F & W Construction Company, Inc.

PROJECT: Kelsey Dock Interpretive Center

CONTRACT: 20321

F&W JOB#: 20318 **COST CODE:** 3000

DATE: August 20, 2018

RFI	12	RFP	4A

DESCRIPTION

Install (16) each 3200W Electric Heaters in soffit per RFI 12 and ECI's email narrative dated 7/20/18, and as shown in redlined sheet A9.1. Please note the following: 1. We have included rough openings only in soffit framing, no GWB "tent" is included. Back of heater to be exposed above soffit finish. 2. Attached qualifications concerning available power and circuits by Puffin Electric. 3. All engineering to be provided by ECI.

CONTRACTOR'S COSTS

SUBCONTRACTOR TOTAL (See Sheet 4 of 4)			38,560.00	
SUBCONTRACTOR MARKUP	@ 5 %	X 0.05	1,928.00	
SUBCONTRACTOR TOTAL			40,488.00	40,488.00
LABOR TOTAL (See Sheet 2 of 4)			11,231.64	
MATERIALS / MISC TOTAL (See Sheet 3 of 4)			2,384.00	
EQUIPMENT TOTAL (See Sheet 4 of 4)			600.00	
SUBTOTAL			14,215.64	
F & W FEE	@ 10%	X 0.10	1,422.00	
F &W TOTAL			15,637.64	15,637.64
F & W / SUBCONTRACTOR TOTALS				56,125.64
BOND / INSURANCE	@ 0%	X 0.00		0.00
			TOTAL PROPOSAL	56,125.64

F & W Construction Company, Inc.

PROJECT: Kelsey Dock Interpretive Center

CONTRACT: 20321

F&W JOB#: 20318 **COST CODE:** 3000

Direct Labor Breakdown

Trade	Rate
Carpenter Gen Frmn	90.69
Carpenter Non-Work Frmn	
Carpenter Work Frmn	
Carpenter Journeyman	77.61

Trade	QTY	MH	MH Total	Rate	Total	Description
Carpenter Gen Frmn	1	28.0	28.0	90.69	2,539.32	Frame R.O's
Carpenter Journeyman	1	112.0	112.0	77.61	8,692.32	Frame R.O's
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
			0.0		0.00	
Total			140.0		11,231.64	

F & W Construction Company, Inc.

PROJECT: Kelsey Dock Interpretive Center

CONTRACT: 20321

F&W JOB#: 20318 **COST CODE:** 3000

Material Costs

#	Description	QTY	*UOM	Unit Price	Cost
1	358 T 200 - 54 Track	320	LF	2.20	704.00
2					0.00
3					0.00
4					0.00
5					0.00
6					0.00
7					0.00
8					0.00
9					0.00
10					0.00
	Total Material Costs				704.00

Miscellaneous Costs

#	Description	QTY	*UOM	Unit Price	Cost
1	Camp Days	14		120.00	1,680.00
2					0.00
3					0.00
4					0.00
5					0.00
6					0.00
7					0.00
8					0.00
9					0.00
10					0.00
	Total Miscellaneous Costs				1,680.00

Total Material + Miscellaneouss Costs 2,384.00

*UOM is Unit of Measurement

F & W Construction Company, Inc.

PROJECT: Kelsey Dock Interpretive Center

CONTRACT: 20321

F&W JOB#: 20318 **COST CODE:** 3000

Equipment Breakdown

#	Description	Unit	Rate	Total
1	Manlift - weekly rate	2.0	300.00	600.00
2				0.00
3				0.00
4				0.00
5				0.00
6				0.00
7				0.00
8				0.00
	Total Equipment Costs			600.00

Subcontractor

#	Subcontractor	Total
1	Puffin (Attached)	38,560.00
2		
3		
4		
5		
6		
7		
8		
9		
10		
	Total Subcontractor Costs	38,560.00

PUFFIN ELECTRIC INC.

PROJECT:	**Kelsey Dock interperative center**			
SUBJECT:	**Canopy ceiling Heat strip Design 1**			
8/15/2018				
	Cost/Unit	**Quantity**	**Item cost**	**Labor Hours**
Install 16 ceiling mounted recessed radiant heaters				
16 - 240v , 3200w Heat strip (flush mounted heaters)	$ 593.30	16	$ 9,492.80	
Flush mounting kit	$ 323.00	16	$ 5,168.00	
3/4"Conduit with fittings and assessories	$ 80.00	7	$ 560.00	
Wire	$ 130.00	7	$ 910.00	
Camp Man Days: 2 man crew, 1 day	$ 150.00	10	$ 1,500.00	
Labor (2 Men, 10 day)				95
Truck & Work Trailer: Days		10		
16 ea Circuit relay with 4 switches, 2 remote control	$ 3,520.00	1	$ 3,520.00	
16-240v -20 amp breakers	$ 79.12	16	$ 1,265.92	
freight		1	$ 400.00	
Item cost Without Markup			$ 22,816.72	
12% Overhead			$ 2,738.01	
Cost Plus Overhead			$ 25,554.73	
10% Profit			$ 2,555.47	
Total Items Cost with OH & Profit			$ 28,110.20	
Labor Hours total				95
Labor Flat Rate				$ 110
Labor Cost				$ 10,450
Material:	$ 28,110			
Labor:	$ 10,450			
Total Cost:	$ 38,560			

From:	David Popiel
To:	Nathan Duval (nduval@ci.valdez.ak.us); Robby Capps
Cc:	Brian Meissner; Saigen Harris; "Mike Felch"
Subject:	Kelsey Dock - Radiant heating in ceiling
Date:	Friday, July 20, 2018 10:57:56 AM
Attachments:	image001.png Basis of Design 2 - InfratechHeatersUSA Cutsheet.pdf 2018_0716 - Ceiling Heaters Draft Layout.pdf Basis of Design 2 - Infratech Flush Mount.pdf Basis of Deisgn 1 - HEATSTRIP-USA-RECESS-KIT-MANUAL-Rev-C.pdf

