SNAP-LOC

QUALITY METAL ROOFING

MANUFACTURED BY

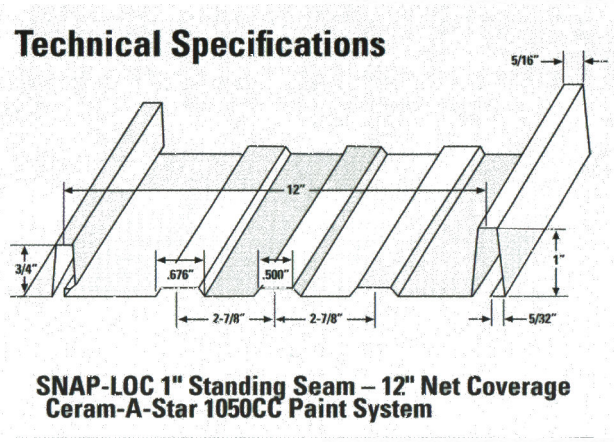
CHAMPION METAL
Of Washington, Inc.

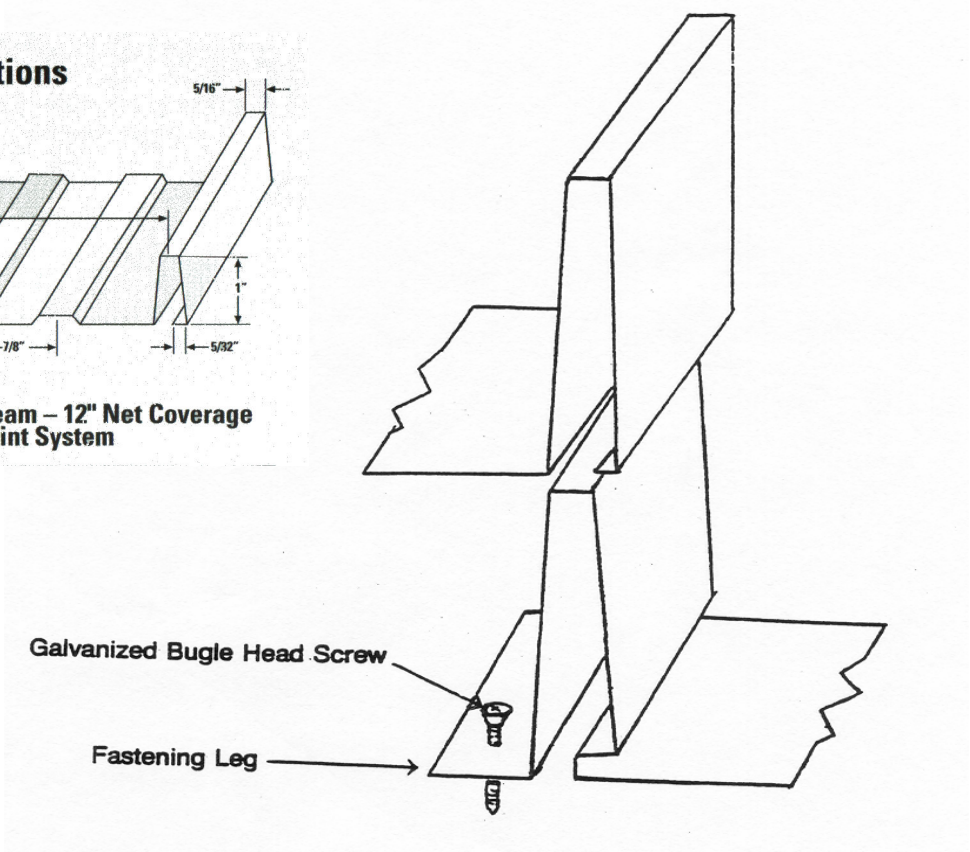
INSTALLATION AND HANDLING MANUAL

5/20/2013

TABLE OF CONTENTS

CHAMPION METAL
Of Washington, Inc.





Snap-Loc Application:

For ease of application, the Snap-Loc panel has a fastening leg designed into the panel. To apply the panels, all that is necessary is to align the panels with the eave edge and fasten, using galvanized bugle-head screws, spacing the screws about 18" to 24" along the fastening leg.

To apply the remaining panels, simply snap the next panel in place and fasten as before.

Note: Caution must be taken to insure that the panels are kept in square as they are applied. 30 lb. felt should be applied prior to laying the panels.

NOTE: **Cutting.** Steel roofing and trim should be cut with nibblers, tin snips or a profile shear. Although Champion Metal of WA. does not advocate the use of a saw, the reality is many people use a power saw in some manner. There are two concerns when using a saw. First, be sure that no burrs are left on the ends of the panel. The rough edges are not protected and will rust. Second, the filings coming off the blade are hot and will adhere to the surface of the panels and these will rust. Be sure all filings are removed from the surface as they will rust and pit the surface of the sheet.

CHAMPION METAL
Of Washington, Inc.

UNDERLAYMENT

Snap-Loc roofing can span up to 2 foot on center, and still fall within most loading requirements.

We at Champion Metal of Washington recommend that **Snap-Loc** be installed on a solid underlayment. The building owner will be happier with the application for three main reasons:

1. **AESTHETICS:** A standing seam roof system tends to telegraph whatever the underlayment is. Although "oil canning" with steel cannot be 100% eliminated, a flat underlayment will greatly reduce the possibility.

2. **SOUND:** It makes sense that if steel roofing is applied onto a solid surface, there will be no dead air space for the sound of rain to reverberate. You should not have a "noisy metal roof", if it is applied on a solid surface.

3. **MAINTENANCE:** A solid underlayment makes it much easier to walk on your roof without worrying about denting the product where you step. With **Snap-Loc**, you have no exposed fasteners to know where your supports would be if using purlins.

Note: Heavy snow loads and freezing conditions require specific unique applications. See the next page regarding this as well as consulting your distributor.

CHAMPION METAL
Of Washington, Inc.

SNOW CONDITIONS AND SNAP-LOC ROOFING

Metal roofing has traditionally been a very good roof for geographical areas that are prone to high volumes of snow. There are a few recommendations that Champion Metal of WA, Inc. would like to make concerning snow and your **Snap-Loc** roof.

We recommend that an ice and water shield underlayment be used on eave lines and in valley areas on your roof. This underlayment is designed to protect your roof in case of any ice-damming problems. There are many of these types of underlayment on the market. **Certainteed** has one called "Winterguard" that works very well. Ask your distributor for specification sheets and proper installation methods.

Installers should install **Snojax®** above entry areas and walkways. This prevents snow from avalanching off the roof and causing harm to people or property.

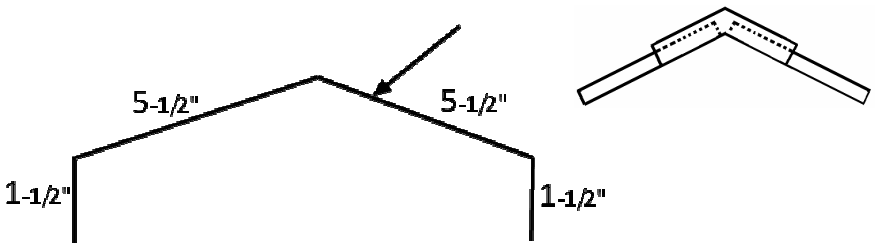
Installers should take proper precautions to make sure that all pipes and chimneys are not ripped off their roof when the snow and ice slides off. Here are a few ideas for you to consider:

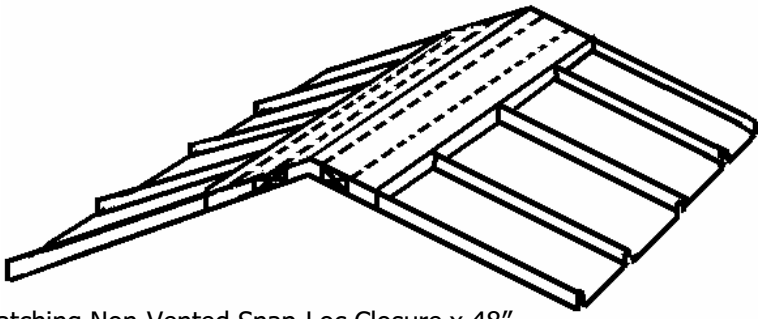
- Re-plum your pipes so that they are coming up through the ridge of your building.
- Use heavy-duty pipes and extensive guy wires for support.
- Build and flash crickets behind all pipes.

We cannot possibly anticipate all problems that could be associated with a large amount of snow. These ideas should help eliminate the majority of snow-caused problems.

CHAMPION METAL
Of Washington, Inc.

Ridge Cap * TSLRC__



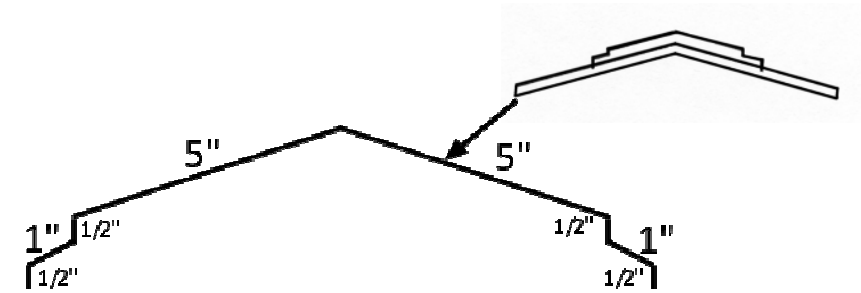


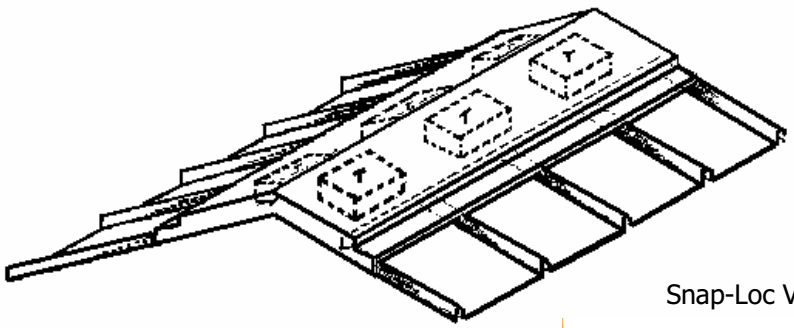
Matching Non-Vented Snap-Loc Closure x 48"

1. Nail a 2 x 2 on both sides of the roof peak.
2. Install the roof panels by lining them up with the eaves. The ridge cap will cover any slight differences in length at the peak.
3. If pitch is low or you are facing a strong wind, you may want to bend the flat pan of the panel up under the ridge, creating a dam. This ensures that water will not be blown under the ridge. Although bending your panels up is recommended, you may also want to use a matching closure, specifically made for the **Snap-Loc** panel, under the ridge cap to stop the weather.
4. After the gable trim is applied, place the ridge cap on top and notch out the 1-1/2" return so that the ridge cap sits down flush with the pan of the panel. A notching tool should be available through your distributor.
5. Fasten the ridge cap to the 2 x 2's with the painted neoprene-washered screws.

Vented Ridge Cap * TSLRV__

Use the same application as the standard **Snap-Loc** ridge cap with these exceptions:



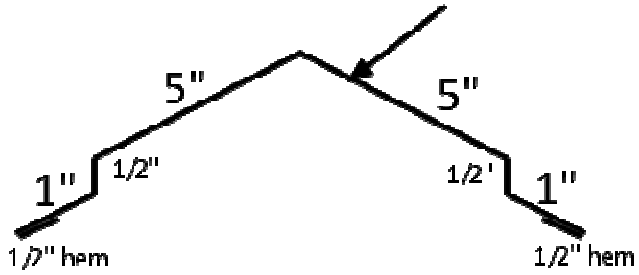


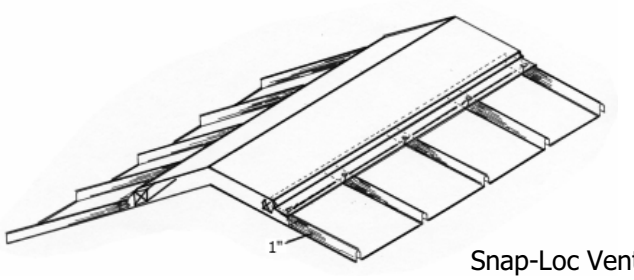
Snap-Loc Vented Closure x 24"

1. 2 x 2's are cut into blocks and spaced so that the airflow is unobstructed.
2. The return on the vented ridge cap is only ½" so it will not sit down flat in the pan. A ½" air space will exist for the airflow.
3. Bird screen may be placed across the 2 x 2's, if desired.
4. With a vented ridge cap, some installers choose to omit the 2 x 2's altogether and fasten the ridge into the top of the panel ribs using an exposed painted trim fastener.
5. Note: Bending up your panels under the ridge will prevent water from penetrating the system under most circumstances. If the structure is located in a severe environment where wind-driven rain or snow is a concern, vented closures and other options are available.

