



General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges within the City, payment arrangements must be made before permits of any kind

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 10/21/14

Address/Location of Construction: 46 Torrington Ave		
Total Square Footage of Proposed Structure: /		
Tax Assessor's Chart, Block & Lot Chart# Block# Lot#	Applicant Name: Revision Energy Address: 142 Presumpscot Street City, State & Zip: Portland, ME 04103	Telephone: 221-6342 Email: Christine@revisionenergy.com
Lessee/Owner Name : (if different than applicant) Address: City, State & Zip: Telephone E-mail:	Contractor Name: Thomas Rice (if different from Applicant) Address: 46 Torrington Ave City, State & Zip: Portland, ME 04108 Telephone: 221-6342 E-mail:	Cost Of Work: \$ 16,024 C of O Fee: \$ _____ Historic Rev \$ _____ Total Fees : \$ _____
Current use (i.e. single family) <u>single family</u> If vacant, what was the previous use? _____ Proposed Specific use: _____ Is property part of a subdivision? <input type="checkbox"/> If yes, please name _____ Project description: <u>Installation of a solar hot water system on roof of home</u>		
Who should we contact when the permit is ready: Christine Puopolo		
Address: <u>142 Presumpscot St Portland ME 04103</u>		
City, State & Zip: <u>Portland ME 04103</u>		
E-mail Address: <u>christine@revisionenergy.com</u>		
Telephone: <u>221-6342</u>		

Please submit all of the information outlined on the applicable checklist. Failure to do so causes an automatic permit denial.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at <http://www.portlandmaine.gov/754/Applications-Fees> or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: [Signature] Date: 9/29/2014

This is not a permit; you may not commence ANY work until the permit is issued.



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PRODUCT DATA SHEET

IRONRIDGE XR ROOF MOUNT

Date: 10/21/14

KEY FEATURES

- ◆ Extruded aluminum components are lightweight for easy handling yet strong enough for most roof mount applications
- ◆ Choice of XRL (lightweight) and XRS (standard) rails
- ◆ Both XRL and XRS rails come with slots for attaching L-feet and top slots for attaching panel clamps
- ◆ XRS rails has slot for bottom mounting clamps
- ◆ Hidden internal splice bars are aesthetically pleasing
- ◆ Internal splices provide superior strength and flexibility with L-feet placement
- ◆ Adjustable L-feet have vertical extension slots for easy adjustability of up to 1-3/8"
- ◆ Standoffs provide increased airflow and ventilation and enable precise placement of flashings
- ◆ Standoffs come in four standard heights: 3", 4", 6", and 7"
- ◆ XR platform compatible with popular flashings including QuickMount and Oatey
- ◆ Panel clamps for both top and bottom mounting
- ◆ Panel clamps for most popular photovoltaic modules
- ◆ Mid-clamp design maximizes panel density
- ◆ Ground clips eliminate the need for copper wire between modules
- ◆ The XR Roof Mount components are covered with an industry-leading 10 year limited product warranty and a 5 year limited finish warranty
- ◆ All XR Roof Mount components are PE certified



The IronRidge XR platform is a reliable, comprehensive, and feature rich photovoltaic mounting solution. Anchored by the XRS (Standard) and XRL (Light) rails, the XR platform includes all of the components necessary for supporting virtually any commercial or residential roof mount installation, regardless of surface material or roof grade.

The XRS and XRL rails are manufactured from extruded aluminum to maximize spans while minimizing weight for improved handling. The graceful curves of the XRS rail will please even the most aesthetically demanding customers. Rails can be extended with the IronRidge patent-pending internal splice bars, providing a strong support connection and ultimate flexibility in footing attachment locations. Installers have a variety of options in attaching IronRidge rails to the roof, including adjustable L-feet, aluminum standoffs, and tilt legs for optimizing power. In addition, IronRidge accommodates modules from most major manufacturers. Top-down panel clamps securely grip the outside frame of the module, freeing the installer from the constraints of panel mounting holes. The XRS rail has an additional side slot to enable the option of bottom mounting. Lastly, grounding clips pierce the anodized rails, creating a ground path through the equipment and eliminating the need to run copper wire between every module.

IronRidge provides a complete technical support system that includes step-by-step installation guides, engineering certification documentation, easy-to-read span charts, and on-line configurator software.

See reverse for product specifications and ordering information. Please contact your local distributor for configuration assistance.