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Good morning Nate, Robbie,

Recently, Nate and other members of the Owner team had discussions regarding adding radiant heating in the ceiling at the Interpretive Center. Nate requested that the design team look into the feasibility of adding the heaters. ECI and PDC looked into it and we determined that heating could be added to the ceiling with the current electrical service. We picked a basis of design product, located architectural detailing that fits with our project, and generated a basic layout. After discussing our findings with the Nate, we would like to proceed with the addition of the heaters as a design/build effort between F&W (and Puffin) and the design team.
To that end, a couple things follow from this, see notes below

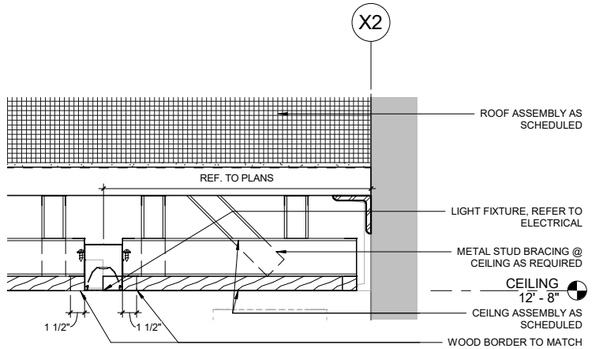
- **All:** This will require an RFP, I believe that we have done several so far on the project, I believe that Mike and Saigen have handled this previously.
- **Robbie/Saigen:** This is a late add to the project so please review and keep us in the loop of the feasibility and impact of the effort.
- **Robbie/Saigen:** We are in the process of compiling the information we gathered for the addition of the heaters which I summarized above. I have attached a preliminary draft of that information to aid in the discussion of this. We will have a formal version over to you early next week. Can you review internally and ask Puffin what additional information they would need to go ahead with the design/build effort?

The intent behind this email is to get this moving prior to the release of formalized information so pardon the piece meal nature of this. I am out of the office today but am available on my cell (303.518.402) and over email. Give me a call or email with questions.

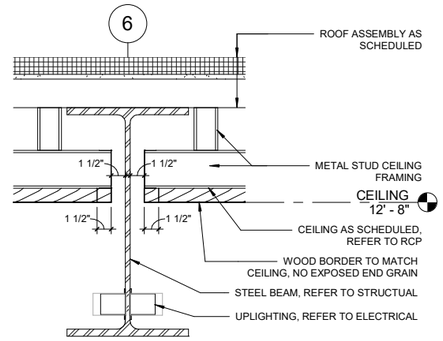
Thanks,

ECI
David Popiel AIA, LEED AP

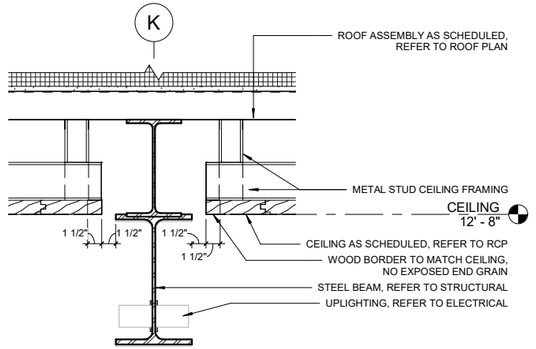
3909 Arctic Boulevard, Suite 103
Anchorage, Alaska 99503
(907) 565-5012
www.ecialaska.com



9 SECTION DETAIL - FLUSH LIGHTING @ CEILING, TYP.
1 1/2" = 1'-0"



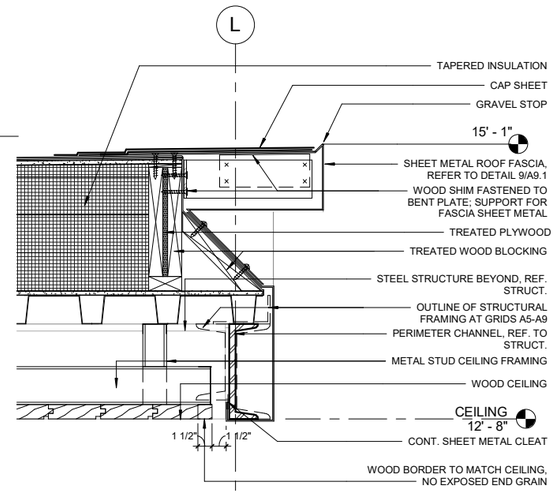
6 SECTION DETAIL AT E-W ROOF BEAM
1 1/2" = 1'-0"



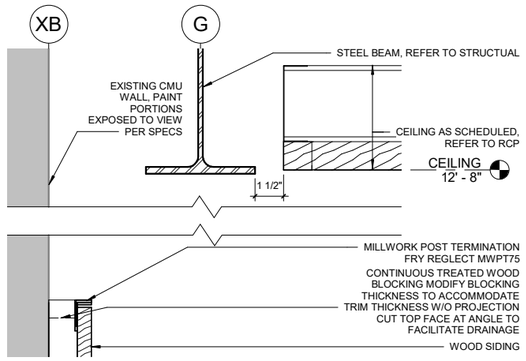
4 SECTION DETAIL - BEAM AT GL I
1 1/2" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

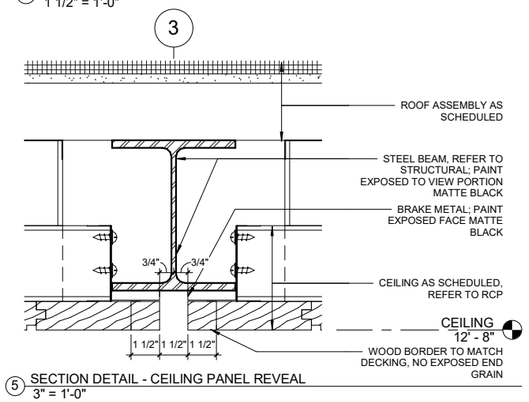
1. DIMENSIONS TO LIGHT FIXTURES ARE FROM GRIDLINE TO CENTERLINE OF FIXTURE UNLESS NOTED OTHERWISE.
2. REFER TO ELECTRICAL FOR FIXTURE LENGTHS
3. LIGHT FIXTURES TO BE CENTERED ON CEILING PANEL UNLESS OTHERWISE NOTED
4. CEILING REVEALS/CHANNEL GROOVE TO ALIGN ACROSS WIDTH N/S OF CEILING, REFER TO DRAWINGS FOR REVEAL LAYOUT