CHAMPION METAL
Of Washington, Inc.

Hemmed Vented Ridge Cap * TSLRVH__





Snap-Loc Vented Closure x 24"

1. This ridge cap is used by roofers who prefer not to notch out the return on the vented ridge cap. The return is actually folded back under the ridge itself to give the edge rigidity.

2. Do not use blocks of 2 x 2's with this ridge cap as they will be visible. Attach this ridge cap by applying an exposed painted trim fastener through the top of the ribs of the panel. This style of ridge cap is not recommended in high wind areas.

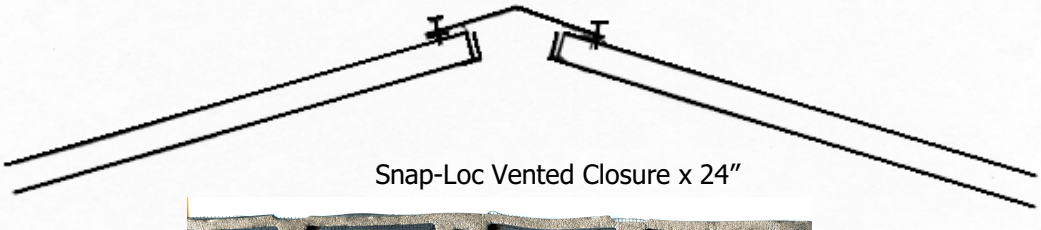
3. Note: Bending up your panels under the ridge will prevent water from penetrating the system under most circumstances. If the structure is located in a severe environment where wind-driven rain, or snow is a concern, vented closures and other options are available.

Optional Ridge Cap * TSLOR__

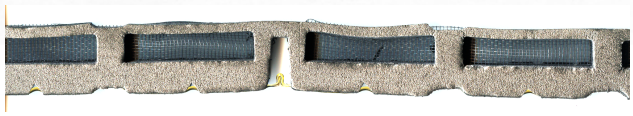
This ridge cap is used in applications where a smaller cap is necessary for aesthetic value.

Fasten this ridge cap to the top of the ribs using an exposed, painted trim fastener.

Hip or Ridge Detail

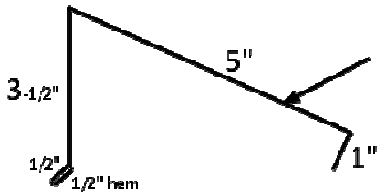


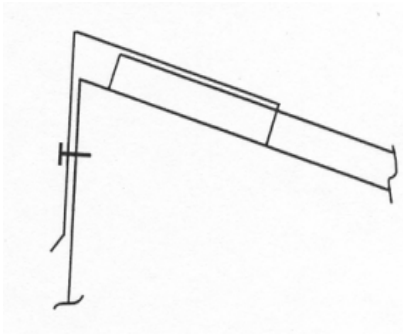
Snap-Loc Vented Closure x 24"

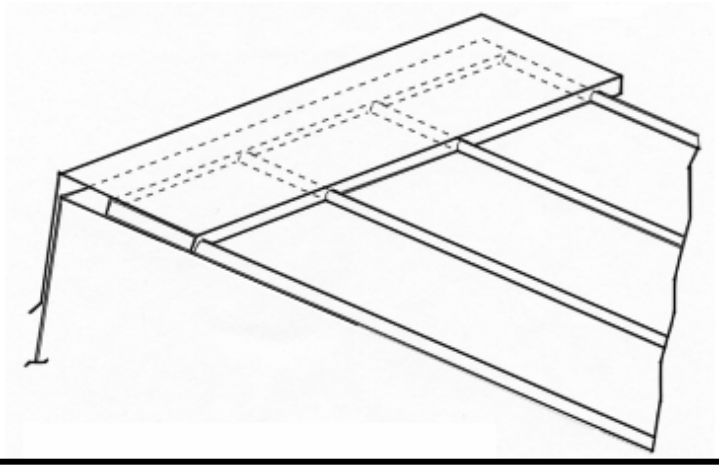


CHAMPION METAL
Of Washington, Inc.

Shed Metal * TSLSM__







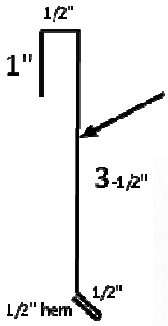
This is simply a ridge cap for a single-sloped roof.

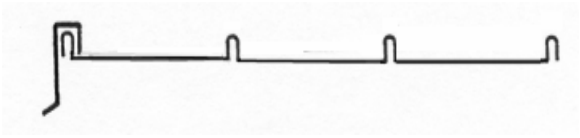
Install the roof panels. You may want to bend them up underneath to block water. You may also want to use matching closure strips to help seal under the cap.

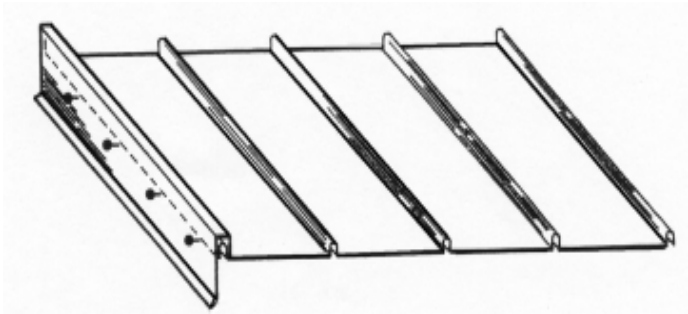
After the gable trim is applied, place the shed metal on top and notch out the 1½" return so that the ridge sits down flush with the pan of the panel. A notching tool should be available from your distributor.

Fasten the cap down from behind, into the wall, using an exposed painted trim fastener. You may also wish to fasten the cap into the top of the panel ribs with the same exposed painted trim fastener.

Gable Trim TSLGT__



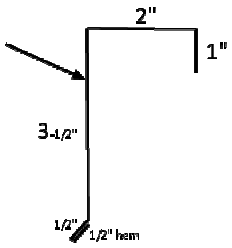


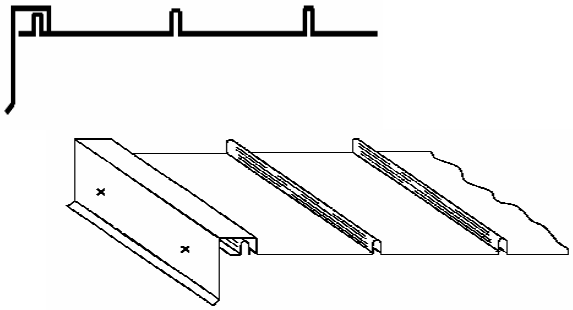


The gable trim is applied on top of the panel over the rib before the ridge cap is applied. It is fastened to the fascia board with exposed painted trim fasteners.

As shown in the diagram, if a rib does not fall flush with the gable edge, you must make an artificial rib by cutting the panel vertically 1" wider than the building and bending it up to form a rib.

Compensating Gable Trim TSLCG--



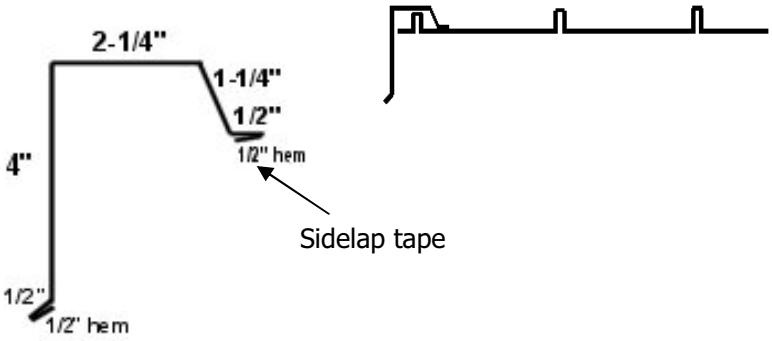


Use the same application procedures as the standard **Snap-Loc** gable trim on the previous page.

This is generally used to compensate for a building that is not in square or is slightly wider than the panels.

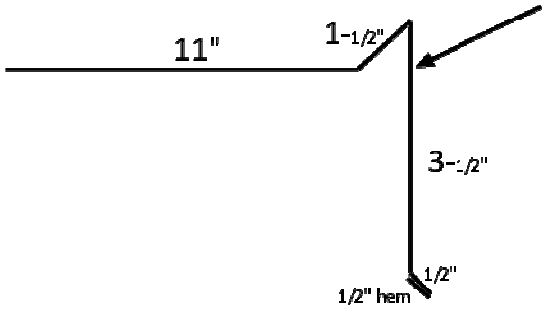
Note: We recommend using this type of gable trim if you are a first-time installer.

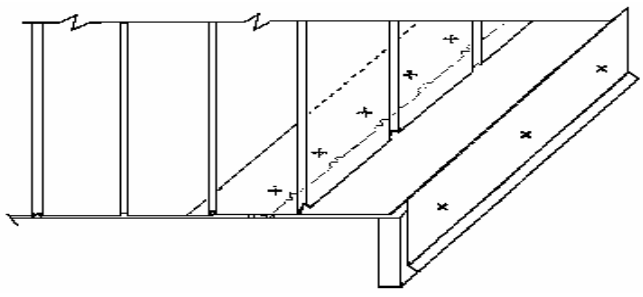
G-Gable TSLGG--



When installing this gable trim, it is recommended that you apply sidelap tape under the fastening flange as shown. This is to prevent water from seeping under the gable trim.

Flared Gable Trim TSLFG--





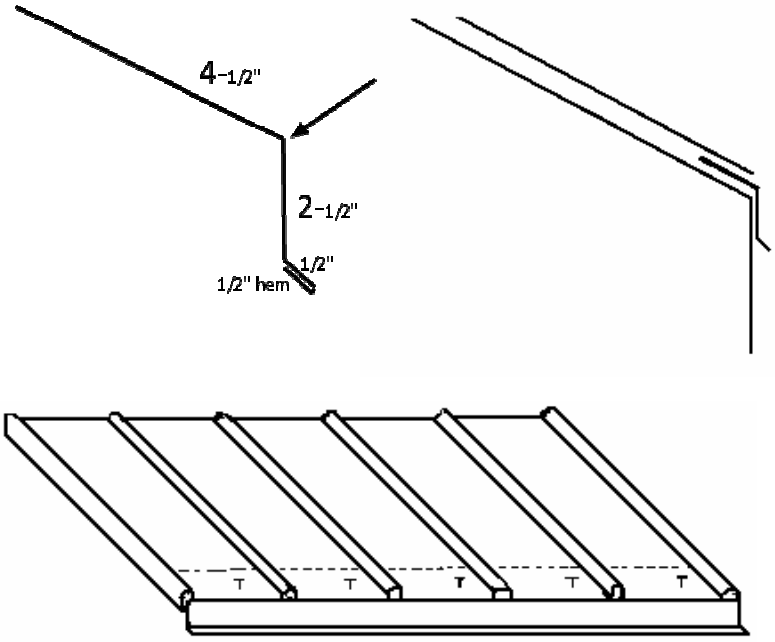
This gable trim is designed for use on a prow-type roof where the ridge is wider than the eave. It is applied the same way as W-Valley. It is basically half of a valley.

