Ozone Depletion Potential (ODP) and negligible Global Warming Potential (GWP). EnergyShield CGF combines high R-value, enhanced durability from two coated glass-mat facers, and water resistive attributes in a high performance rigid Wall insulation.

**Foam Density:** 2.0 PCF

**Flame Spread (ASTM E84):** <75

**Smoke Development (ASTM E84):** <450

**Moisture Vapor Transmission (ASTM E96):** 1.2 Perm at 1-inch

**Water Absorption (ASTM C209):** <1% by Volume

**Dimensional Stability (ASTM D2126):** <2% Linear Change

**Service Temperatures:** -100°F to +250°F

### Thermal Data:

STANDARD FOAM THICKNESS	R-VALUE (As A Finished Composite)
1 ½"	12
2"	15
2 ½"	18
3"	21
3 ½"	24
4"	28

### Compliance with:

- ASTM C1289 Type II, Class 2
- ASTM E84 Flame Spread, less than 75
- ASTM E84 Smoke Development, less than 450
- International Building Code (IBC), Section 2603
- International Residential Code (IRC), Section R316
- ASHRAE 90.1 / ASHRAE 189.1 / IECC
- ASTM E2178 Air Barrier Material - <0.04 L/(s\*m2) @75 Pa
- Has Achieved GREENGUARD GOLD Certification

Manufactured by: Atlas Roofing Corp.



## SS U-BOLT



01970375

Rings have twin shanks to prevent twisting.

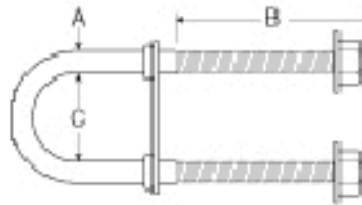
**Material:** Grade 18-8 Stainless Steel

Dimensions- Face Plate: 2 1/2" x 1"

Dimensions: A: 5/16" Diameter

B: 3/8"-16 x 2 7/16"

C: 1 1/16"



4 - U bolts with 1" plate washers are capable of safely lifting 4,040 lbs.

Manufactured by: Fastco

## ConSeal - Bituman Blended Sealant



**CS-102B**

Butyl base gasket for sealing joints between the enclosure and concrete.

### Specifications

- Provides permanently flexible watertight joints.
- Low to high temperature workability: 30°F to 120°F (-1°C to 48°C)
- Rugged service temperature: -30°F to +200°F (-34°C to +93°C)
- Excellent chemical and mechanical adhesion to clean and dry surfaces.
- Greater cohesive and adhesive strengths.
- Sealed Joints will not shrink, harden or oxidize upon aging.
- Controlled flow resistance for application ease.
- No priming normally necessary. When confronted with difficult installation conditions, such as wet concrete or temperatures below 40°F (4°C), priming the concrete will improve the bonding action. Consult Concrete Sealants for the proper primer to meet your application



## 304 STAINLESS STEEL 3-POINT DOOR HARDWARE



Hydraulic Door Closer



Aluminum Rain Drip Edge



Stainless Steel Hinges



3-Point Anti-Entrapment  
Latching System



Interior Release Handle



Stainless Steel Grab Handle



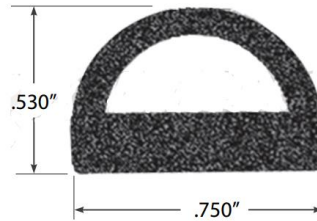
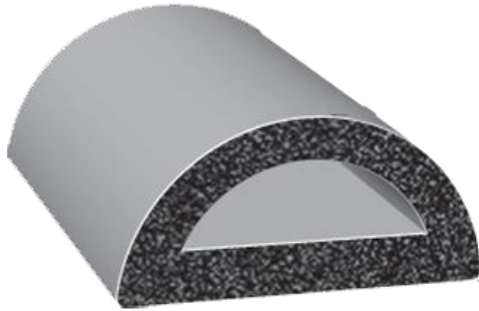
Stainless Steel Pad Lockable  
Exterior Handle

Cam holds door at center while rods hold door at top and bottom. Not available with override feature that would allow exit when door is locked from the outside.

### Component Parts Stainless Steel Unless Otherwise Stated

- \* 2.5" aluminum rain drip edge above door
- \* (1) Hydraulic door closer (Aluminum)
- \* 3-point center case
- \* (2) Rods
- \* (2) Rod guides
- \* Stainless Steel Grab Handle
- \* Interior release handle (Zinc)
- \* Pad-lockable exterior handle

## Door Gasket



X119

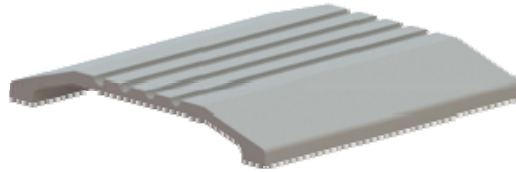
Excellent resistance to water absorption, ozone, sunlight, low temperature and compression set.