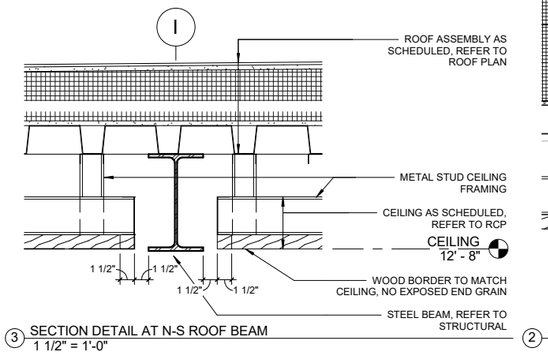
2 SECTION DETAIL - ROOF EDGE PROFILE, TYP.
1 1/2" = 1'-0"



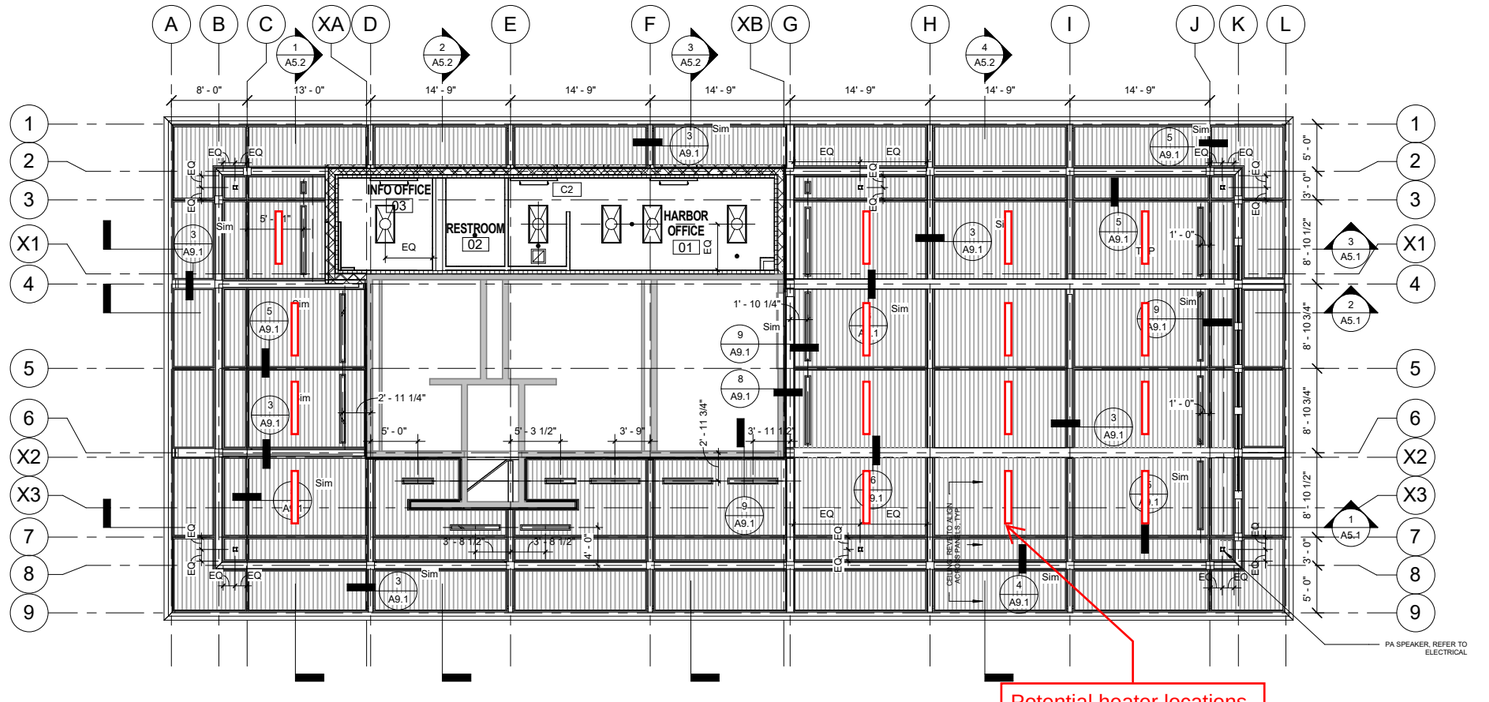
8 SECTION DETAIL - ROOF CANOPY TO EXTERIOR WALL AT G
3" = 1'-0"



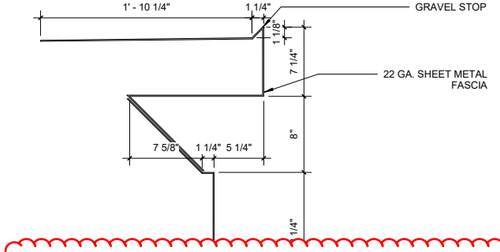
5 SECTION DETAIL - CEILING PANEL REVEAL
3" = 1'-0"



3 SECTION DETAIL AT N-S ROOF BEAM
1 1/2" = 1'-0"



1 REFLECTED CEILING PLAN
1/8" = 1'-0"



On the 480V main panel we can install 16 of the 4000W heaters, or 12 of the 6000W heaters maximum on the existing power distribution system. On the 240V panel C we are limited to 10kW of additional load. Probably not enough capacity to make a difference in the heating/comfort in the space.
The manufacturers literature is conflicting on the available voltages for the electric heaters. The website lists 480V options but the cutsheets only go up to 240V. We have a call into the rep to confirm 480V is possible. Worst case back up plan would be that the 480V panel supply a transformer which would provide the 240V to the heaters.