When installing the panels, run a bead of **Prime Adhere** down under the panels below the screws as illustrated.

Be sure to back the ribs of the panels off about 4 to 6 inches from the upturned edge to allow water and debris to drain off the roof and not accumulate.

Note: When a very steep pitch is involved, the large distance between ribs can present complications. Some installers cut the panels, eliminating the ribs, and leaving an inch of the flat pan extra. They then fold the inch of flat pan under, giving rigidity to the edge of the panel. By creating a "back hem", you will find that the panel will lay flatter and you will now have a straight line up the flared gable that will be visible.

Eave Trim * TSLET__



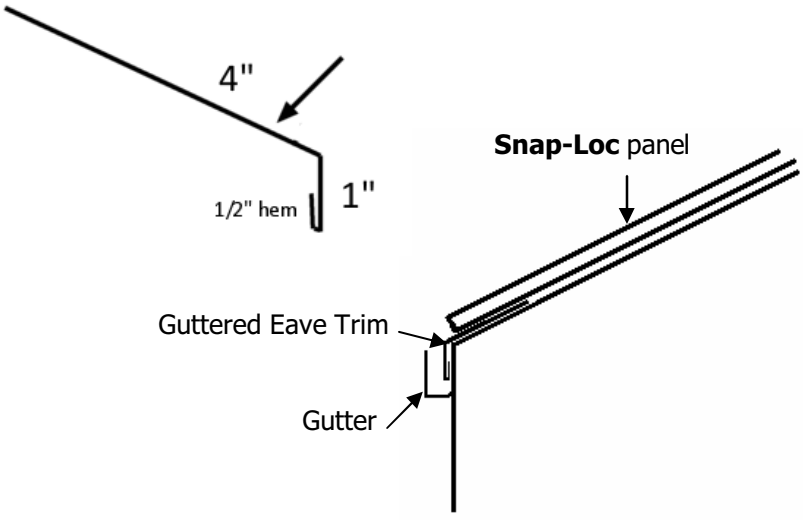
Fasten the eave trim down using bugle head screws.

Install the eave trim first, then run a bead of **Prime Adhere** on top making sure that your sealant is below the line of screws. Next apply the roof panels on top of the eave trim.

When a house has gutters, some installers choose not to use the eave trim. This is because the standard eave trim may not fit with your gutter spikes. These installers simply extend the panel over the roof's edge enough to get the water into the gutter. The exact distance to extend the panels depends on the pitch of the roof and how low the gutters are hung.

The **Snap-Loc** panels will often be bowed at the bottom. This is not a bad thing. It helps to prevent "oil-canning." Usually you do not see the bottom of the panels because of the gutters. It is an accepted installation procedure to seal under the panels with **Prime Adhere** and place an exposed fastener in the flat area of the panel. This will seal the eave line and prevent water from trying to siphon up under the panels.

Guttered Eave Trim * TSLETG__

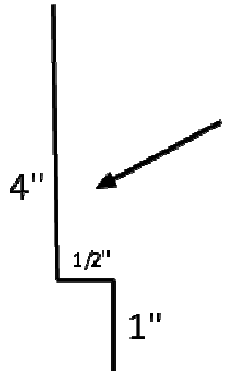


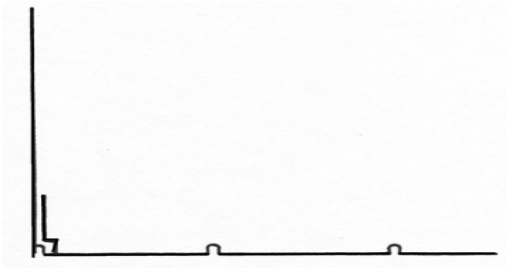
The guttered eave trim is designed to be used when there are gutters on the building. The 1" drop on the face of the trim helps the water drain into the gutter without interfering with the gutter spikes.

The use of a hem on the bottom instead of a drip will protect a homeowner's hands when they clean their gutters.

The trim is installed the same way as the standard eave trim.

Sidewall Flashing TSLSF__





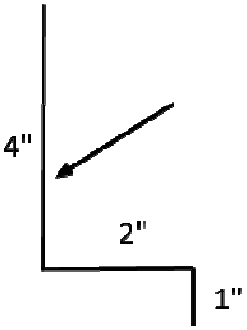
Butt the side edge of the panel against the wall.

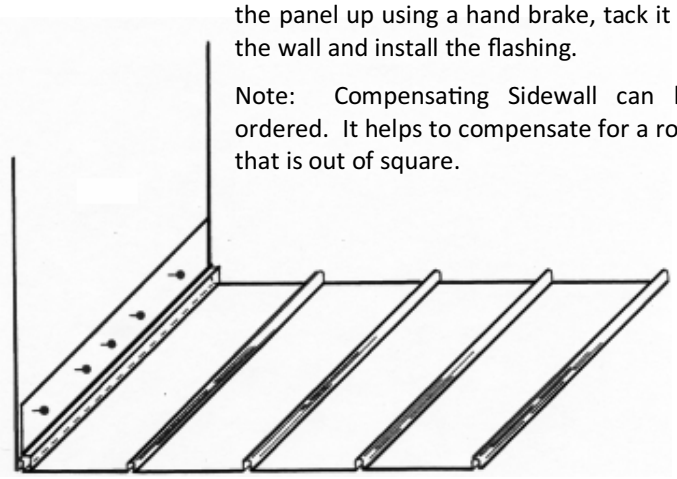
Install the flashing to cover the rib. The flashing usually slides underneath the siding on the wall.

If a rib does not match up with the wall, cut the panel 1" wider than the area, bend the panel up using a hand brake, tack it to the wall and install the flashing.

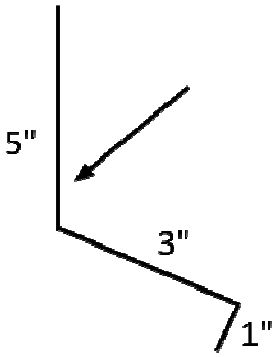
Note: Compensating Sidewall can be ordered. It helps to compensate for a roof that is out of square.

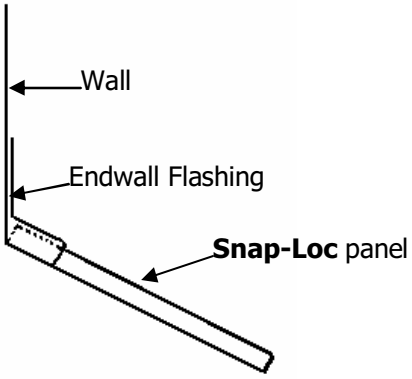
Compensating Sidewall Flashing TSLCS--





Endwall Flashing * TSLEF--



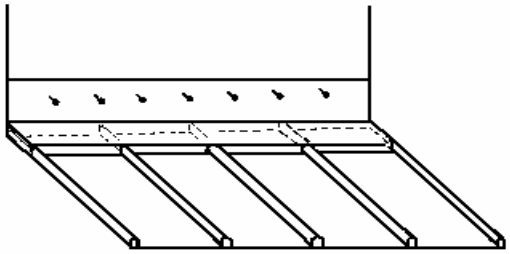


Install roofing panels. If your pitch is shallow, you may want to bend up the pan, creating a dam. You may also install matching **Snap-Loc** closure.

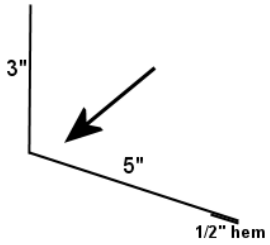
Notch out the return and install the endwall flashing over the roof panels. Use bugle head screws through the upper leg of the flashing into the wall. Cover the screws with wall siding.

As an option, you may also use an exposed fastener through the endwall into the top of the panel ribs.

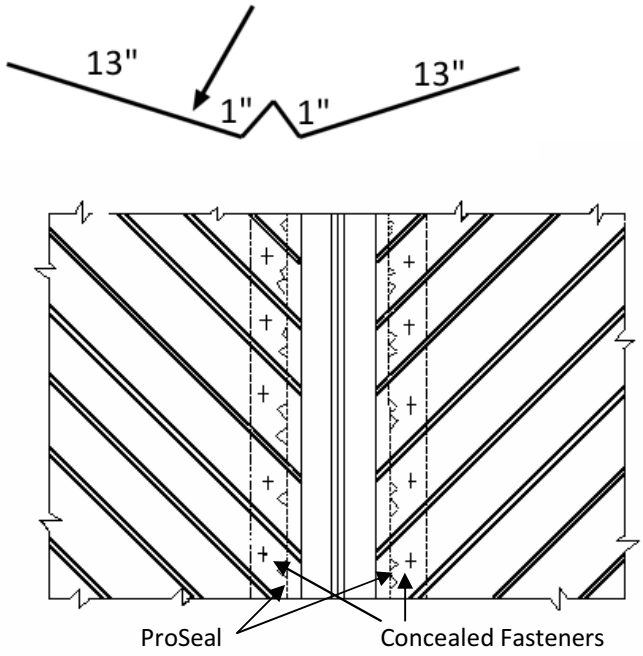
Note: We can fabricate a custom piece of this trim in a ventilated format for an additional charge.



Hemmed Endwall * TSLHEW--



W-Valley TWV__



Install valley metal with bugle head screws.

Cut across the panels at the angle of your valley.

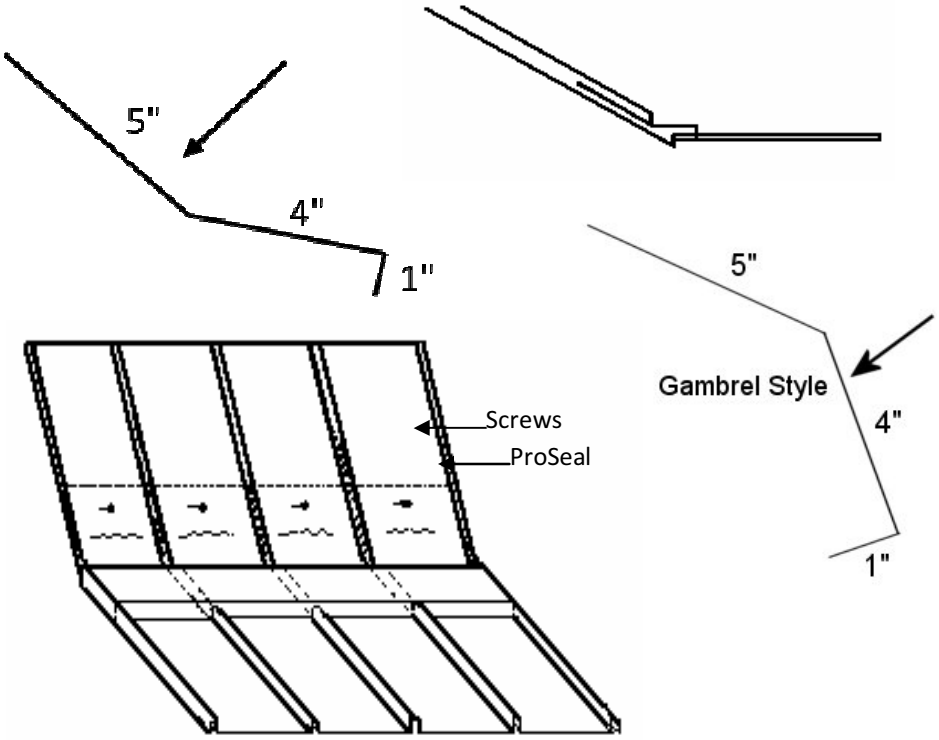
Be sure to lay a bead (or two) of **Prime Adhere** under the panels as you install them. The sealant should be downhill of the fasteners.

It is important to leave 4 to 6 inches between the end of the panels and the middle "V" of the w-valley to allow water and debris to drain off properly.

Note: When a steep pitch is involved, the large distance between the ribs can present complications. Some installers cut the panels, eliminating the ribs and leaving an inch of flat pan extra. They then fold the inch of flat pan under. By creating a "back hem", you will find that the panel will lay flatter and you will not have a straight line up your w-valley to look at.