### **Specifications:**

- Ozone resistant EDPM Sponge Rubber
- High-tack adhesive backed
- Recommended operating temp. range is  $-40^{\circ}$  to  $+212^{\circ}$  F

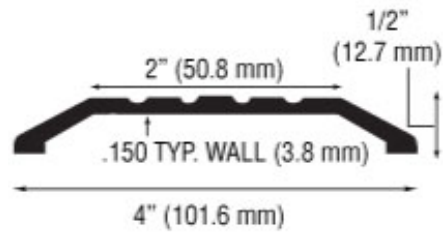


## TRIP-PROOF THRESHOLD



410S

- Finishes: Mill Finish Aluminum
- Width: 8'
- Height: 1/2"
- cULus Listed



Manufactured by: Hager Companies





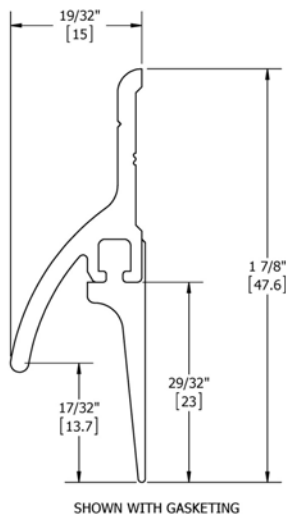
## 3' DOOR BOTTOM SWEEP & SEAL



**770S**

Door sweep to keep rain and slush away from the door bottom. Sweeps have mounting holes to attach to the bottom face of the door using the included mounting screws.

- **Insert Material:** Vinyl
- **Flange Material and Finish:** Mill Finish Aluminum
- **Height:** 1-7/8"
- **Projection:** 19/32"
- **Length:** 3'





## PLEXIGLASS WINDOW



### LEXAN

Plexiglas windows offer clean, simple sightlines. Frame requires no paint and will not warp or yellow. Perfect for doors.

#### Specifications

Clear Plexiglas

- 6-17 times greater impact resistance than ordinary glass
- Breaks into large relatively dull edged pieces
- Excellent resistance to most chemicals

**Fits opening size:** 16 1/4" x 16 1/4"

**Actual window size:** 14 1/8" x 14 1/8"

**Frame:** White Vinyl



## ENCLOSURE



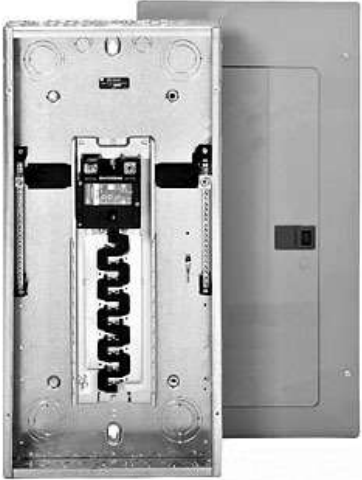
**NA2016P**

**Construction:** Fiberglass Reinforced Polyester  
**Latches:** Stainless Steel Twist with Padlock Hasp  
**Hinge:** Continuous Stainless Steel  
**Gasket:** Closed-Cell Neoprene Cord

Height: 20"  
Width: 16"  
Depth: 8.16"

Manufactured by: E-Box

**Load Center, Main Breaker**  
**NEMA 1, 100A, 1 Phase,**  
**10 Space-20 Circuit**



**BR1020B100S11**

**Specifications**

- NEMA 1
- BR Main Breaker
- Up to 100 Amp
- 1 Phase, 3 Wire
- 120V/240V
- 10 Space-20 Circuit
- 3 Wire
- Bonded Split Neutral
- Front cover Dimensions: 16"H x 12.25" W
- Surface Mount
- Manufacturer: Cutler-Hammer



## GFCI RECEPTACLE - WEATHERPROOF



**GFRST20W**  
**E98GFCN-CAR**

### **GFRST20W**

20 Amp

125 Volt

Self-Test GFCI Receptacle

Face: Flush

Wired: Back and Side

Color: White

UL List: US and Canadian

CSA Certified

NEMA WD-6 Compliant

Manufactured by: Hubbell

### **E98GFCN-CAR**

Gangs: 1

Material: Non-Metallic

Color: Gray

Standards: UL, CSA

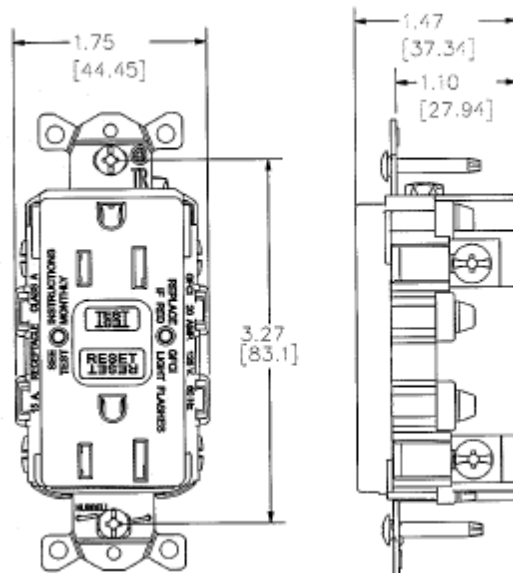
Width: 3.20"