ECI ARCHITECTURE DESIGN STRATEGY
3909 ARCTIC BOULEVARD, SUITE 103
ANCHORAGE, ALASKA 99503 907.561.5543

PROJECT NO.17-0009

CITY OF VALDEZ
KELSEY DOCK INTERPRETIVE CENTER

CONSTRUCTION DOCUMENTS

Kelsey Dock
Possible ceiling heater location
7/11/2018

REFLECTED CEILING PLAN

AUTHOR: DPP CHECKED:
REVISION:
ISSUE DATE: 03.14.2018
OWNER PROJECT NO: -

A9.1

FULL SIZE PRINTED ON 22 x 34

BASIS OF DESIGN1 - PREFERRED

RECESS KIT

THHAC-009
THHAC-011
THHAC-012

INSTRUCTION MANUAL

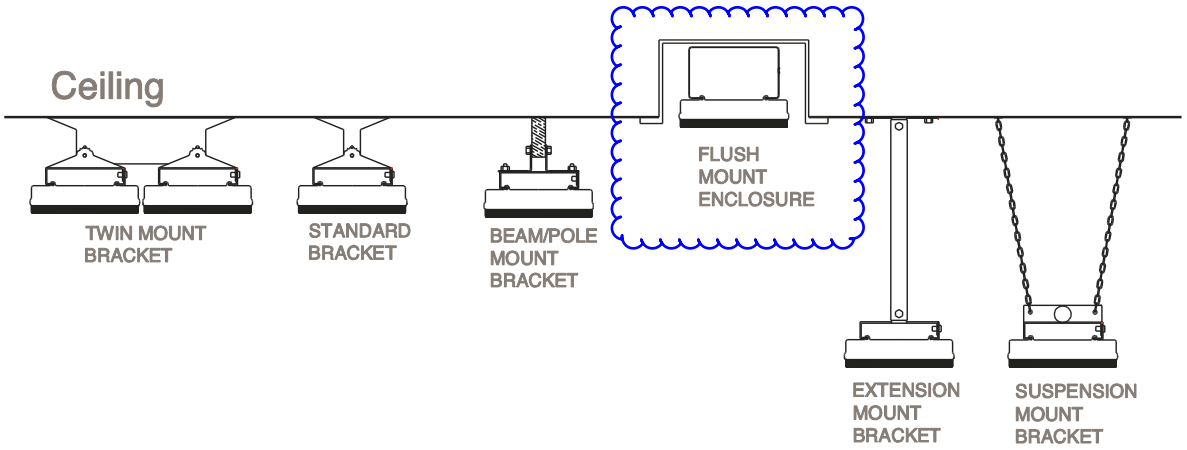
HEATSTRIP
USA

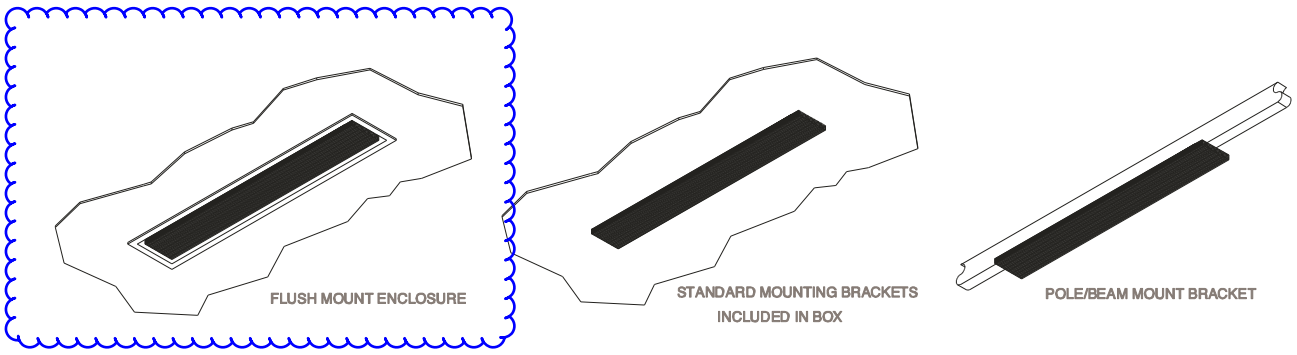
MOUNTING OPTIONS

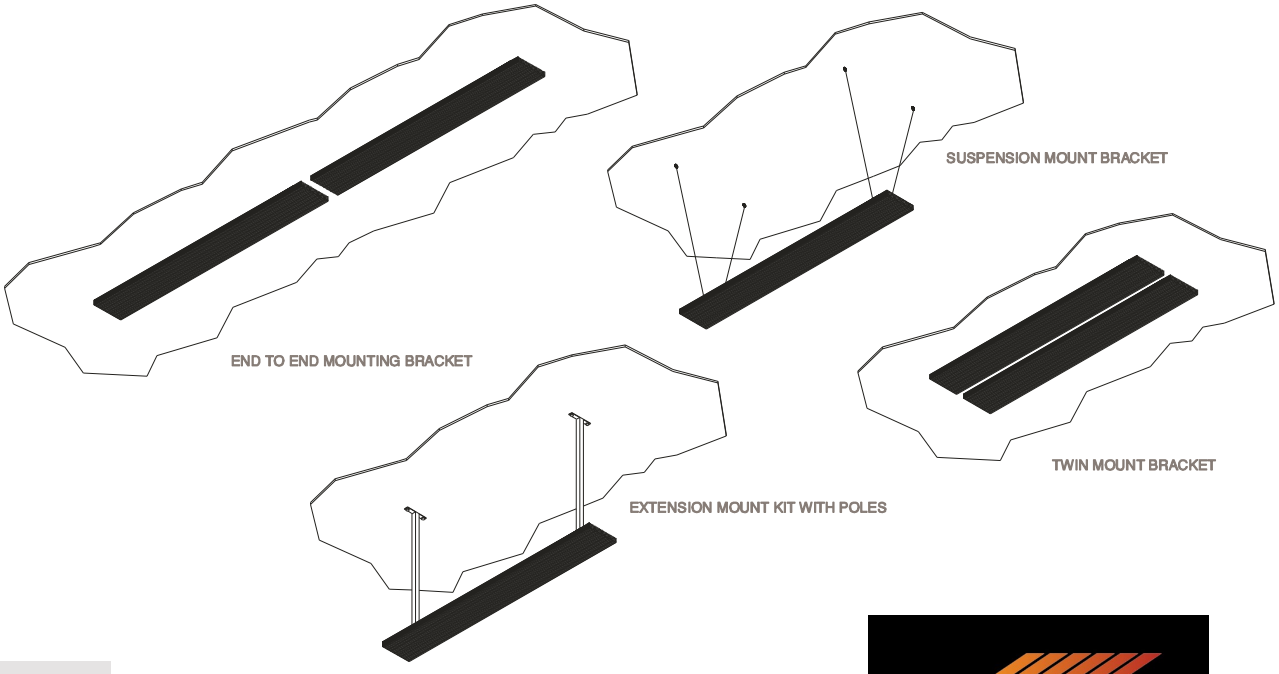
BASIS OF DESIGN1 - PREFERRED

The installation of HEATSTRIP® Classic is simple and easy with the standard mounting brackets other more challenging locations there are range of mounting options available - refer to below diagrams.