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PRODUCT DATA SHEET

IRONRIDGE XR ROOF MOUNT

SPECIFICATIONS

- ◆ XRL/XRS Rail – 6105-T5 extruded anodized aluminum
- ◆ XRL/XRS Splice Bars – 6105-T5 extruded aluminum
- ◆ Standoffs – 6105-T5 extruded aluminum
- ◆ L-feet: 6105-T5 extruded aluminum
- ◆ Clamps: 5052-H32 aluminum
- ◆ Hardware: 18-8 Stainless Steel

XRS PROPERTIES

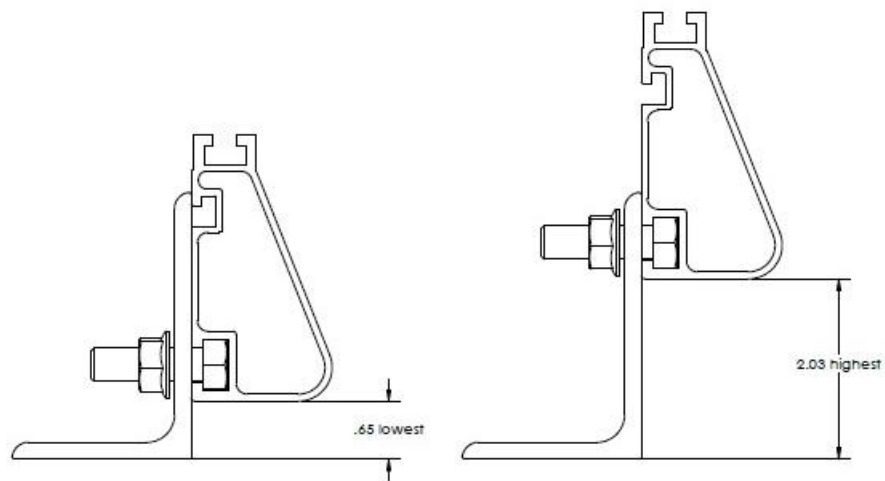
- ◆ Area = .807136 inches²
- ◆ Centroid relative to output coordinate system origin
 - ◆ X = 0.5556
 - ◆ Y = 1.4097
 - ◆ Z = 120.000
- ◆ Moments of Inertia of the area (at the centroid)
 - ◆ Lxx = 0.8430
 - ◆ Lxy = 0.1117
 - ◆ Lxz = 0.0000
 - ◆ Lyx = 0.1117
 - ◆ Lyy = 0.1822
 - ◆ Lyz = 0.0000
 - ◆ Lzx = 0.0000
 - ◆ Lzy = 0.0000
 - ◆ Lzz = 1.0252
- ◆ Polar Moment of Inertia
 - ◆ At Centroid = 1.0252⁴
- ◆ Principal Moments of Inertia
 - ◆ Ix = 0.1638
 - ◆ Iy = 0.8614
- ◆ Principal-Part Axes
 - ◆ Angle = 99.343 degrees
- ◆ Moments of Inertia (output)
 - ◆ LXX = 11625.205
 - ◆ LXY = 0.5204
 - ◆ LXZ = 53.8153
 - ◆ LYX = 0.5204
 - ◆ LYY = 11623.1909
 - ◆ LYZ = 136.5369
 - ◆ LZX = 53.8153
 - ◆ LZY = 136.5369
 - ◆ LZZ = 2.8784