Height: 4.75"

Depth: .78"

Depth when Open: 5.06"

Manufactured by: Taymac





## SINGLE POLE SWITCH WEATHERPROOF



### HUB1221W WEATHERPROOF

Hubbell-Pro™ Heavy Duty Specification Grade  
Side and Back Wired  
Self-Grounding  
Type: Single Pole  
Amp Rating: 20  
Volt Rating: 120/277  
Style: Toggle  
Color: White  
Listed to Standard UL 20, CSA Certified meets NEMA WDI

Manufactured by: Hubbell

11/11/2013

# Vaporproof Strip - 4 Foot

## 1 - 3 Lamps

Vaporproof Fluorescent



Project:	
Catalog#:	
Approved by:	

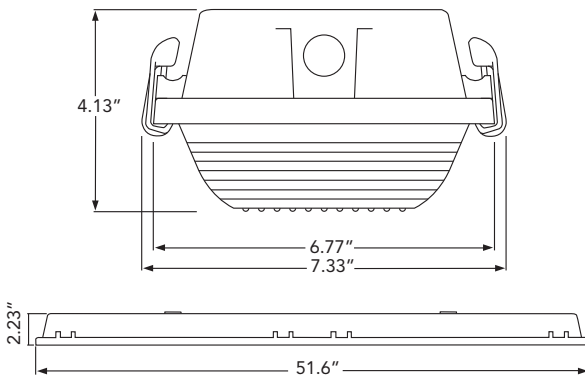
### Applications

- |                    |                     |
|--------------------|---------------------|
| Entrance Lighting  | Beverage Industry   |
| Car Washes         | Food Processing     |
| Public Access      | Construction Sites  |
| Parking Structures | Industrial Lighting |

### Certifications



### Dimensional Drawings



### Description

VSA4 series 4' fluorescent vaporproof strip fixture is gasketed to provide dust and moisture resistant illumination. This fixture operates up to three T8 or T5HO lamps, and as a standard feature, it comes with a Howard ballast.

### Features

#### Housing

- One-piece upper body; no seams to crack, break, or leak
- Reinforced fiberglass body is rugged and corrosion resistant
- 5VA Flammability Rating
- White plastic latches standard
- Eight latches for positive lens retention
- Latches designed to accept screws to make enclosure tamper resistant
  - White Polycarbonate latches accepts #4 - 1/2" screw
  - Stainless steel latches accepts #6 - 3/8" screw (optional)
- White polyethylene molded end plugs for use as knockouts
- High gloss, baked enamel reflective front

#### Gasket

- Closed cell polyester gasket
- Poured gasket seamlessly fills channel for maximum seal
- Gasket has dry skin that will not stick to the mating surface
- High gasket compression recovery ensures a solid seal over life of fixture

#### Diffuser

- Injection molded for maximum strength and precise detail
- Lineal prisms on sides reduce glare
- Continuous formed perimeter provides for positive seal
- Materials:
  - Option A: 100% Virgin Impact Resistant Acrylic  
Long lasting clarity and resistance to weathering
  - Option P: UV Stabilized Polycarbonate  
Maximum impact resistance
  - Option D: Deep Lens, Impact Resistant Clear Acrylic with diffused ends
  - Option F: Deep Lens, Impact Resistant Frosted Acrylic

#### Installation

- Shipped fully wired with Howard ballast
- Easy access to wiring compartment and ballast via removable gear tray
- Gear tray tethered to housing by two lanyards for extra safety
- Knockouts on each end
- Spring-mount, stainless steel bracket allows for surface or chain mount
- Brackets install first, then snap securely onto fixture
- NEC compliant luminaire power disconnect standard

#### Ballast

- Electronic, Inherent Thermal Protection, Class P, Sound rated A
- UL Listed

#### Quality Assurance

- System Tested, Designed, Approved, and Manufactured by Howard Lighting Products in Mendenhall, Mississippi.

Specifications subject to change without notice.

# Vaporproof Strip - 4 Foot

## 1 - 3 Lamps

Project:	
Catalog#:	
Approved by:	