The HEATSTRIP® Classic can be mounted directly to the ceiling, angled downwards on a wall, fitted flush with the ceiling; suspended on chains or poles; attached to beams or poles; mounted end-to-end, or 2 units together. Refer to the following pages for more detailed information on each mounting option.







HEATSTRIP USA

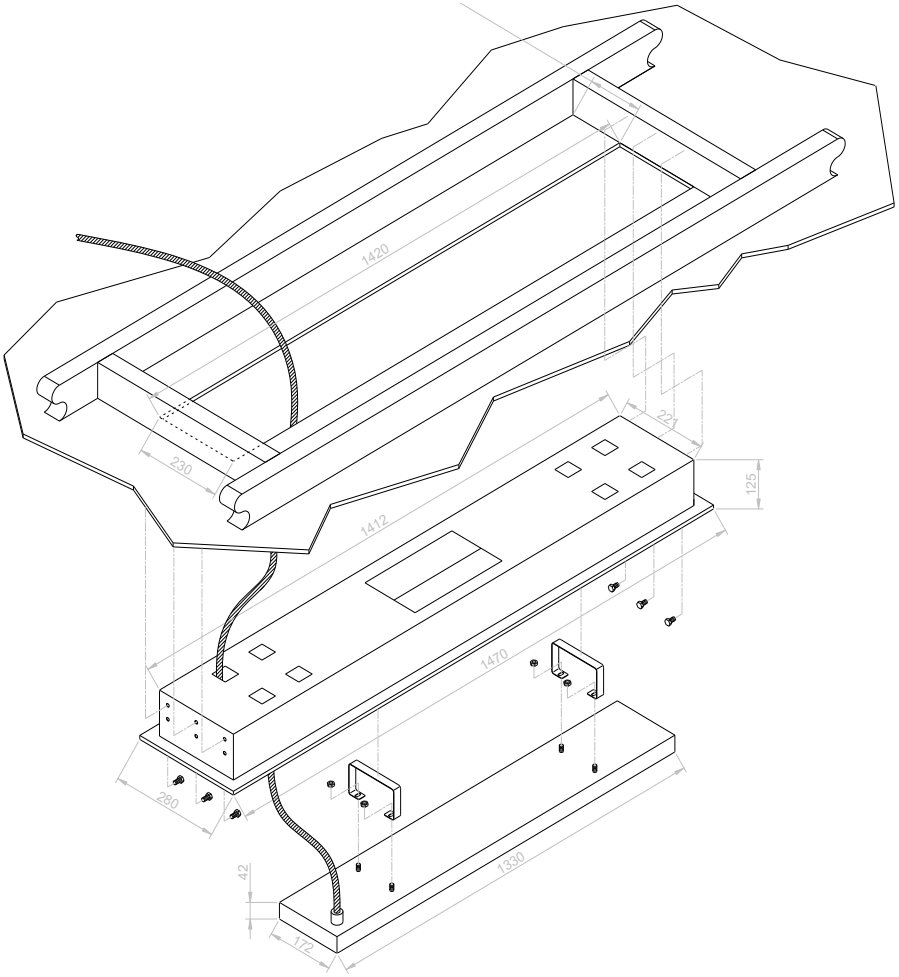
DESCRIPTION

BASIS OF DESIGN1 - PREFERRED

The Flush Mount Enclosure is an ideal way to neatly install the HEATSTRIP® into a ceiling. They for all HEATSTRIP® Classic models, and are supplied as a one-piece unit for mounting of heaters. Flush mounting can be used with plaster or wood lined ceiling materials.

An ideal mounting height is 90” - 105” (2.5m-2.7m), with a maximum ceiling height of 117” (3.0m) in an outdoor enclosed environment. Maximum mounting heights should be strictly followed, otherwise the performance of the units may be reduced.

The facia of the enclosure is manufactured from 316 Stainless Steel and the rear casing is black zinc coated steel.
Please refer to the Installation Manual for more detailed installation information.