ORDERING INFORMATION

Date: 10/21/14

XR Rails		
Part Number	Description	Weight
51-7000-144a	XRS Standard Rail (1) – 12 feet	11.364 lbs
51-7000-168a	XRS Standard Rail (1) – 14 feet	13.258 lbs
51-7000-192a	XRS Standard Rail (1) – 16 feet	15.152 lbs
51-7000-216a	XRS Standard Rail (1) – 18 feet	17.046 lbs
51-6000-144a	XRL Light Rail (1) – 12 feet	6.288 lbs
51-6000-168a	XRL Light Rail (1) – 14 feet	7.336 lbs
51-6000-192a	XRL Light Rail (1) – 16 feet	8.384 lbs
51-6000-216a	XRL Light Rail (1) – 18 feet	9.432 lbs
29-7000-010	XRS Splice Kit (1)	0.442 lbs
29-7000-000	XRL Splice Kit (1)	0.151 lbs
Panel Clamps		
Part Number	Description	Weight
29-7000-xxx	End Clamps (4) – depends on panel	.251-.290 lbs
29-7000-10x	Mid Clamps (4) – depends on panel	.213-.251 lbs
29-7000-117	Under Clamps (4)	0.324 lbs
Footing Attachments & Flashings		
Part Number	Description	Weight
29-7000-017	L-foot Kit (4)	0.872 lbs
51-600x-500	3"-7" Standoffs – Specify L-foot or Tilt leg	.533-.710 lbs
31-1000-001	Oatey Galvanized Flashing 11830 (12)	8.750 lbs
31-1000-000	QuickMount QMSCA12 (12)	13.390 lbs
51-7200-0XX	Tilt Legs (7" – 40")	.0658 lbs/inch
51-7210-000	Tilt Leg Bracket	1.576 lbs
Grounding		
Part Number	Description	Weight
29-4000-001	WEEB DMC-Clip (100)	0.258 lbs
29-4000-002	WEEB Grounding Lug (100)	12.356 lbs
29-4000-003	WEEB Bonding Jumper (100)	17.614 lbs
29-4000-006	WEEB ACC-PV Wire Clip (100)	0.625 lbs

L-FOOT DIMENSIONS





PLUMBING PERMIT AI

Reviewed for Code Compliance
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PROPERTY ADDRESS

Street: ~~Thomas~~ 46 Torrington Ave

CBL:

Town/City PORTLAND

Permit # _____

Date: 10/21/14

Date Permit Issued ____ / ____ / ____ Fee: \$ _____

PROPERTY OWNER(S) NAME

OWNER NAME:

Thomas Rice

Applicant Name:

Revision Energy

Mailing Address of Owner/Applicant (if Different)

142 Presumpscot St
Portland, ME 04103

E Mail: christine@revisionenergy.com

Owner/Applicant Statement

I certify that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Local Plumbing Inspector(s) to deny a permit.

Chris
Signature of Owner/Applicant

Date: 9/29/14

Local Plumbing Inspector Signature

L.P.I. # 360

The Internal Plumbing Fixtures and Piping shall not be installed until a Permit is issued by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the plumbing system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Caution: Inspection Required

I have inspected the installation authorized above and found it to be in compliance with the Maine Plumbing Rules Application.

LPI Signature

Date Approved (Final)

PERMIT INFORMATION

This Application is for

- 1. NEW PLUMBING
- 2. RELOCATED PLUMBING

Type of Structure to be Served

- 1. SINGLE FAMILY RESIDENCE
- 2. MODULAR OR MOBILE HOME
- 3. MULTIPLE FAMILY DWELLING
- 4. OTHER-SPECIFY _____

Please call 874-8703 with your permit # to schedule inspections!

Plumbing to be Installed by:

NAME: Christopher Blaisdell

E Mail:

- 1. MASTER PLUMBER
- 2. OIL BURNERMAN
- 3. MFG'D HOUSING DEALER / MECHANIC
- 4. PUBLIC UTILITY EMPLOYEE
- 5. PROPERTY OWNER

LICENSE # 11111192705

Hook-Up & Piping Relocation Maximum of 1 Hook-Up	Column 2		Column 1	
	Number	Type of Fixture	Number	Type of Fixture
<input type="checkbox"/> HOOK-UP: to public sewer by those cases where the connection is not regulated and inspected by the local sanitary district. <input type="checkbox"/> HOOK-UP: to an existing subsurface wastewater disposal system		Hosebib / Sillcock		Bathtub (and Shower)
		Floor Drain		Shower (separate)
		Urinal		Sink
		Drinking Fountain		Wash Basin
		Indirect Waste		Water Closet (Toilet)
		Water Treatment Softener, Filter, Etc.		Clothes Washer
<input type="checkbox"/> PIPING RELOCATION: of sanitary lines, drains, and piping without new fixtures.		Grease / Oil Separator		Dish Washer
		Roof Drain		Garbage Disposal
		Bidet		Laundry Tub
		Other: _____	01	Water Heater
	Fixtures (Subtotal) Column 2		10	Fixtures (Subtotal) Column 1
			01	TOTAL FIXTURES
<input type="checkbox"/> TRANSFER FEE [\$10.00]	Fees by fixture: First 4 fixtures = \$40 Over 4 = \$10/per fixture			Fixture Fee
				Transfer Fee
				Hook-Up & Relocation Fee
Please call 874-8703 with your permit # to schedule inspections!			PERMIT FEE (TOTAL)	



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PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Date: 10/21/14

Jeff Levine, AICP, Director
Director of Planning and Urban Development

Tammy Munson
Director, Inspections Division

Electronic Signature and Fee Payment Confirmation

Notice: Your electronic signature is considered a legal signature per state law.