Please note: Black w-valley is only available 14" wide.

Transition Flashing ** TSLTF__ (Pitch Change)



Install panels on the lower pitch first. If the pitch is low, you may want to bend the pan up to create a dam.

Notch out the return on the bottom of the flashing and install over lower panels using bugle head screws under where the upper panels will rest.

Before installing the upper panels, lay a bead of **Prime Adhere** for the upper panels to sit on. Be sure this bead is downhill of the bugle head screws.

Install the upper panels, covering the bugle head screws.

Note: Back the upper panels off far enough to allow for the height of the lower ribs.

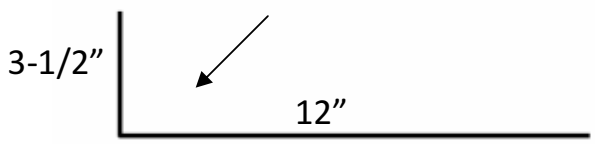
Note: We will need both pitches in order to fabricate; upper pitch first, lower pitch second.

CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

SKYLIGHT TRIM

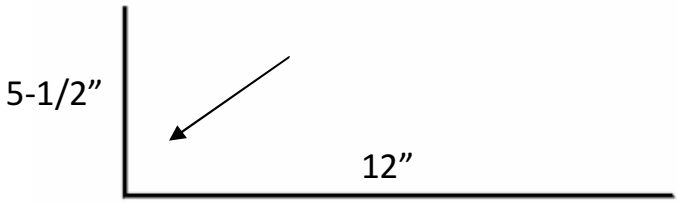
For 2" x 4" Curbing

3-1/2" Pan Flashing
TSLP3__

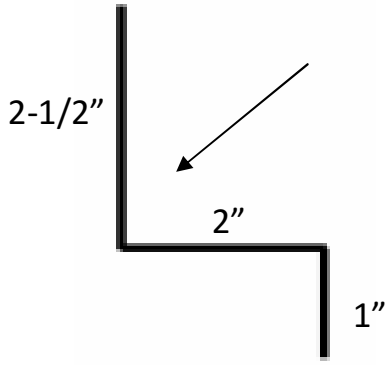


For 2" x 6" Curbing

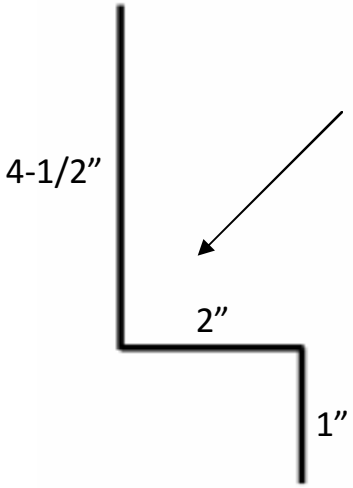
5-1/2" Pan Flashing
TSLP5__



3-1/2" Sides & Bottom Flashing
TSLSB3__



5-1/2" Sides & Bottom Flashing
TSLSB5__



Apply as described on the following pages. Please note that the 12-inch leg of the pan flashing used on a chimney application will need to be bent to the pitch of the roof.

CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

SNAP-LOC SKYLIGHT DETAIL

There are 3 pages of details to the skylight trim application in this guide. The first page shows where and how to cut out the panels and flashing. The second page shows these items after they have been cut and bent. The third page indicates where each piece is placed around the skylight.

Step #1 – Working from right to left, cut and install the first panel (#1). The next two panels are cut flush with the curb of the skylight, and may be bent up, if needed. Next, panel #2 is cut and bent to fit, then installed.

Step #2 – The next piece to install is the pan flashing (#3). First place a bead of **Prime Adhere** on the top of panel #1 and #2 to stop any water from siphoning at the joint. Next, cut and bend the pan flashing to fit. The artificial ribs should be ½" high. Set in and fasten.

Step #3 – Before installing the upper panels, run a bead of **Prime Adhere** on top of the pan flashing parallel to the upper curb. Hold the upper panels back far enough from the curb to allow the water to drain to either side. Generally 4" to 6" is sufficient, depending on the width of the skylight. Working from right to left, cut and install panel #4, snapping it into place and continue fastening as usual across the panel #5.

Step #4 – Install the bottom flashing #6 as you would the standard endwall flashing. Next, apply side flashing (#7-#8) finishing off around the curb of the skylight. (Trim items shown in the pictures as #6, #7 and #8 are actually all the sides and bottom flashings. They are just cut differently on the job.

General Notes –

Prime Adhere should be used at all joints and where the metal is to be overlapped.

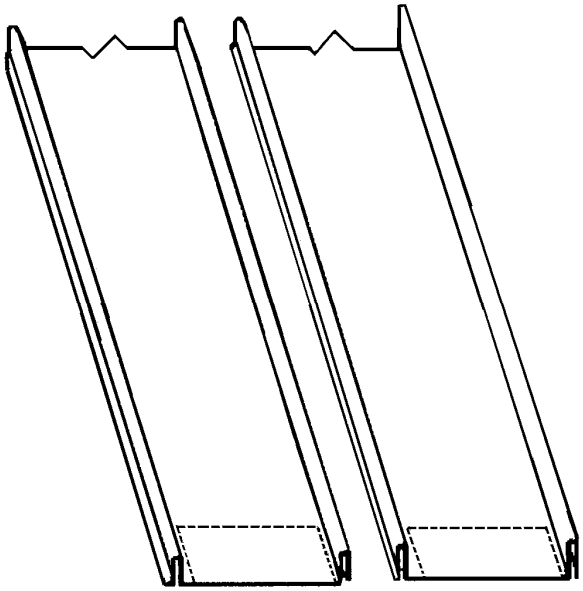
The care and attention to detail that is used when installing the flashings determines the overall finished appearance.

The preceding information is designed as a general guideline to be used and is not the only acceptable method to flash a skylight.

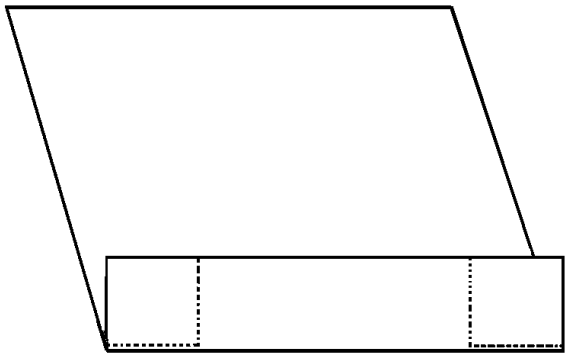
For information concerning Velux Skylights and their application, please contact Velux for their specifications at 800-88-Velux.

SKYLIGHT FLASHING (CUTTING INSTRUCTIONS)

#5 #4

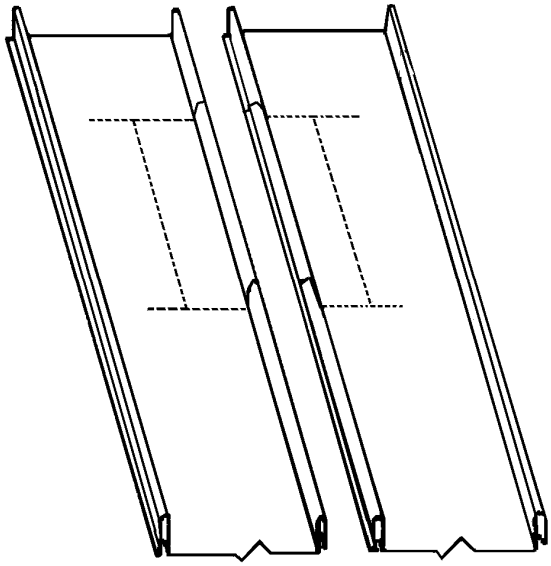


#3

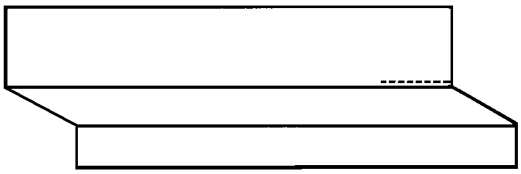


Note: #3 is the Pan flashing. Order the proper size for the curb height of your skylight. #6, #7 & #8 are the Sides and Bottom flashing. The only difference is the way they are cut on the job. Again, order the proper size for the curb height of your skylight.

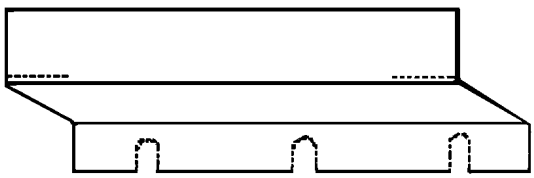
#2 #1



#7 and #8



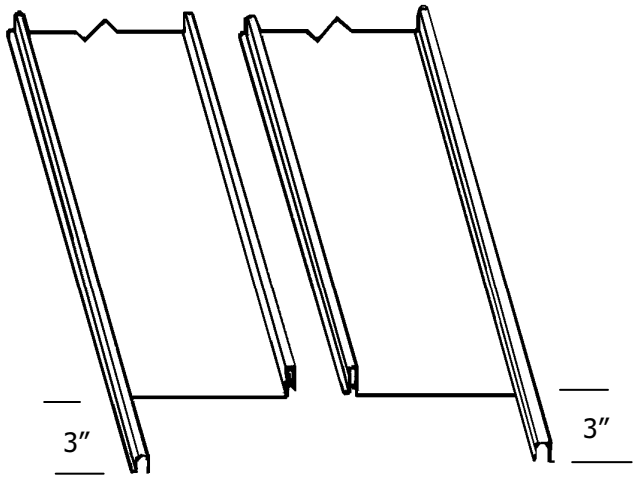
#6



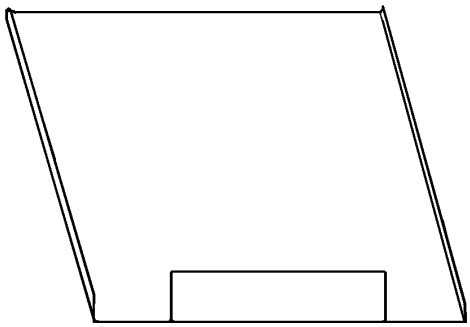
CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

SKYLIGHT FLASHING (CUT)