### Ordering Information

Model Family	Lens	No. of Lamps	Lamp Type/Wattage <sup>(1)</sup>	CRI/CCT				Ballast (See Table1)	Input Volts	Factory Installed Options	Cordset Options	T B A	Pack.	
VSA4	A	2	32	A				SE	MV	000	00	0	I	
VSA4	A: Impact resistant acrylic  P: UV stabilized polycarb.  D: Deep Lens, Impact Resistant Clear Acrylic with diffused ends  F: Deep impact resistant frosted acrylic	1 2 3	28: F28T8 32: F32T8  28:F28T5 54: F54T5HO	CRI	CCT	High Lumen	T8	T5	SE: SBF High Eff <sup>(2)</sup> HE: HBF High Eff <sup>(2)</sup> LE: LBF High Eff <sup>(2)</sup>  PS: PRS T5 P8: PRS T8 <sup>(2)</sup>	MV: 120-277v HV: 347-480v (T5HO only) AX: 480-277 <sup>(3)</sup>	000: No FIOs E: Enhanced specular aluminum reflector G: Garage Configuration with Miro-4 reflector <sup>(4)</sup> H: Chain hanging bracket I: Special Wiring Instructions S: Stainless steel latches W: Wide distribution reflector <sup>(5)</sup>	00: Standard Disconnect 01: 6', no plug 02: 10', no plug 03: 6', twist lock 120v 04: 10' twist lock 120v 05: 6' non twist lock 120v 06: 10' non twist lock 120v 07: 6' twist lock 277v 08: 10' twist lock 277v 09: 6' non twist lock 277v 10: 10' non twist lock 277v 11: 16/3, no plug spec len 12: 16/4, no plug spec len 16: 16', non twist lock 277v 17: 18/3, no plug spec len 18: 6', twist lock 480v 19: 10', twist lock 480v 20: 16', twist lock 120v 21: 16', twist lock 277v		I: Single
				A: No Lamps										
				B: 75	3000		X							
				C: 75	3500		X							
				D: 75	4100		X							
				E: 75	5000		X							
				F: 85	3000		X	X						
				G: 85	3500		X	X						
				H: 85	4100		X	X						
				I: 85	5000		X	X						
				J: 85	6500			X						
				K: 85	3000	Yes	X							
				L: 85	3500	Yes	X							
				M: 85	4100	Yes	X							
				N: 85	5000	Yes	X							

(1) Lamp installation available.  
 (2) High Efficiency ballasts are CEE Listed.  
 (3) Step-down autotransformer. Allows hook-up of standard MV ballast to 480v.  
 (4) Garage application reflector works with 3 lamp configuration and deep lens (options D & F) only.  
 (5) Wide distribution reflector available with lens options D & F (frosted acrylic)

**Sample Ordering Number:**  
**VSA4 A 2 32A SE MV 000 00 I**  
 VSA4 Series 4-Foot Vaporproof Strip  
 Impact resistant acrylic lens  
 2-lamps (none installed)  
 F32T8 Standard Ballast Factor High Efficiency Ballast  
 Multi-volt (120-277v)  
 No Factory Installed Options  
 No Cordset  
 Single Packaging

Table1:

SE	Standard Ballast Factor High Efficiency Instant Start T8 Ballast
HE	High Ballast Factor High Efficiency Instant Start T8 Ballast
LE	Low Ballast Factor High Efficiency Instant Start T8 Ballast
PS	Program Rapid Start T5 Ballast
P8	Program Rapid Start High Efficiency T8 Ballast

Specifications subject to change without notice.



11/11/2013

Vaporproof Fluorescent

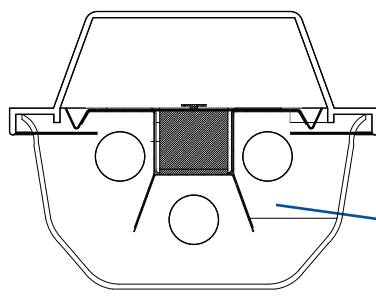
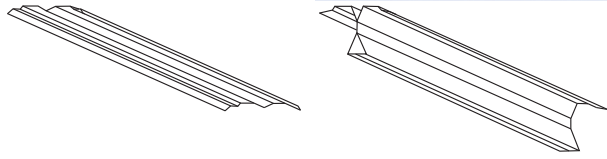
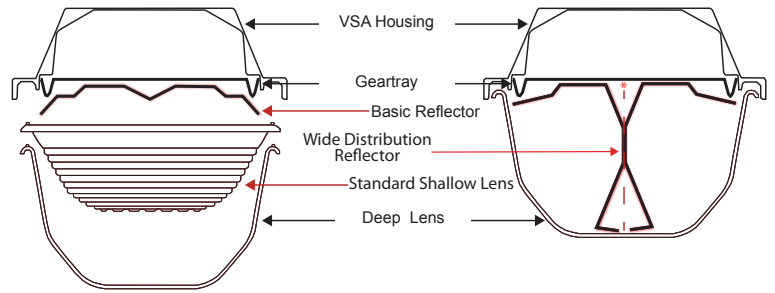
**Options Available**

Project:	
Catalog#:	
Approved by:	

**Basic Reflector**



**Wide Distribution Reflector  
For 2-lamp versions only**



**Deep Lens, Impact Resistant Clear Acrylic with diffused ends**  
Can be used with:  
FIO Option W  
Wide Distribution Reflector  
FIO Option G\*  
Garage Configuration with Miro-4 reflector.