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a **legal signature** per Maine state law. You are also signifying your intent on paying your fees by the opportunities below.

I, the undersigned, intend and acknowledge that no permit application can be reviewed until payment of appropriate permit fees are **paid in full** to the Inspections Office, City of Portland Maine by method noted below:

Within 24-48 hours, upon receipt of an e-mailed invoice from Building Inspections, which signifies that my electronic permit application and corresponding paperwork have been received, determined complete, entered by an administrative representative, and assigned a permit number, I then have the following four (4) payment options:

- to provide an on-line electronic check or credit/debit card (we now accept American Express, Discover, VISA, and MasterCard) payment (along with applicable fees beginning July 1, 2014),
- call the Inspections Office at (207) 874-8703 and speak to an administrative representative to provide a credit/debit card payment over the phone,
- hand-deliver a payment method to the Inspections Office, Room 315, Portland City Hall,
- or deliver a payment method through the U.S. Postal Service, at the following address:

City of Portland
Inspections Division
389 Congress Street, Room 315
Portland, Maine 04101

Once my payment has been received, this then starts the review process of my permit. **After all approvals have been met and completed, I will then be issued my permit via e-mail.** No work shall be started until I have received my permit.

Applicant Signature: _____

Date: 9/29/14

I have provided digital copies and sent them on: _____

Date: _____

NOTE: All electronic paperwork must be delivered to buildinginspections@portlandmaine.gov or by physical means ie; a thumb drive or CD to the office.

Room 315 - 389 Congress Street- Portland, Maine 04101 (207) 874-8703 - Fax: 874-8716 - TTY: 874-8936



Professional design, installation and service of solar energy sys



Reviewed for Code Compliance
Inspections Division
Approved with Conditions

September 29, 2014

Date: 10/21/14

City of Portland
389 Congress Street
Portland, ME 04101

RE: ReVision Energy Solar Installation at 46 Torrington Avenue in Portland, Maine.

Dear Code Enforcement,

ReVision Energy has been contracted to design and install a solar hot water system at the above address in Portland. This letter is to confirm that all work will be performed by licensed and qualified installers, expert in the field and in compliance with both manufacturer's recommendations and all applicable local and state codes and standards. This also confirms that the roof structure can handle the weight of the panel load, in addition to snow load. The weight of the panels does not change the structural integrity of the building.

ReVision Energy employs licensed engineers, plumbers, and electricians and carries the solar industries highest certifications (NABCEP) in both solar thermal and photovoltaic installation. We're committed to high quality, code compliant work and look forward to working together with the city and the CEO to ensure that all your requirements and needs are met and that our customer ends up with a system that is beautiful, functional and safe.

Electrical and grounding:

All electrical work to be performed by a licensed ME electrician and will conform to NEC 2011 revision as well as NABCEP standards. Specifically, wiring and grounding of the photovoltaic system will be governed by manufacturer's recommendations and article 690. All installed metal components are grounded via the grounding electrode conductor.

If you have any questions or concerns, we'd like to address them as quickly and completely as possible. Please don't hesitate to call or e mail anytime.

Respectfully,

Fortunat Mueller, P.E.
Co-owner
ReVision Energy
(207) 752-6358
fortunat@revisionenergy.com

91 West Main Street
Liberty, ME 04949

(207) 589-4171

142 Presumpscot Street
Portland, ME 04103

(207) 221-6342

www.revisionenergy.com

7 Commercial Drive
Exeter, NH 03833

(603) 679-1777



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Date: 10/21/14

Harvest the

Power of the Sun



Reviewed for Code Compliance
Inspections Division
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Date: 10/21/14

FLAT PLATE COLLECTOR SOL 25 PLUS



**The new
SOL 25 PLUS solar
collector offers all
the latest features
known to the
industry**

Highly efficient solar collector is suitable for many types of applications. Features include:

- **High selective chromium oxide absorber coating**
- **Copper absorber with copper fluid tubes**
- **Low iron tempered solar glass**
- **Durable corrosion resistant aluminum frame**
- **Low profile at 3" thickness**
- **Full complement of custom mounting hardware is available**