#5 #4

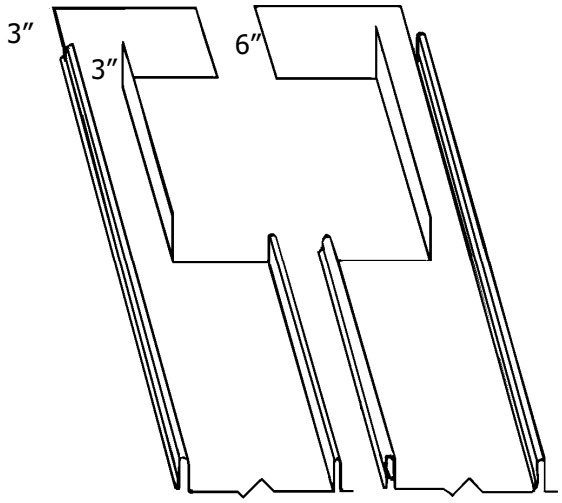


#3

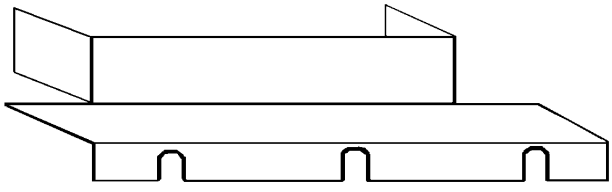


#7 & #8

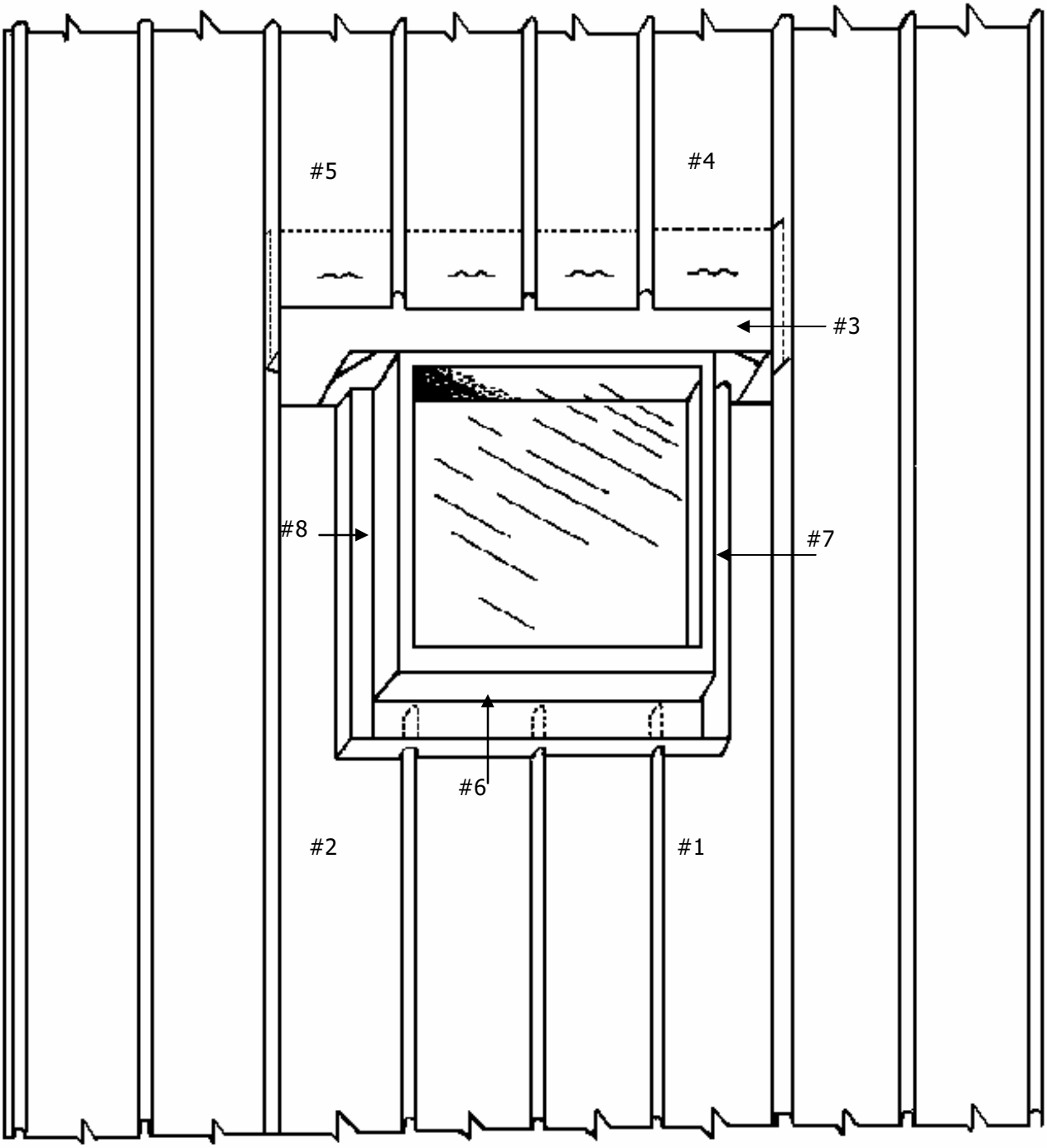
#2 #1



#6



SKYLIGHT APPLICATION



CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

RETROFIT DEKTITES™

Designed for applications where obstructions or continuous pipes prevent the use of standard Flasher Pipe Flashings.

- Made of flexible, weatherproof E.P.D.M. rubber.
- Corrosion-resistant aluminum case can be easily shaped to conform to most roof profiles.
- Unique stainless steel closure effectively resists corrosion and provides a positive weatherproof seal.
- The pliable cone and stainless steel closure can easily be trimmed to the exact diameter of pipe to be flashed.
- Isolates the pipe from building movement caused by expansion, contraction or vibration.
- -30º F to +250º F continuous service temperature range.
- Easily installed by wrapping around existing pipe and fastening down onto metal roof deck.
- Pipe diameter markings on the flexible cone in inches and millimeters.

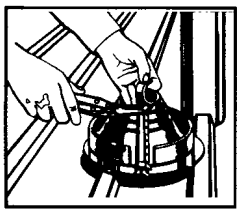
Applications

Plumbing, Heating, Air Conditioning, Electrical and Exhaust Vents.

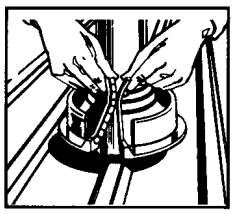
RETROFIT DEKTITE™ SELECTOR GUIDE

Dektite Size Number	Outside Diameter of Pipe to be Flashed	Dektite Base Diameter	Dektite Height
801	3/4" – 2-3/4"	6-3/10"	3-1/2"
802	2" – 7-1/4"	10-3/4"	5-3/5"
803	3-1/4" – 10"	14-1/2"	5-4/5"

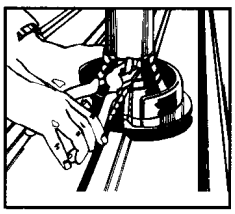
Retrofit Dektite Installation Guidelines



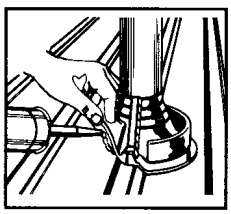
STEP 1: Begin cutting opposite of the mechanical locking joiner. Cut through the joiner with tin snips.



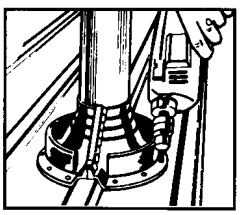
STEP 2: Wrap Retrofit Dektite around the pipe. Engage the top section of the joiner first, then proceed down until joiner is completely engaged.



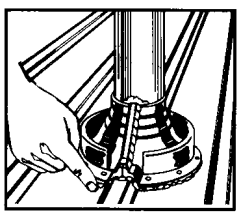
STEP 3: Crimp joiner tightly, starting at the top by squeezing joiner "fingers" with pliers.



STEP 4: Apply sealant to the underside of the ribbed aluminum base. Press Retrofit Dektite against contours of the panel configuration.



STEP 5: Attach Retrofit Dektite to the panel with self-drilling screws. Screws should be spaced as necessary to avoid gaps between the base and the panel.



STEP 6: Apply additional sealant around the top of the Dektite and along the mechanical locking joiner seam.

Flashers®

The flexible flashing that lasts for years but installs in minutes.

INSTALLATION PROCEDURE

1. Cut to pipe diameter marked on Flashers (this is approximately 20% smaller than the diameter of the pipe).

2. Slide the Flashers down the pipe, using water to lubricate if necessary.

3. Form and bend the aluminum base of the Flashers to fit the surface of the roof.

4. Seal the Flashers by applying urethane/silicone sealant between the Flasher and the roof. Use a large slot screwdriver to press the base down tightly.

5. Fasten the Flashers with weather-resistant fasteners to complete the seal.

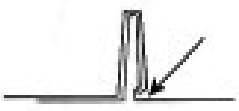
SIZE CHART

Flashers Size	1	2	3	4	5	6	7	8	9
Outside Pipe Diameter (inch)	1/4"- 2"	1 3/4"- 3 1/4"	1/4"- 5"	3"- 6 1/4"	4 1/4"- 7 1/2"	5"- 9"	6"- 11"	7"- 13"	10"- 19"
Outside Pipe Diameter (mm)	6-50mm	44-82mm	6- 127mm	75-160mm	108-190mm	125-230mm	150-280mm	175-330mm	254-483mm
Base O.D. Diameter	4 3/4"	6 1/4"	7 3/4	9 1/4"	10 3/4"	12 1/4"	14 1/4"	16 1/2"	25 1/2"
Top Diameter	Closed	1 3/8"	Closed	2 1/4"	3 1/2"	4"	4 1/2"	5 1/2"	7 3/4"
Overall Height	3"	4"	4"	5"	5"	6"	6"	6"	8"
Carton Quantity	10	10	10	5	5	5	5	5	2

Notes: Flashers numbers 1 and 3 are closed on the top. On a deep corrugated surface or on a steep pitched roof, use the next largest size Flashers for optimum flange flexibility.

MATERIAL SPECIFICATIONS

Material	Temperature Range	Range Applicable Specifications
EPDM (black)	-65° to +250°	ASTM-D D2000, M3, BA 510, A14, B13, C12, F17, Z1, Z2, Z3, Z4
EPDM (color)	-65° to +250°	ASTM-D D2000, M2, BA 507, C12, F17, Z1, Z2, Z3, Z4
Silicone	-100° to +450°	ASTM-D D2000, M4, GE 505, A19, B37, C12, F19, Z1, Z2, Z3



Special Note – If using with Snap-Loc profile and hole for pipe falls at a rib, it will require installer to fill area where the panels lock with sealant from the ridge cap down to hole to avoid water running under flexible base.

CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

SNAP-LOC END-LAP DETAIL

When you have a run longer than 40'0", or need to have shorter panels than required due to handling requirements, you will need to become familiar with this section of the **Snap-Loc** manual **PRIOR TO ORDERING YOUR MATERIAL.**

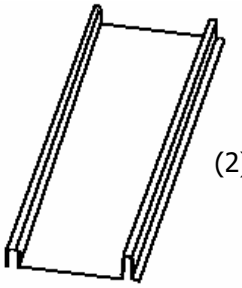
The **Snap-Loc** panels cannot be overlapped end to end as some other profiles. In order to end-lap **Snap-Loc,** the following procedure MUST be followed.

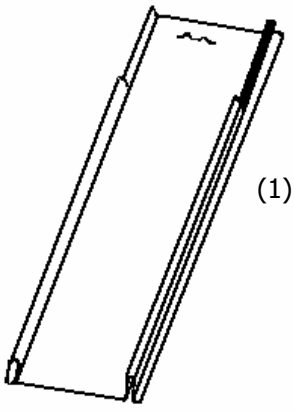
The lower panel (1) is cut as shown. The ribs are cut along the top approximately 4" to 6" as required by the pitch of the roof. With a pair of locking "Duckbill" pliers, flatten (crimp) the leftover male rib. This will create a new artificial rib and allow enough play for the panels to be end-lapped without buckling your top panel. The flat portion of the panel is left so that it can be overlapped with the top panel (2).

First, install the lower panel (1) per the standard application. Next, apply a bead of **Prime Adhere** on the flat portion of the lower panel where the upper panel will overlap.

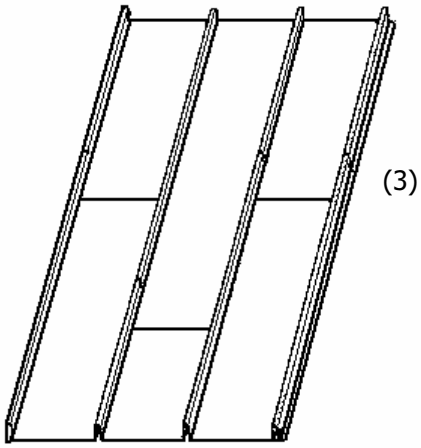
Next, apply the upper panel (2). The upper panel ribs should overlap the crimped ribs of the lower panel (1) and butt up against the non-crimped ribs of the lower panel. Apply **Prime Adhere** to the joints.
To stagger the joints in an orderly manner, the panels are normally ordered in two different lengths. If you had a 48'0" run, you could order one panel length of 28'0" and the other at 20'6" (allowing a 6" overlap). By doing this, you would start the first run with the longer panel on the bottom. The next run, the shorter panel would be on the bottom and so on.