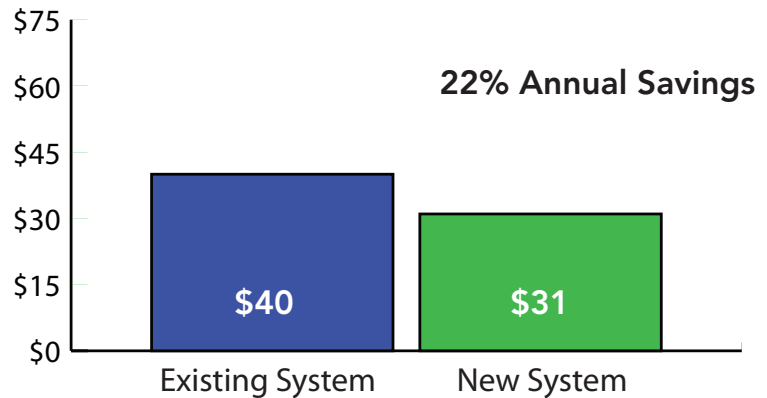
**Frosted Acrylic Lens Option F**  
Can be used with  
Wide Distribution Reflector  
FIO Option W



**VS-CB Chain Bail**  
(2 needed per fixture, order separately)

\* Garage Application reflector works with 3 lamp configuration and Deep Lens options only.

Energy Cost Estimator					
		Existing System		New System	
		M2/40RS-277		VSA4A232ASE Standard Ballast Factor Fluorescent Strip	
Hours burned per year	4368	Number of Fixtures	1	Number of Fixtures	1
Cost per kWh\$	0.12	Watts per Fixture (existing system)	77	Watts per Fixture (new system)	59
Energy Cost Estimation		Energy used per year (existing system)	\$40	Energy used per year (new system)	\$31
		Energy saving per year (per fixture)			<b>\$9.43</b>



Howard Industries provides this tool to examine the potential impact of lighting decisions. This tool provides an ESTIMATE only. The analysis of this tool does not warrant or guarantee the actual costs or savings that will be realized as the analysis suggested. You can find the full version of this cost saving tool at the Howard Lighting Website—www.howardlightingproducts.com. Click "Cost of Ownership Calculator".  
Copyright (c) 2008 Howard Industries All Rights Reserved.

Specifications subject to change without notice.

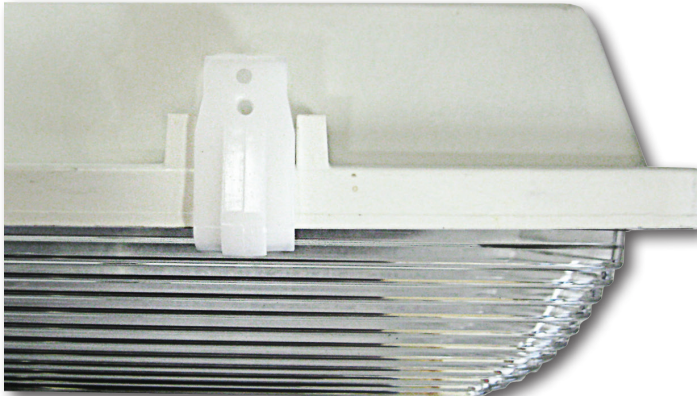
11/11/2013

Vaporproof Fluorescent

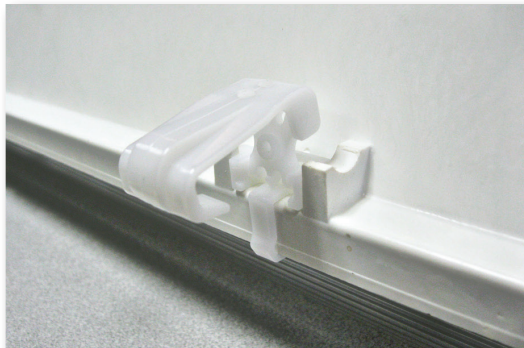
**Hardware - Latches**

Project:	
Catalog#:	
Approved by:	

**White Plastic**



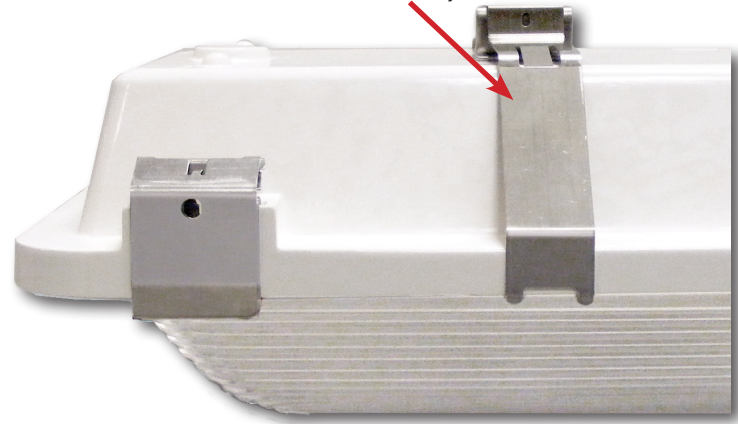
White Plastic Latch locks open during maintenance



**Stainless Steel**

- withstands corrosive environments

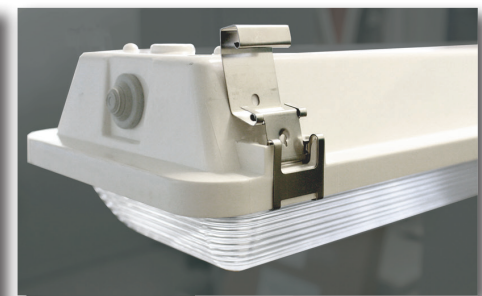
Stainless Steel Mounting Brackets come standard with every fixture