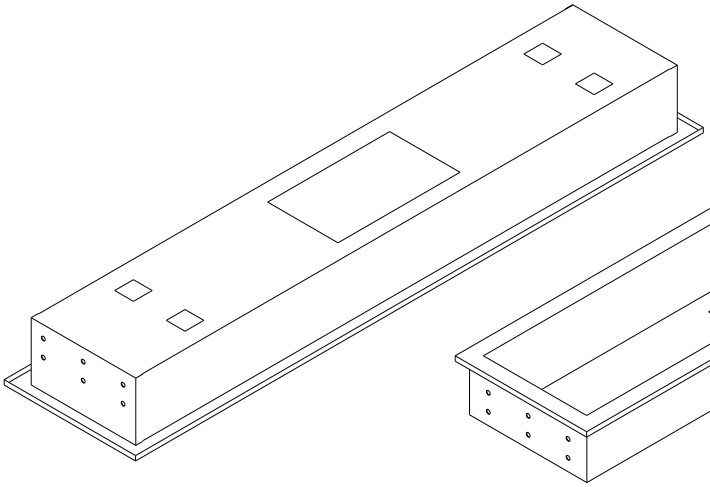


SUITABLE FOR MODELS	PART No	HOLE CUTOUT DIMENSIONS (inches)	OVERALL DIMENSIONS (inches)	WEIGHT (lbs)
THH1500A	THHAC-009	38.5” x 9” (980 x 230mm)	40.3” x 11” x 4.9” 1030 x 280 x 125	12 (5.5kg)
THH2400A	THHAC-011	55.5” x 9” (1420 x 230mm)	57.5” x 11” x 4.9” (1470 x 280 x 125mm)	18 (8kg)
THH3200A	THHAC-012	72.5” x 9” (1830 x 230mm)	73.6” x 11” x 4.9” (1880 x 280 x 125mm)	22 (10kg)

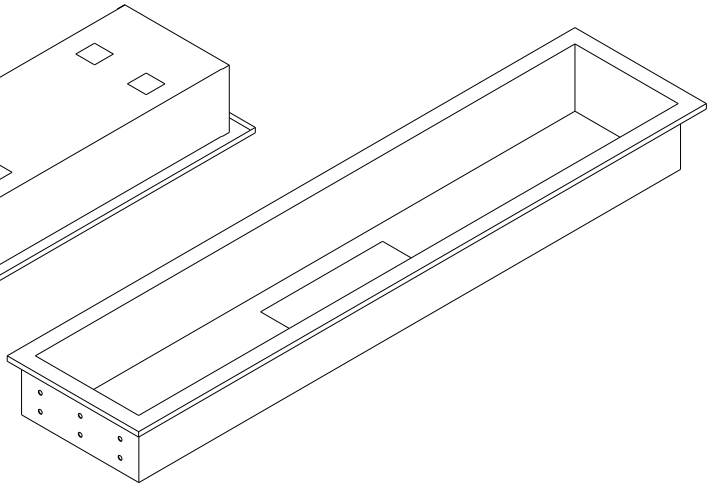
FME DIMENSIONS

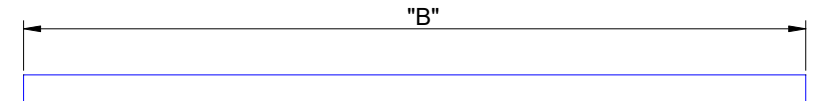
BASIS OF DESIGN1 - PREFERRED

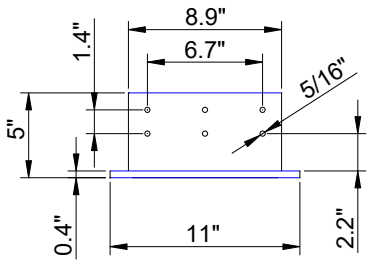
VIEW FROM TOP

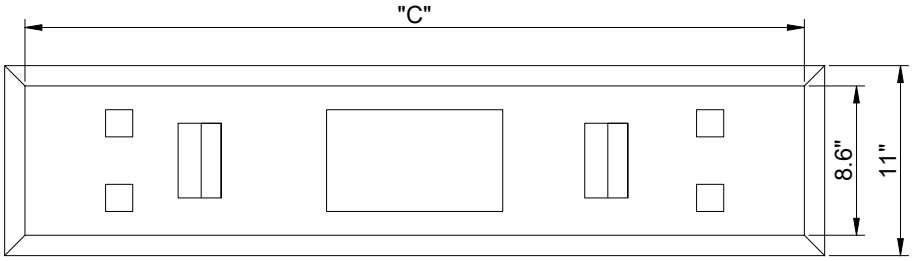


VIEW FROM UNDERNEATH









PART No	MODEL	“A” (inches)	“B” (inches)	“C” (inches)
THHAC-009	THH1500A	40.5” (1030mm)	38.3” (974mm)	38.2” (970mm)
THHAC-011	THH2400A	57.9” (1470mm)	55.6” (1414mm)	55.5” (1410mm)
THHAC-012	THH3200A	74” (1880mm)	71.8” (1824mm)	71.6” (1820mm)