In order to continue the next run, the same application procedure is used with one exception. **THE JOINTS MUST BE STAGGERED IN ORDER TO ASSURE A WEATHER-TIGHT SEAL (3).**



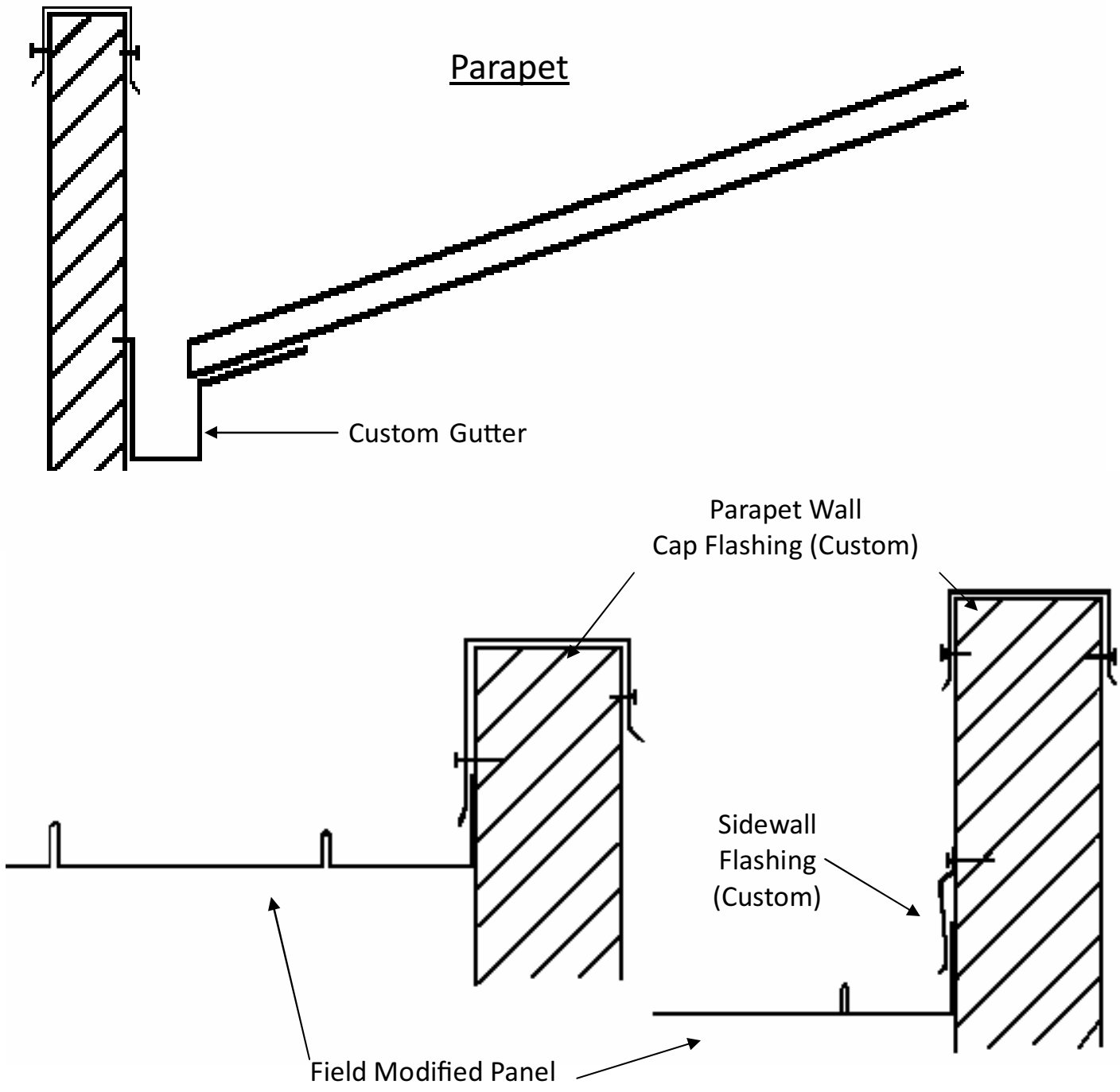


To stagger the joints in an orderly manner, the panels are normally ordered in two different lengths. If you had a 48'0" run, you could order one panel length of 28'0" and the other at 20'6" (allowing a 6" overlap). By doing this, you would start the first run with the longer panel on the bottom. The next run, the shorter panel would be on the bottom and so on.



CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

PARAPET APPLICATION

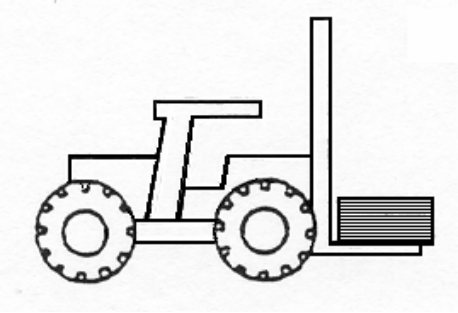


Custom Trim Pieces - Please specify dimensions when ordering.

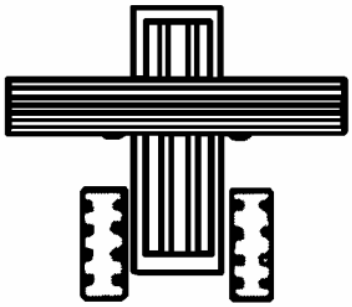
CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

HANDLING PANEL BUNDLES

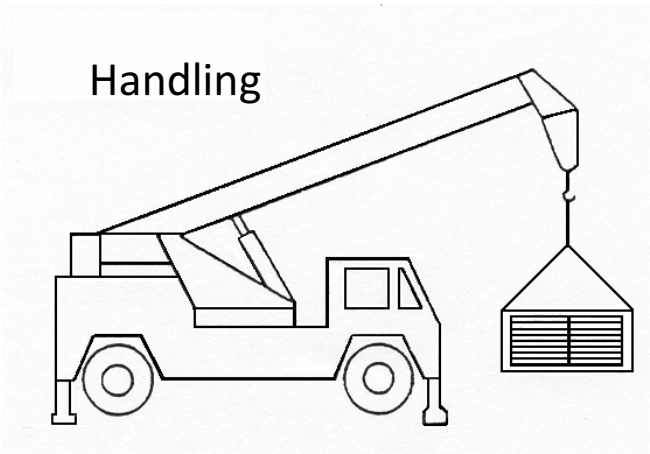
Care in the handling of the **Snap-Loc** panels from the time of arrival at the building site through their actual placement on the structure requires normal precautionary measures to prevent damage to the panels. This may involve the use of a spreader bar for a crane or the proper use of a forklift to handle the bundles.



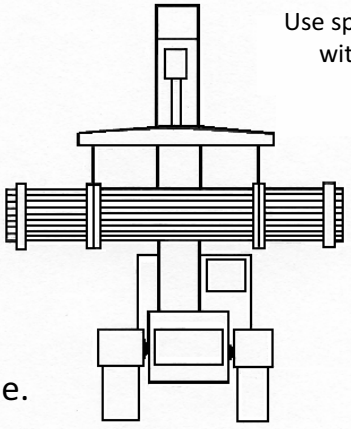
Evenly spread forks under the bundle



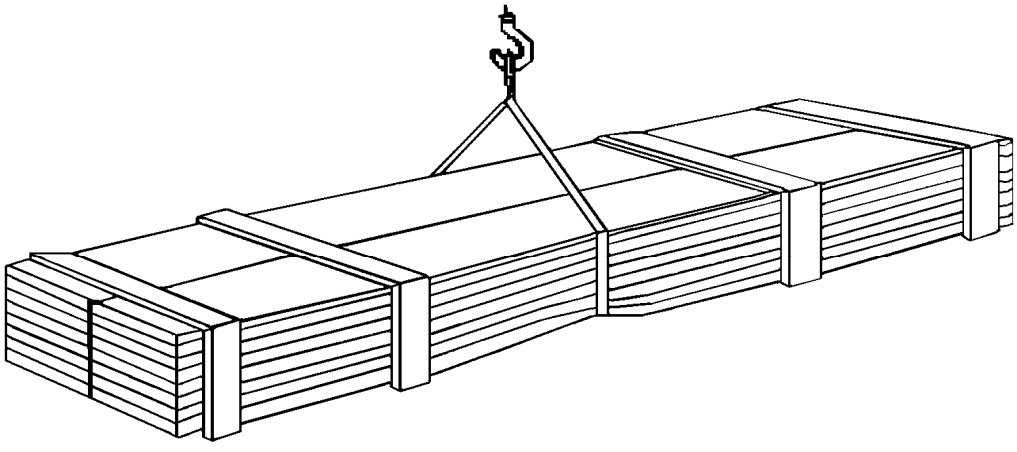
Handling



Use spreader bar with crane



Do NOT lift bundles with a single cable.

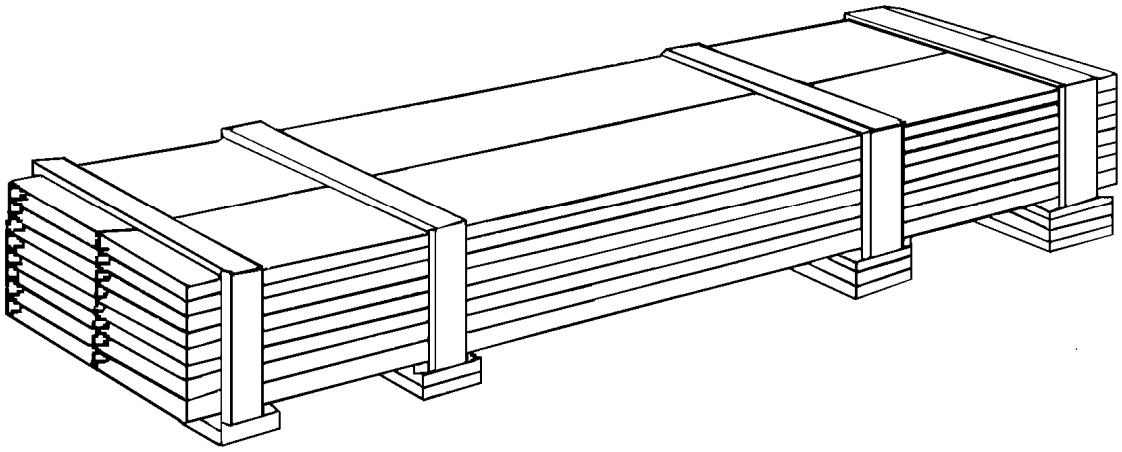


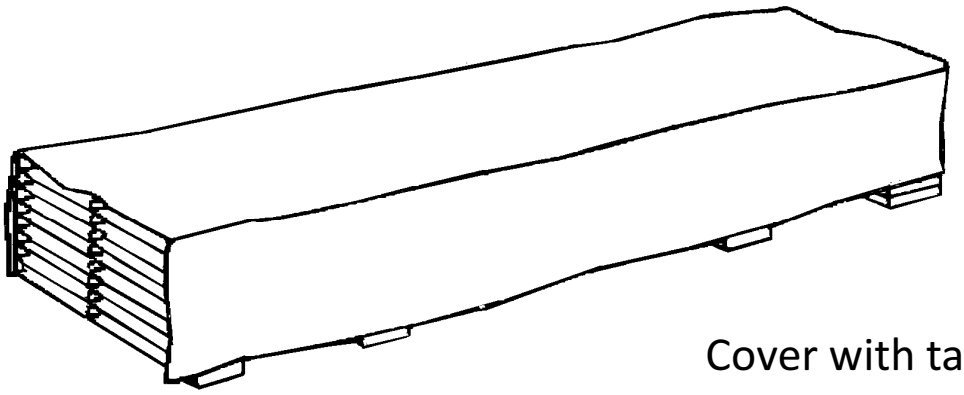
CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

STORAGE

All bundles of **Snap-Loc** and accessories should be stored in such a manner as to prevent moisture from damaging the surface finish of the metal. This is easily accomplished by raising one end of the bundle allowing any moisture inside of the bundle to escape from the ends. The bundle should then be covered with a waterproof tarp as a final precautionary measure. It is important to wipe the water from the panels if they become wet and allow them to air dry. The air should be allowed to circulate through the loosely restacked bundles to dry them completely. **Storing Snap-Loc panels in a wet condition can cause the deterioration of the panels.**

Raise one end to drain any moisture.