Captive Keeper secures latch to housing preventing accidental loss of latch



Keeper



**Latch Features:**

Latches can be made Tamper Resistant with the addition of locking screws\*

- White Plastic #4-32 x 1/2" Screws
- Stainless Steel #6-32 x 3/8" Screws

\*\*Screws not included with the fixture

Stainless Steel Mounting Brackets (Model# VSAX-MB-2L-2)

Come standard with every fixture

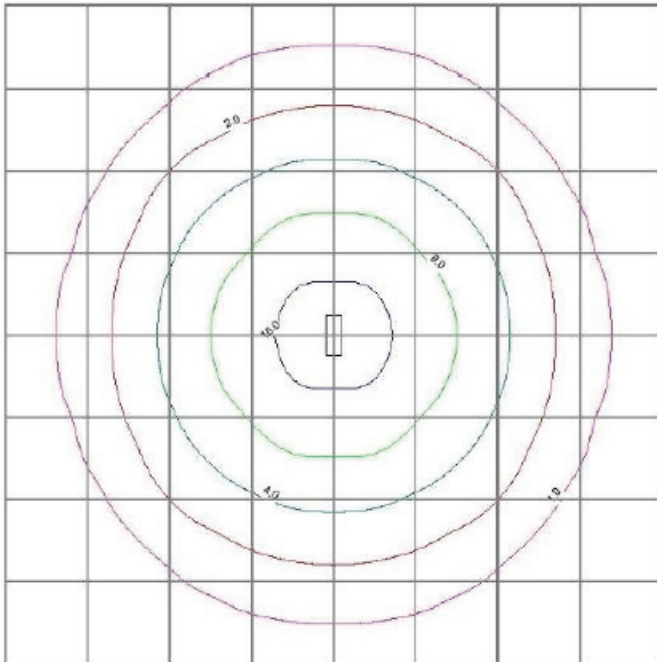


Specifications subject to change without notice.

11/11/2013

Vaporproof Fluorescent

**Iso Footcandle Plot**



16' Mounting Height  
Ballast: EPH2/32IS/MV/MC/HE (High Ballast Factor)  
Lamps: Two Howard F32T8/841/ECO/IC

Project:	
Catalog#:	
Approved by:	

**Operating Temperatures**

Number of Lamps	Lamp Type	Ballast Factor	Acceptable Temperature Range C (min-max)	Acceptable Temperature Range F (min-max)
2	T5	Standard	-30 to 35	-20 to 95
3	T5	Standard	-30 to 25	-20 to 77
2	T8	High	-17 to 35	0 to 95
3	T8	High	-17 to 25	0 to 77
2	T8	Standard	-17 to 45	0 to 115
3	T8	Standard	-17 to 30	0 to 85

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fix
0-30	4080	22	28
0-40	6613	36	46
0-60	11426	61	79
0-90	14472	78	100.00
0-180	14472	78	100.00

**Coefficients of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance 0.20															
RC	80				70				50			30			10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	0
0	93	93	91	91	91	91	87	87	87	83	83	83	80	80	80
1	78	75	83	79	76	73	76	73	71	73	71	69	66	66	66
2	65	61	75	69	64	60	66	62	59	64	60	57	55	55	55
3	56	51	68	61	55	50	59	53	49	56	52	48	46	46	46
4	48	43	63	54	48	43	52	47	42	50	45	42	39	39	39
5	42	37	58	48	42	37	47	41	37	45	40	36	34	34	34
6	37	32	53	44	37	32	42	36	32	41	36	32	30	30	30
7	34	29	50	40	33	29	38	33	28	37	32	28	26	26	26
8	30	26	46	36	30	26	35	30	25	34	29	25	24	24	24
9	27	23	43	33	27	23	32	27	23	32	26	23	21	21	21
10	25	21	41	31	25	21	30	25	21	29	24	21	19	19	19

Specifications subject to change without notice.

# 12" Corrosion-Resistant Shutter Fan



**1BLH8**

This fan is constructed with fiberglass shutter and frame and stainless steel hardware for superior resistance to corrosive gasses and vapors.

## Specifications

• Item	Exhaust Fan
• Type	Corrosion Resistant Shutter Mount
• Propeller Dia. (In.)	12
• CFM @ 0.000-In. SP	1100
• CFM @ 0.125-In. SP	799
• CFM @ 0.250-In. SP	636
• CFM @ 0.375-In. SP	451
• Sones @ 0.0-In. SP @ 5 Ft.	13.4
• Max. Ambient Temp. (F)	104
• Voltage	115
• Hz	60
• Phase	1
• Full Load Amps	1.9
• Motor HP	1/8
• Motor RPM	1625
• Height (In.)	15
• Width (In.)	15
• Sq. Opening Required (In.)	13
• Frame Material	Fiberglass
• Guard Material	Steel
• Wire Guard Finish	Epoxy Coated
• Propeller Material	Fiberglass Reinforced Polypropylene
• Number of Blades	4
• Agency Compliance	UL Listed for US and Canada