*Leaders in
Thermal Solar Technology*

STIEBEL ELTRON

Simply the Best

800-582-8423

E-mail: info@stiebel-eltron-usa.com
www.stiebel-eltron-usa.com

**Over 30 Years
of Solar Panel
Experience**



SOL 25 PLUS complies
with ISO 9806

ISO 9001
CERTIFIED

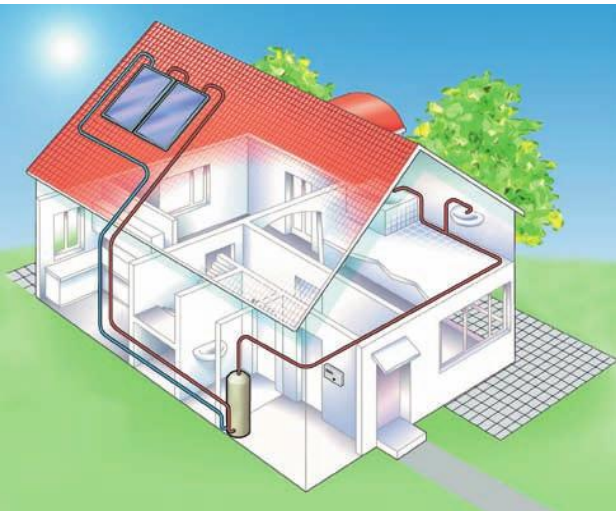
THE POWER OF THE SUN

Flat Plate Solar Collector SOL 25 PLUS

STIEBEL



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Inspections Division
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The SOL 25 PLUS is ideal for m

- Residential or commercial water
- Space heating
- Swimming pools

Date: 10/21/14

Advantages Include:

Maximum Efficiencies

The SOL 25 PLUS is a highly efficient thermal collector. The net absorber surface of almost 28 sq feet results in a maximum output of 21,000 btu/day per panel. The SOL 25 PLUS also offers features such as a high selective absorber coating, low-iron, tempered solar glazing, and very effective insulation around the absorber plate. The internal fluid tubes are copper.

Installation Time Is Minimized

The large panel size and the availability of a full complement of custom designed mounting accessories minimizes the installation costs.

Appealing Design

The SOL 25 PLUS has a low profile, making it visually less obtrusive and compatible with existing architectural designs.

Lasting and Reliable Energy Saving Investments

Stiebel Eltron uses only the most durable materials. The SOL 25 PLUS is the culmination of over 30 years of experience in the thermal solar business.

Specifications

Total surface area	sqft	29.06	sqm	2.7
Net effective surface area	sqft	28	sqm	2.6
Collector output range	Btu / day	21,000	W / day	6155
Max. temp.	°F	410	°C	210
Typical transfer flow rate	Gal / h	13 – 80	l / h	50 – 300
Working operating pressure	PSI	50.7	bar	3.5
Max. operating pressure	PSI	87.0	bar	6
Tested to pressure	PSI	160	bar	11
Pressure loss	PSI	0.44	m / bar	30
Dimensions	in.	87 15/16 x 48 1/8 x 3 1/16	mm	2233 x 1223 x 78
Weight without heat transf. fluid	lb.	108	KG	49
Recommended mounting angle		10° – 90°		
Plumbing connections	in.	3/4" BSOT		
Frame	anodized aluminum, corrosion resistant			
Absorber	copper, chromium-oxide selective surface			
Thermal insulation	mineral wool			
Absorptivity / emissivity	95 % / 5 %			
Light transmission	92 %			
Heat transfer fluid	non-toxic polypropylene glycol solution			

	<p>This product certified by the Solar Rating and Certification Corporation c/o FSEC, 1679 Clearlake Road Cocoa, FL 32922 (321)638-1537 www.solar-rating.org SRCC Document OG-100</p>	<p>Stiebel Eltron 17 West Street West Hatfield, MA 01088</p>	<p>Mildly Cloudy Day Rating in Category C</p>
		<p>Model No.: Sol 25 Plus Gross Area 2.73 m (29.42 ft) Serial Number:</p>	<p>22 MJ/day 21 Mbtu/day</p>

Distributed by:

STIEBEL ELTRON, Inc.

17 West Street, West Hatfield, MA 01088

Phone: (413) 247-3380 • (800) 582-8423

Fax: (413) 247-3369

E-mail: info@stiebel-eltron-usa.com

Please visit our web site at www.stiebel-eltron-usa.com