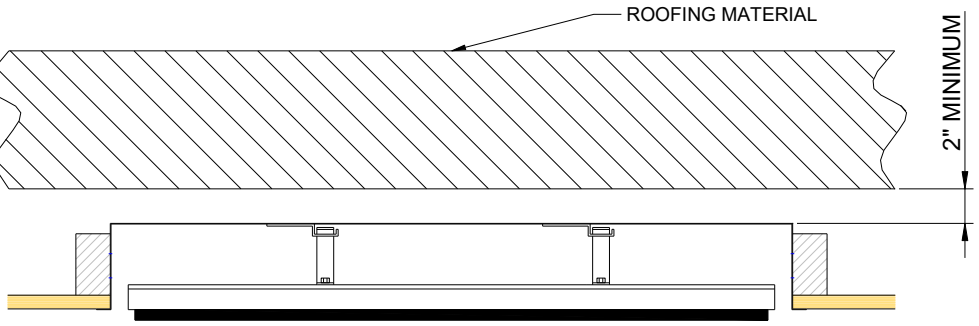
HEATSTRIP USA

BASIS OF DESIGN1 - PREFERRED

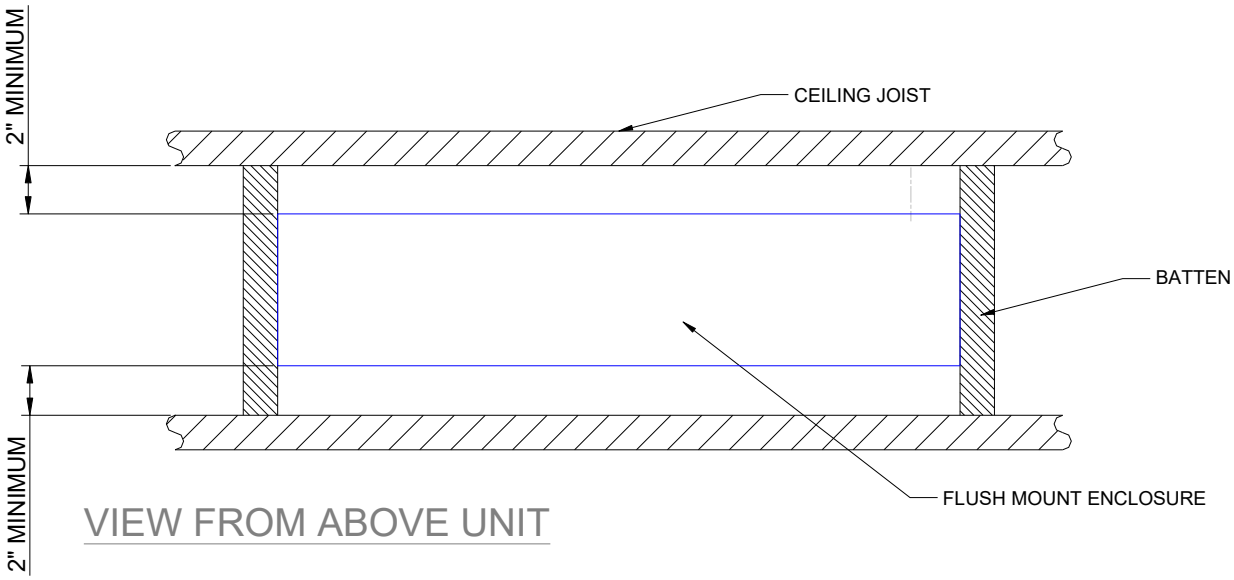
INSTALLATION CLEARANCE DIMENSIONS

Shown in the diagrams below are the minimum clearance required for the installation of the Flush Mount Enclosure.

It is imperative that all cables, backing materials, insulation and other materials are keep clear of the back and the sides of the Flush Mount Enclosure.



VIEW FROM SIDE



VIEW FROM ABOVE UNIT

CLEARANCE DIMENSIONS

HEATSTRIP USA

INSTALLATION INSTRUCTIONS

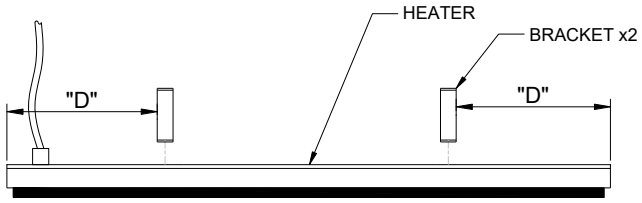
Ensure all minimum clearance requirements are met and the materials used are compliant to your local building codes.

Before installing the FME, ensure the site to be fixed is fully prepared with the hole cut the correct size and the mounting points securely in place.

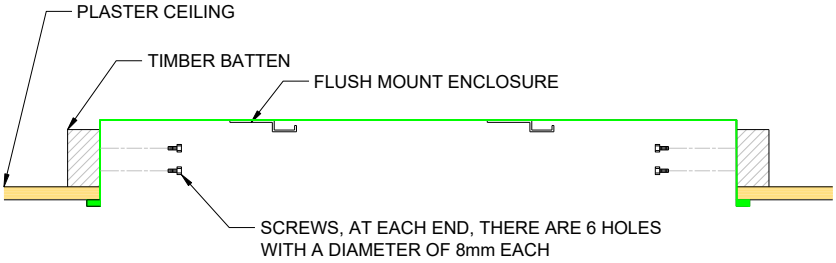
MODEL	"D" DISTANCE TO BRACK
THH1500A	6" (150mm)
THH2400A	14.5" (370mm)
THH3200A	16.5" (425mm)

BASIS OF DESIGN1 - PREFERRED

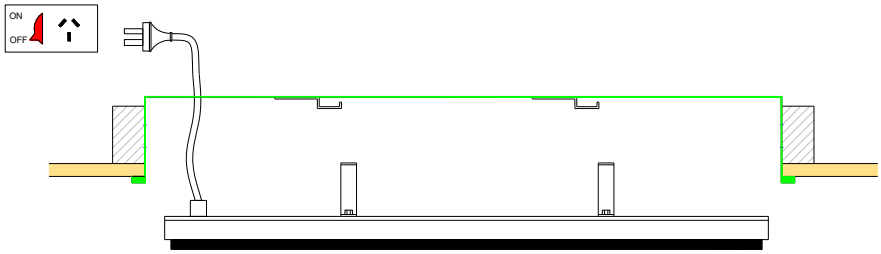
STEP 1: Attach the brackets to the rear of the heater. The dimensions for the spacing of the brackets is listed in the table.



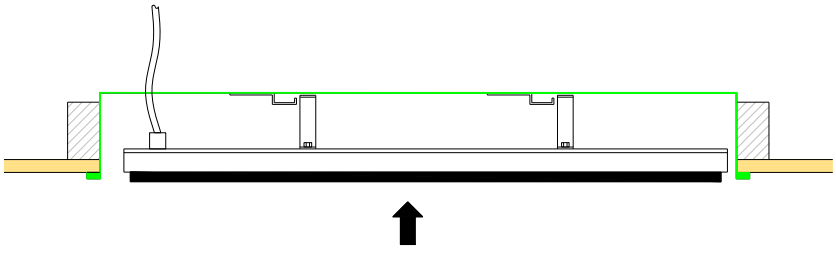
STEP 2: Screw the FME into the battens. NOTE: screws are not included.