# Line Voltage Thermostat



**4LZ94**

## Specifications

• Item	Line Voltage Thermostat
• Type	Heating/Cooling
• Switch Type	SPDT
• Switch Action	Open / Close on rise
• Number of Switches	1
• Control Range (F)	30 to 110
• Differential (Deg. F)	+/-3 to 12 Adj.
• Height (In.)	7
• Width (In.)	3-1/4
• Depth (In.)	3-1/2
• Sensor Type	Coil Bulb Hydraulic
• Characteristics	Agricultural Temperature Control, Tolerate Continuous Spraying with Water, High Humidity and Airborne Contaminants, Resistant To Corrosive Conditions, Ventilation Control
• For Use With	Agricultural, Commercial and Industrial Applications
• Color	Grey
• Application	Heating or Cooling
• Display	Analog
• Voltage Range	120 to 240 VAC
• Inductive Amps @ 120V	16
• Inductive Amps @ 240V	8
• Full Load Amps @ 120V	16
• Full Load Amps @ 240VAC	8
• Contact Rating Resistive @ 120V (A)	22
• Contact Rating Resistive @ 240V (A)	22
• Agency Compliance	UL, CSA, NEC 547

## 12" FRP Gravity Louver



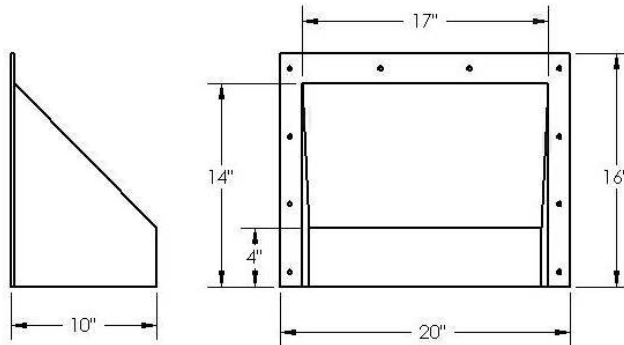
**5C211**

Sturdy shutters for direct or belt-driven exhaust fans. Blades open when fan comes on and close when air flow stops. For use in areas where corrosion is a known problem such as chemical plants and anywhere a rugged, non corrosive shutter is required. Unit features heavy-duty fiberglass frame and blades. Blades have stainless steel pins and bearings at pivot points.

### Specifications

• Item	Exhaust Shutter
• Type	Gravity Operated, Single Panel
• Fits Fan Dia. (In.)	12
• Overall Square (In.)	15
• Opening Required (In.)	12-1/2 x 12-1/2
• Frame Depth (In.)	3
• Open Depth (In.)	6-1/4
• Flange Width (In.)	1-1/2
• Mounting Hole Size (In.)	9/32 x 1/2
• Free Area (Square-Ft.)	0.786
• Max. Velocity (FPM)	2500
• Mounting Position	Vertical
• Blade Material	Beige Fiberglass
• Construction Material	Fiberglass Frame and Stainless Steel Tie Rod
• For Use With	Vertical Mounted Exhaust Fans
• Insect Screen	
• Rain Hood	

## 16" FRP Rain Hood



**RH-16**

Shelter Works will provide them fully installed. If rain hoods have to be removed for shipping we will pre-install the units and then remove them and ship them inside the shelter complete with a tube of color-matched silicone caulking. The fasteners will be threaded into the mounting holes in the wall.

### Specifications

- Material: Fiberglass
- Length: 20"
- Height: 16"
- Width: 10"



### Model Code:

PAW	12	15	-SS	-ST
A	B	C	D	E

**A: Series**  
**B: Volts:** 12=120V 20=208V  
 24=240V 27=277V  
**C: Watts (250 - 2250)**  
**D: Stainless Steel**  
**E: Slope Top**



- 304 Stainless Steel Enclosure
- Pic-A-Watt® Element
- Multiple wattages
- Flange-mount wall can
- Manual reset high limit
- C-Frame Motor
- Squirrel Cage Blower
- Patented Smart Limit Protection®
- Whisper quiet
- Slope top
- Approved for inspected vessels
- 3-year limited warranty



## The Stainless Steel PAW Series

**The heater of choice in the boating industry.** This is the only electric heater specifically designed to be used in marine applications. It has all the great features of the Pic-A-Watt® heater (including a stainless steel grill, wall can and interior) enabling it to stand up to the corrosive environment on saltwater boats. The wall can is flanged for recess mounting into a wood bulkhead. Consult factory or review catalog for other models, including a high-efficiency motor and a Dial-A-Watt™ switch allowing you to change the wattage with a grill-mounted selector switch.