Cover with tarp allowing air to circulate through the bundle.

CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

SNAP-LOC TAKE-OFF GUIDE

This guide is an effort on the part of Champion Metal of WA. to make the use of **Snap-Loc** roofing even easier. This guide will not answer every question involved with measuring each roof. However, it should give you the fundamentals required. With this guide, a little common sense and some assistance from your Authorized **Snap-Loc Distributor,** you should be well on your way. It is our objective to make you feel comfortable with the material you are ordering.

THE PERSON IN CHARGE OF INSTALLATION SHOULD BE COMPILING THE MATERIALS LIST FOR THE JOB.

We at Champion Metal of WA. do not compile materials lists. Metal roofing is cut to the closest inch. Nothing will upset an installer more than to have to cut a couple of inches off every panel, simply because they did not take the time to compile their own list. It may cost the installer a lot of extra time and money.

In this same regard, we at Champion Metal of WA. do not encourage our distributors to compile materials lists either. What we do ask our distributors is to understand the following procedures so that they can teach their installers how to measure their roofs and put together their materials list.

These are the steps required to do your material takeoff. Please refer to the roof drawing (Appendix 2) for the following example.

- **Draw a picture of the roof looking down on it.** You will find this makes it much easier to understand just what direction the panels will be laying.
- **Section the roof into two different types of areas.** These two areas are called straight runs and angled runs. A straight run is any roof plane that has both ends of the panels ending in a 90° angle. An angled run is any part of the roof in which a panel does not end in a 90° angle. Note: All panels are cut to a 90° angle at the factory. Any other angles must be cut in the field by the installer.

- **Measure all eaves and ridges.** You will use these measurements in order to identify how many panels in each area to order. **Snap-Loc** is a one-foot coverage panel, so you can round these numbers up to the nearest foot.

- **Measure all gable-run lengths in inches.** If a dormer intersects a roof plane, you will need the length of the panel from the ridge of the main roof down to where the dormer intersects it. You will find that the math is much easier to understand if it is figured in inches rather than feet and inches.

- Identify and label all identical areas. You will find that most structures start out as boxes. When the architect complicates the roof-line, they create many identical areas. By labeling these areas, you will only have to do the math once for every identical section.
- Order the panels for your straight run areas. Since **Snap-Loc** is a one-foot coverage panel, and you have measured your eaves and ridges, it should be easy to identify how many panels you will need in a given area. The critical measurement is the length to order. Consider the following variables involved in figuring out the exact length to order:

1. How much do you deduct from your panel length to accommodate the ridge cap?

a. You may need to subtract 1½" to 2" if your roof is to be vented. You may want to contact your local building department to find out just how much ventilation is required for your structure.

b. If you are using a 2 x 2 nailer board to fasten your ridge cap down, you will need to subtract 1½" from your panel length.

c. You will need to subtract ½' to 1" to allow yourself a little play. Remember that if your roof is out of square or your panels are not cut exactly consistent, you will want to line up your panels flush with the eave line and cover up any inconsistencies with your ridge cap.

d. If your roof is steeply pitched, you may have to order a larger ridge cap to accommodate the steeper pitch and give you enough material to cover at the top.

2. How much do you add to your panel length at the eave line?

a. If your roof is guttered, you can overhang the panel anywhere from ½" to 2". It all depends on the pitch of the roof and how high the gutters are installed. The idea is to overhang the roofing enough so that the water will drain into the gutters but not overshoot them.

b. Typically in heavy snow-load areas, roofs are not guttered. If this is the case, please use an eave trim to help protect the trim board. You can overhang the panels anywhere from 0" to 1". Many people install them flush so that they do not see the bottom of the panels from the ground. If this is done, be sure to install **Prime Adhere** or sealant tape under the panels. This is to prevent water from siphoning up under the panels.

As you can see, there are many variables required in figuring out exactly what lengths to order your panels. Only the installer will know all of these variables.

For example, let's refer to our drawing (Appendix 2). In the sections labeled (A), we have 28 + 9 + 9 = 46 panels. The rafter lengths are 170". Let's assume that we are installing a standard ridge cap and we need an inch of overhang into the gutter.

Here are the measurements.

Minus 1-1/2”	for the nailer board
Minus 1/2”	for play
Plus 1”	for the overhang
Equals Minus 1”	net loss on your panel length

For the (A) areas of your roof, you would order 46 panels at 169”.

- **Order the panels for your angled roof runs.** There are three main items that you must identify in order to figure out any angled runs.

  1. Identify the number of identical areas you are trying to figure out. In the sections labeled (B) in our example, there are 8 identical triangles. After we figure out the different panel lengths, we now know that we will order 8 at each length. This way we will be done with all 8 triangles at one time. In the section labeled (C), there will be 2 identical areas.

  2. Identify the number of different panel lengths there will be in the given roof plane. By either examining the footage on the ridge line or the eave line, we can identify this number. In the sections labeled (B) in our example, we have an 8-foot eave line. Therefore, we will have 8 different panel lengths. In section (C), there will be 5 different panel lengths.

  3. Identify the amount of footage you are losing in a given roof area. In the sections labeled (B) in our example, we are starting out with a 170” panel and going down to 0”. Therefore, we are losing all 170”. In the section labeled (C) in our example, we are starting out with a 170” panel and going down to a 70” panel. Therefore, we are only losing 100”.

  Now that you have identified these three items, you are ready to figure out your materials list. Begin developing your cutting schedule for the roof areas. In section (B), we will be ordering 8 panels each at 8 different panel lengths. In section (C), we will be ordering 2 panels each at 5 different lengths.

Section (B)		Section (C)
8 panels @ _____	8 panels @ _____	2 panels @ _____
8 panels @ _____	8 panels @ _____	2 panels @ _____
8 panels @ _____	8 panels @ _____	2 panels @ _____
8 panels @ _____	8 panels @ _____	2 panels @ _____
		2 panels @ _____

Now you have to figure the lengths of your panels. In order to do this, you will need to figure how much you will be cutting off of each panel as you move down a hip or valley. To figure this, you only need one formula:

The total amount of loss in an area, divided by the number of panels in an area = the amount you are cutting off per panel.

Section (B): 170" loss / 8 panels = 21.25" per panel. 21" will be close enough.

Section (C): 100" loss / 5 panels = 20" per panel exactly.

Now you can start with the longest panel length and simply start subtracting.

Section (B) Subtract 21"		Section © Subtract 20"
8 panels @ 170"	8 panels @ 86"	2 panels @ 170"
8 panels @ 149"	8 panels @ 65"	2 panels @ 150"
8 panels @ 128"	8 panels @ 44"	2 panels @ 130"
8 panels @ 107"	8 panels @ 23"	2 panels @ 110"
		2 panels @ 90"

You now have a way of checking your work. In section (B), if you are going to cut 21" off of your panel, you must have at least 21" left on your last panel or you mess up your takeoff. In section (C), if you are going to cut 20" off of your last panel and still have a 70" panel left, you must have at least a 90" panel on your last measurement.

The last thing to remember is that we can only cut **Snap-Loc** panels as short as 30". Once you have checked your work, you can make the proper adjustments.

- **Order your trim and accessory items.**

❖ **Trim**: All trim items are 10 feet in length. Refer to Appendix 1 to locate the appropriate trim pieces for your roof. When ordering the amount needed, don't forget that you will have to overlap your trim when splicing together. Champion Metal of WA manufactures all the trim per order. If you need custom dimensions, please ask your distributor. CMW has the capability of fabricating trim according to your specifications though the pieces will be in 10-foot lengths only.

❖ **Screws**: All screws are sold by the hundreds. Bugle head screws in a 1" length are usually used to apply the panels. You may order the screws in longer lengths, i.e. 1 5/8", 2 ¼", etc. You should order one fastener per square foot of roofing. This will allow a few extra screws. You will also need painted hex head screws with washers to apply the trim items. Figure one fastener per lineal foot of trim.

- **Flasher Pipe Flashings**: **Flasher®** pipe flashings are used to flash all pipe penetrations. It is important to take into consideration the pitch of the roof when ordering the appropriate **Flasher®**. These boots each accommodate a range of sizes. Please ask your distributor for assistance. Note: When pipes are large (such as stovepipe), many roofers prefer to build a curb and flash the curb like a skylight. This tends to be less expensive, more attractive and more leak-proof. Also remember that when installing a **Flasher®** boot over a seam, sealant must be installed inside the seam from the roof penetration up to the ridge line. This prevents water from getting inside the seam and leaking onto the roof deck.

- **Prime Adhere:** This is the sealant CMW recommends for **Snap-Loc** roofing. It is applied wherever metal is overlapped to prevent capillary action. **Prime Adhere** should also be applied in valleys, around skylights, and under **Flasher®** pipe flashings. Note: A good roofer does not flash a roof so that he has to rely on his sealant. **Prime Adhere** is an inexpensive insurance policy.

- **Paint**: It is always a good idea to add a can or two of paint per order. Note: Paint is generally used to accessorize your roof. **DO NOT SPRAY IN THE FIELD OF YOUR ROOF TO COVER SCRATCHES.** The paint will fade at a different rate than the baked-on SMP (Silicone Modified Polyester) finish of the panels.

Here is a summary of what would be ordered in our example roof:

Section A: 46 panels @ 169”

Section B: 8 panels each at 170”, 149”, 128”, 107”, 86”, 65”, 45”, and 30” (23” adjusted).

Section C: 2 panels each at 170”, 150”, 130’, 110”, and 90”.

Section D: 2 panels each at 100”, 75”, 50”, 30” (25” adjusted).

Section E: 18 panels @ 100”.

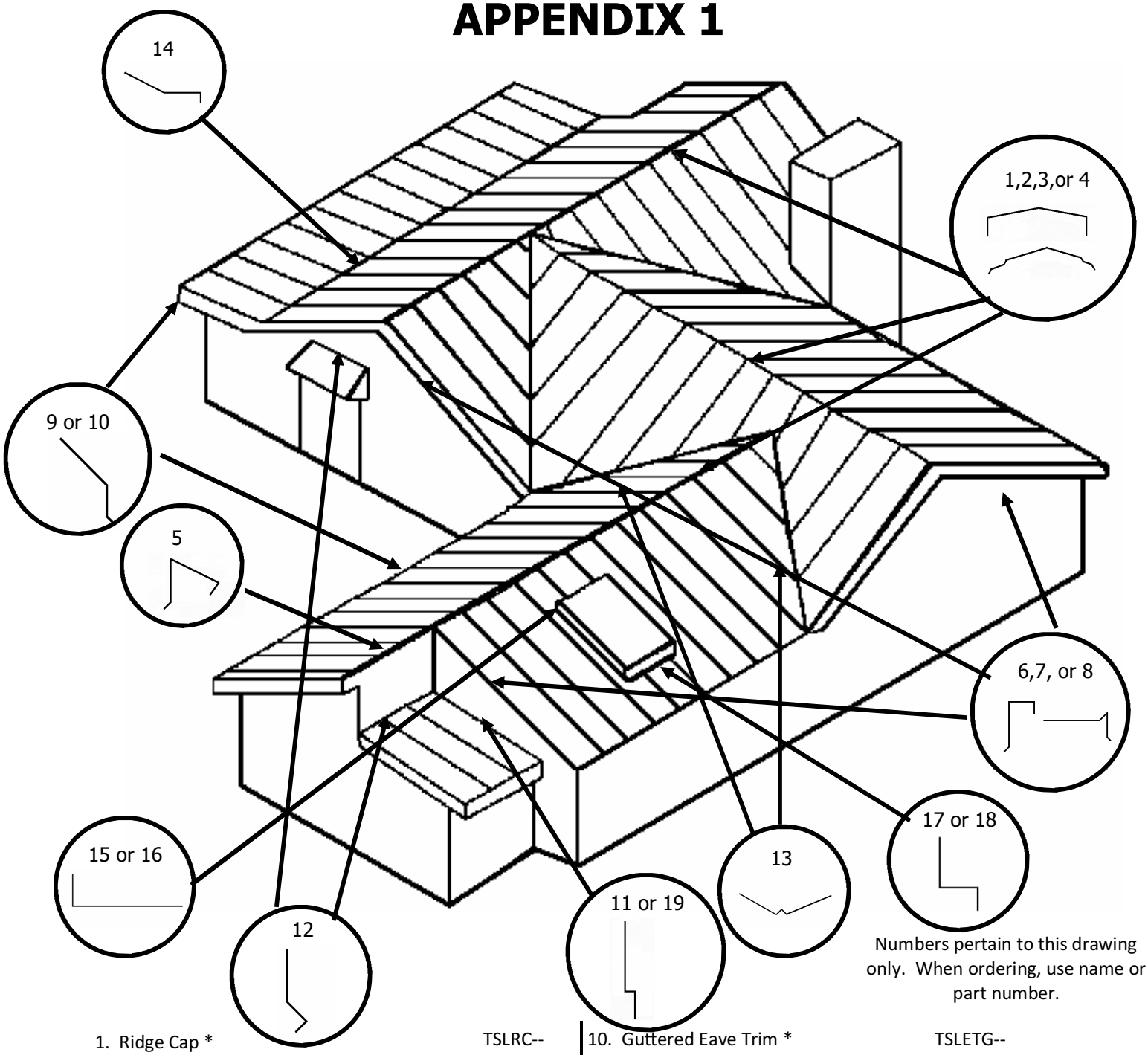
(13) Ridge Cap - ??? Pitch	(1500) 1” Bugle Screws
(2) Gable Trim	(200) 9 x 1” painted Trim Screws
(4) W-Valley	(6) tubes clear **Prime Adhere**
(15) Eave Trim - ??? Pitch	(1) 4-oz. brush-top can of paint