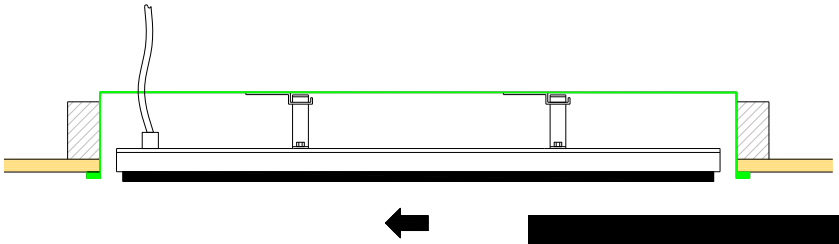
STEP 3: If there is no roof access, connect the heater to the power source, ensure the power is OFF.



STEP 4: Lift the heater into the FME ensuring the brackets are to the side of the mounts



STEP 5: Push the heater to the left ensuring the brackets engage in the mounts. It will then drop in. Shake the heater to ensure that it is securely mounted.



HEATSTRIP USA

BASIS OF DESIGN1 - PREFERRED

SAFETY

In operation, this heater is VERY HOT— do not touch any part of the heater while it is turned on. Do not touch any part until 30 minutes after it is turned off.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or intellectual capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.

Do not allow any cables, furnishings, flammable materials or other items come in contact with any surface of the Flush Mount Enclosure.

If installed in wet areas, the heater switches or controls must be located so that they cannot be touched by persons in the bath or shower.

The Flush Mount Enclosure needs to be installed as per the installation instructions paying special attention to the minimum clearances. The heater needs to be mounted on a rigid bracket or fixing.

See the heater Operations, Installation and Maintenance Manual for the heater specific guidelines.

MAINTENANCE

The Flush Mount Enclosure is made from durable materials, however regular care and maintenance of your product will help prolong its life.

It is recommended that you wipe down your Flush Mount Enclosure and with a soft cloth gently wipe the surfaces of the FME with a mild detergent to remove the built up contaminants from the environment. Then with a clean cloth ensure all detergent is removed.

All chemicals in the atmosphere including cigarette smoke, pollution etc. will tarnish the surface of the Flush Mount Enclosure. In this case, additional cleaning and maintenance may be required. The cleaning process at least every three months will reduce the amount of build up and keep it looking as best it can. If the Flush Mount Enclosure is in a corrosive environment eg. salt spray, we recommend that you clean the FME every week.

Before cleanings or inspection activity, the heater must be switched off and cooled down completely.
Do not use any abrasive materials or products to clean the Flush Mount Enclosure, this includes solvents, citrus based cleaners or other harsh cleaning products.

When handling the Flush Mount Enclosure, ensure that your hands are clean or that you use clean gloves as grease or dirt can mark the surface of the heater.

Do not use high pressure water to clean Flush Mount Enclosure. It is not recommended to hose down the FME and heater as water may get into the roof cavity.

Warranty Terms & Conditions

BASIS OF DESIGN1 - PREFERRED

The below Warranty Terms and Conditions apply for **North American Customers.**

Heatstrip USA warrants to the original owner that HEATSTRIP® Classic products will be free from defects in materials and workmanship for a period of 12 months from the date of purchase in accordance with the following warranty terms and conditions.

Provision of this warranty is subject to:

- The HEATSTRIP® product must be installed in accordance with the Installation Instructions and relevant electrical standards and codes.
- The HEATSTRIP® product must be maintained and cleaned according to instructions detailed in the Installation Manual.
- There is no warranty expressed or implied with regard to capacity requirements. The selection of the unit or units depends entirely upon the system design and capacities as determined by the purchaser.
- The customer has not repaired, opened or altered the product in any unauthorised manner.
- This warranty excludes damage to the product or components arising from circumstances outside the control of Heatstrip USA, including, but not limited to, where the product is not used for intended purpose; where the product has been rectified in any way; incorrect installation; incorrect power supply; damaged caused during delivery; misapplication, misuse, abuse, vandalism, lack of maintenance or accident.
- Heatstrip USA's obligations under this warranty are limited to repair or replacement at Heatstrip USA's factory of any components of the product which Heatstrip USA identifies to its satisfaction to be defective.
- Transportation charges involved in return of the product to the Heatstrip USA factory (or any other location authorised in writing by Heatstrip USA) is the sole responsibility of the customer.
- All products are inspected and tested before despatch and are at the risk of the purchaser after the shipment from the Heatstrip USA factory, if not delivered by Heatstrip USA to destination.
- No products or components will be supplied in advance of an examination of the faulty product or components by Heatstrip USA or an authorized representative of Heatstrip USA.
- Heatstrip USA does not participate in any site related costs or labour expenses incidental to replacement of parts, repairing, removing, installing, servicing, transportation or handling of parts to complete products, and assumes no liability on parts repaired or replaced without written authorisation. Heatstrip USA shall not be liable for any default or delay in performance of its warranty obligations caused by any circumstances beyond its control, including, but not limited to, judicial or government restrictions, strikes, fires, floods, abnormal weather conditions, delayed supply of components.

Should products be determined as damaged on arrival, immediately notify the transport company of the condition and have them noted on the freight documents. If damage is discovered after unpacking, demand immediate inspection by the transportation company and insist that a record of the damage is made on the freight documentation.

The customer warrants using the product in accordance with:

- Any instructions provided to it by Heatstrip USA from time to time.
- All government and local regulations, including but not limited to all relevant electrical, environmental laws and regulations governing the installation, storage, use, handling and maintenance of the goods.
- All necessary and appropriate precautions and safety measures relating to the installation, storage, use, handling and maintenance of goods.

All warranty requests for repairs or replacements must be accompanied by a complete "Warranty Claim Form" available from Heatstrip USA, together with proof of purchase (and where possible, photos of the installation) and the heater returned to the place of purchase.

In the event of a warranty claim, the goods need to be returned to the distributor/retailer for repair/replacement.

DISTRIBUTOR

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