### Ordering Information

\*Add suffix -ST for Slope Top Surface Can (required when surface-mounting on inspected vessels)

MODEL	UPC	VOLTS	WATTS	AMPS	SHIP WEIGHT lbs
PAW1215-SS	16315	120V	250•500•750•1000•1250•1500	2.1-12.5	9.5
PAW2022-SS	00516	208V	500•750•1000•1250•1500•1750•2250	2.4-10.8	9.5
PAW2422-SS	16313	240V	500•750•1000•1250•1500•1750•2250	2.1-9.4	9.5
PAW2720-SS	00518	277V	1000•2000	3.6-7.2	9.5

## Engineering Specifications

*Contractor shall supply and install PAW Stainless Steel Series in-wall mounted forced-air electric heaters manufactured by King Electrical Mfg. Company. Heaters shall be of the wattage and voltage as indicated on the plans.*

**Construction:** The heater wall can and heat box assembly will be of 20 gauge 304 stainless steel and have a depth gauge label on top of the wall can. Flanges on each side of the wall can will aid in mounting to wooden bulkheads. All fasteners are stainless steel or nickel plated. If surface mounting on a inspected vessel an angled top can will be used.

**Ratings:** Heaters shall be available in wattages of 250 to 2,250 at 120, 208, 240, or 277 Volts.

**Blower and Motor:** A tangential cylindrical blower, delivering 65 CFM, shall be driven by a shaded pole, permanently lubricated, C-frame type motor with impedance protection and sealed bearings. Motors shall be the same voltage as the heater.

**Elements:** Element assemblies shall consist of three steel sheathed heating tubes in a furnace-brazed, plate-finned, block design. Each sheathed tube shall contain coiled Ni-Chrome wire embedded in an insulator of Magnesium Oxide. The element assembly shall provide up to seven (7) possible wattage configurations available for selection during field installation. The use of external resistors, diodes, or other weak links to obtain multiple wattages will not be accepted.

**Thermal Overload:** Heaters shall be equipped with King's patented thermal overload Smart Limit Protection®, which disconnects elements and motor in the event normal operating temperatures are exceeded. If thermal overload trips due to abnormal operating temperatures, thermal overload shall remain open until manually reset by turning the heater off for fifteen minutes. Automatic reset of thermal overloads, which allow the element to continue to cycle under abnormal conditions, will not be accepted.

**Wall Can:** The wall can shall be 20 gauge stainless steel and shall contain a minimum of three (3) knockouts through which power leads are brought. The wall can shall have a depth gauge or flange and a factory installed Copper ground-wire. Minimum 4" clearance to floors and 6" to sidewalls. Zero clearance to combustibles in wall.

**Grill:** The grill shall be a louvered, one-piece design with square corners on all four sides. The grill shall be clear epoxy powder-coated.

**Approval:** Heaters shall be listed and approved by Underwriters Laboratories or equal.



# Stainless Steel PAW Series



**Pic-A-Watt**  
Steel Fin Element

## Options

### ADD SUFFIX

-ST

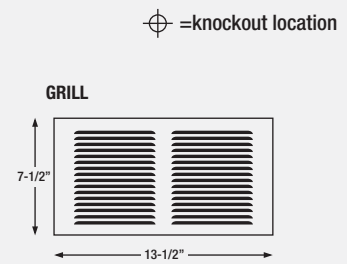
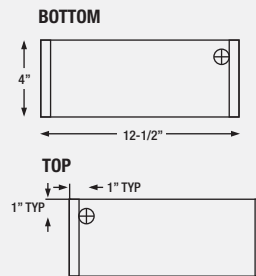
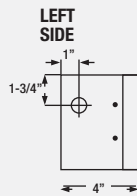
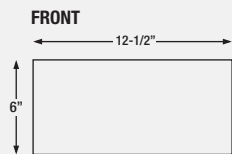
### DESCRIPTION

Adds slope top wall can. Required on inspected vessels.

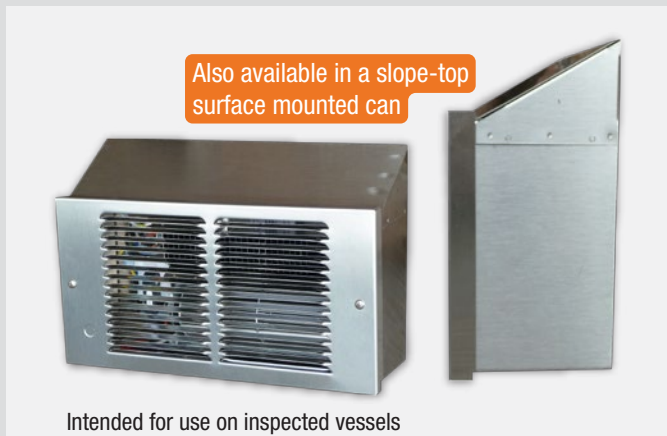
## Accessories

MODEL	UPC	DESCRIPTION	SHIP WEIGHT lbs
PAWF-SS	16318	Bulkhead Can with Flange - Stainless Steel. Inspected vessel.	2
PAWS-SS	16317	Surface Can - Stainless Steel	2
PAWG-SS	16330	Marine Grille - Stainless Steel	2
PT-1-SS	16309	Single Pole Thermostat Kit	0.5
PT-2-SS	16311	Double Pole Thermostat Kit	0.5

## Dimensional Data



⊕ = knockout location



Also available in a slope-top surface mounted can

Intended for use on inspected vessels

### MINIMUM CLEARANCE

Zero clearance to insulation 4" above floor 6" from adjacent wall