It is generally easier to draw a picture of your roof with the actual measurements. Never order directly off blueprints alone. Once you have completed the takeoff, you may want to ask your distributor to check the work.

Champion Metal of WA would like to reiterate that the installer should compile the materials list. As you can see, the list can become quite complicated. When the panels are manufactured, and prepared for shipment, they are stacked with the longest lengths on the bottom up to the shortest pieces on top. If the installer does not do his own takeoff, he will never know where all the pieces are to be installed. If you are still confused about the material takeoff process, please ask your Authorized **Snap-Loc** Distributor for assistance

Thank you for using **Snap-Loc** Metal Roofing.

APPENDIX 1

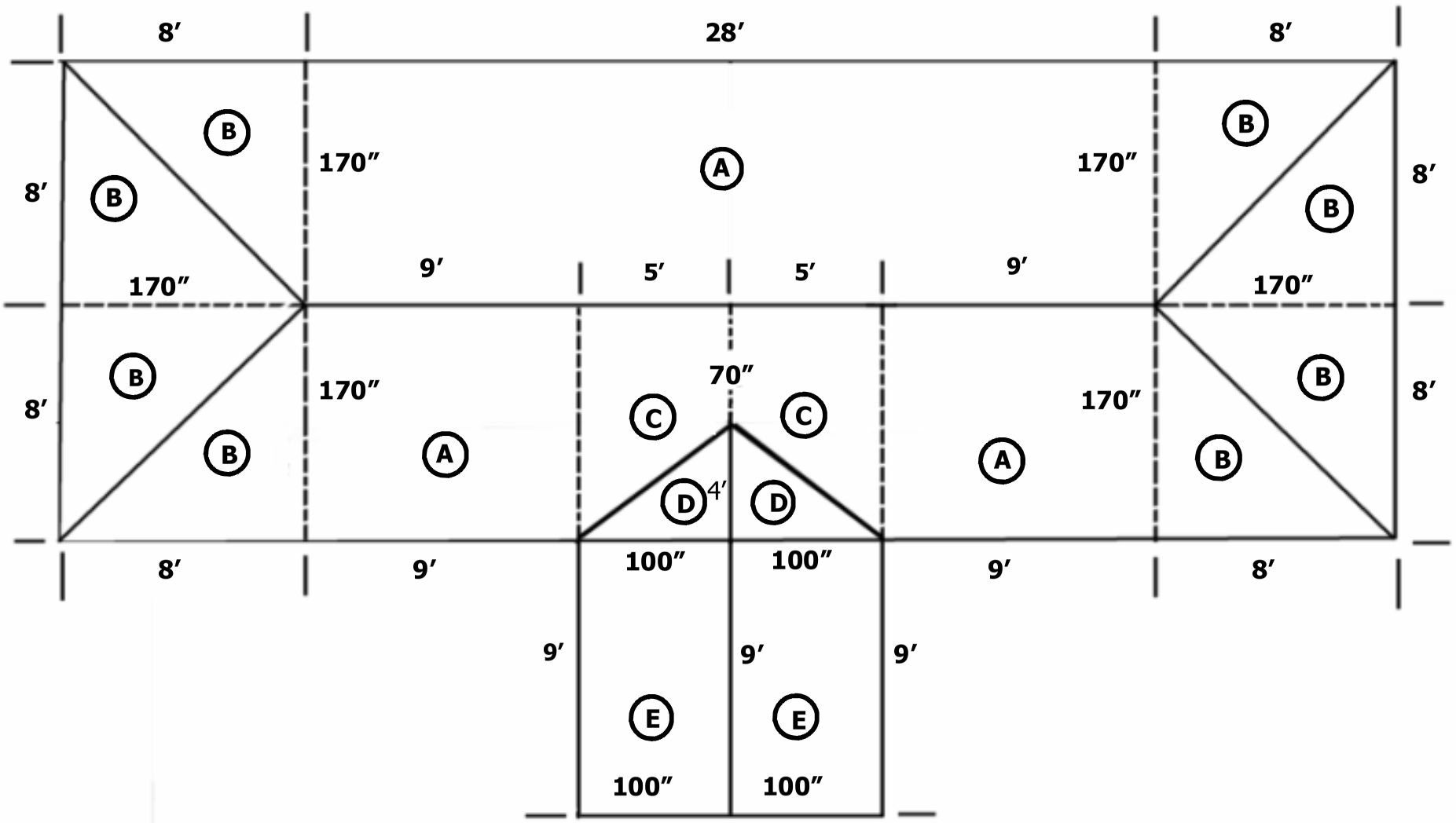


Numbers pertain to this drawing only. When ordering, use name or part number.

1. Ridge Cap *	TSLRC--	10. Guttered Eave Trim *	TSLETG--
2. Vented Ridge Cap *	TSLRV--	11. Sidewall Flashing	TSLSF--
3. Hemmed Vented Ridge Cap *	TSLRVH--	12. Endwall Flashing *	TSLEF--
4. Optional Ridge Cap *	TSLOR--	13. 28” W-Valley	TWV--
5. Shed Metal *	TSLSM--	14. Transition Flashing **	TSLTF--
6. Gable Trim	TSLGT--	15. Skylight Pan Flashing 3.5”	TSLP3--
7. Compensating Gable Trim	TSLCG--	16. Skylight Pan Flashing 5.5”	TSLP5--
8. Flared Gable Trim	TSLFG--	17. Skylight Sides/Bottom 3.5”	TSLSB3--
9. Eave Trim	TSLET--	18. Skylight Sides/Bottom 5.5”	TSLSB5--
		19. Compensating Sidewall Flashing	TSLCS--

* Pitch needed **Two pitches needed

APPENDIX 2


8′
28′
8′
B
B
170″
A
170″
B
B
8′
8′
B
9′
5′
5′
9′
170″
170″
B
B
70″
170″
C
C
170″
B
8′
8′
B
A
A
B
4′
D
D
8′
9′
100″
100″
9′
8′
9′
9′
9′
E
E
100″
100″

SNAP-LOC ORDER CHECK LIST

Part Description	Part No.	Color	Qty	Pitch?	Part Description	Part No.			Color	Qty
Snap-Loc Panels with Accents	180--SLA				8 x 1” Truss Head Screws	SWTH10				
Snap-Loc Panels without Accents	180--SL				9/16” Lath Head Screws	STH10				
Ridge Cap	TSLRC--				1/2” Lath Head Tek Screws	STH10T				
Vented Ridge Cap	TSLRV--				9 x 1” Painted Hex Head Screws	SW10--				
Hemmed Vented Ridge Cap	TSLRVH--				9 x 1.5” Painted Hex Head Screws	SW15--				
Optional Ridge Cap	TSLOR--				1/4” Hex Head Magnetic Socket	MS14				
Shed Metal	TSLSM--				1/4” Hex Drive Phillips Socket	MSPH				
Gable Trim	TSLGT--				Snap-Loc Non-Vented Closure (4’)	MCLSL				
Compensating Gable	TSLCG--				Snap-Loc Vented Closure (2’)	MCLSLV				
Flared Gable	TSLFG--				4 oz. Brush-Top Paint	P--C				
G-Gable	TSLGG--				Prime Adhere clear, white, brown, black, grey	MPA--				
Eave Trim	TSLET--									
Guttered Eave Trim	TSLETG--									
Sidewall Flashing	TSLSF--									
Endwall Flashing	TSLEF--									
Hemmed Endwall Flashing	TSLHEW--									
Compensating Sidewall Flashing	TSLCS--					Regular	Silicone	Colored		
28” W-Valley	TWV--				Flasher #1	F1	FS1	F1--		
Transition Flashing (2 pitches needed)	TSLTF--				Flasher #2	F2	FS2	F2--		
Standard or Gambrel Style					Flasher #3	F3	DS3	F3--		
Skylight Pan Flashing 3.5” x 12”	TSLP3--				Flasher #4	F4	FS4	F4--		
Skylight Pan Flashing 5.5” x 12”	TSLP5--				Flasher #5	F5	DS5	F5--		
Skylight Sides & Bottom 3.5” x 2” x 1”	TSLSB3--				Flasher #6	F6	FS6	F6--		
Skylight Sides & Bottom 5.5” x 2” x 1”	TSLSB5--				Flasher #7	F7	FS7	F7--		
#6 x 1” Bugle Head Screws	SWHL10				Flasher #8	F8	DS8	F8--		
#6 x 1-5/8” Bugle Head Screws	SWHL1625				Flasher #9	F9	DS9	F9--		
#6 x 2-1/4” Bugle Head Screws	SWHL225				#801 Small Retrofit Dektite	DRS				
#6 x 2-1/2” Bugle Head Screws	SWHL25				#802 Medium Retrofit Dektite	DRM				
#6 x 3” Bugle Head Screws	SWHL30				#803 Large Retrofit Dektite	DRL				
#10 x 1” Phillip Wafer Type A Screws	SWPW10									

CHAMPION METAL
Of Washington, Inc.
www.championmetal.com

CARE AND MAINTENANCE

Of your Champion Metal Snap-Loc Roof.

Steel roofing requires very little maintenance to preserve its life expectancy and appearance. However, it does require some. Here is a list of activities that will help ensure that you receive the optimal life expectancy out of your roof.

- Periodically remove all debris from the roof.
- Your metal roof should be washed at least once a year. Wash with a mixture of one cup detergent, which contains less than .5% phosphate, dissolved into five (5) gallons of warm water.
- Another solution would be using a mixture of one (1) cup of household ammonia dissolved into five (5) gallons of room temperature water.

WARRANTY INFORMATION

Please keep all paperwork related to your metal roofing. In order for a warranty issue to be investigated, we must have proof of purchase.

The proof required is our work order number and the date of purchase. If you did not receive a copy of our work order, please contact the dealer from whom the product was purchased.

STORAGE OF METAL ROOFING MATERIALS

It is not a good idea to store metal roofing flat for an extended period of time. When the product is stored flat, water and condensation can siphon in between the panels. Over time the combination of expansion and contraction, the weight of the panels, temperature change and dampness will soften the coatings. Once the coatings are compromised, the life expectancy of the steel is sacrificed.

If you are planning on storing your Snap-Loc roofing, try to elevate one end and possibly cover the bundles to ensure water does not get trapped.

It is our intent to provide you with the information to ensure you the longest lasting life expectancy for your metal roof. If you have any questions regarding this issue, please contact your local distributor or one of our sales representatives.