



Installation Instructions



Residential



Commercial



Multi-Level



Sustainable Building

...and beyond

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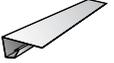
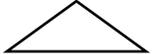
Salesperson: _____

Customer: _____ Date: _____

Address: _____

Home Phone: _____ Work Phone: _____ Cell: _____

Additional Comments:

Product:	Qty:
Panels: 10', 12', 14' or 16' 12 pc/box Color: 	
Carrier: 20 pc/box 	
G-Channel: 6 pc/box <i>remove film</i> 	
Side Cap: 6 pc/box <i>remove film</i> 	
Window Flashing:  9 pc/box	
Trim Coil:  per roll	
3"x4" Downpipe:  10 pc/10'	
6" End Caps:  50 pc	
Elbows:  18 pc	
4" Pipe Clip:  50 pc	
6" Gutter Brackets:  300 pc	
3"x4" Outlet:  50 pc	
Slope Direction: 	
Downspout Location: 	
Deck Condition: Poor Good Excellent	

Calculation Chart

Determine the amount of product you'll need with two easy calculations.

Length of Span/Panels							
Width of Span		10'	12'	14'	16'	18'	20'
10'	Panels	15	15	15	15	15	15
	G-Channel	1	1	1	1	1	1
	Side Cap	2	3	3	4	4	4
	Carrier	3	3	3	4	5	6
12'	Panels	18	18	18	18	18	18
	G-Channel	2	2	2	2	2	2
	Side Cap	2	3	3	4	4	4
	Carrier	2	3	4	4	5	6
14'	Panels	21	21	21	21	21	21
	G-Channel	2	2	2	2	2	2
	Side Cap	2	3	3	4	4	4
	Carrier	3	4	5	5	6	7
16'	Panels	24	24	24	24	24	24
	G-Channel	2	2	2	2	2	2
	Side Cap	2	3	3	4	4	4
	Carrier	3	4	6	6	7	8
18'	Panels	27	27	27	27	27	27
	G-Channel	2	2	2	2	2	2
	Side Cap	2	3	3	4	4	4
	Carrier	3	5	6	6	8	9
20'	Panels	30	30	30	30	30	30
	G-Channel	2	2	2	2	2	2
	Side Cap	2	3	3	4	4	4
	Carrier	4	6	8	8	10	12
22'	Panels	33	33	33	33	33	33
	G-Channel	3	3	3	3	3	3
	Side Cap	2	3	3	4	4	4
	Carrier	4	6	8	8	10	12

Length of Span/Panels

Width of Span		10'	12'	14'	16'	18'	20'
24'	Panels	36	36	36	36	36	36
	G-Channel	3	3	3	3	3	3
	Side Cap	2	3	3	4	4	4
	Carrier	4	6	8	8	10	12

26'	Panels	39	39	39	39	39	39
	G-Channel	3	3	3	3	3	3
	Side Cap	2	3	3	4	4	4
	Carrier	5	7	9	10	12	13

28'	Panels	42	42	42	42	42	42
	G-Channel	3	3	3	3	3	3
	Side Cap	2	3	3	4	4	4
	Carrier	5	7	10	10	12	14

30'	Panels	45	45	45	45	45	45
	G-Channel	3	3	3	3	3	3
	Side Cap	2	3	3	4	4	4
	Carrier	5	7	10	10	13	15

32'	Panels	48	48	48	48	48	48
	G-Channel	4	4	4	4	4	4
	Side Cap	2	3	3	4	4	4
	Carrier	6	9	12	12	15	16

34'	Panels	51	51	51	51	51	51
	G-Channel	4	4	4	4	4	4
	Side Cap	2	3	3	4	4	4
	Carrier	6	9	12	12	15	18

36'	Panels	54	54	54	54	54	54
	G-Channel	4	4	4	4	4	4
	Side Cap	2	3	3	4	4	4
	Carrier	6	9	12	12	15	18

38'	Panels	57	57	57	57	57	57
	G-Channel	4	4	4	4	4	4
	Side Cap	2	3	3	4	4	4
	Carrier	7	10	13	13	16	19

40'	Panels	60	60	60	60	60	60
	G-Channel	4	4	4	4	4	4
	Side Cap	2	3	3	4	4	4
	Carrier	7	10	14	14	18	22

Installation Overview



Install pan flashing up inside the joist bays to bring water over the beam into the gutter.



Install G-Channel 1" down from the bottom of the joists. *(remove protective film from G-Channel before installing)*



Install Side Cap with a temporary fastener at the gutter end. *(remove protective film from Side Cap before installing)*



Install the 1st carrier 3 feet from the G-Channel.



Nest carrier into Side Cap.



Temporarily set a panel to position G-Channel & Gutter.



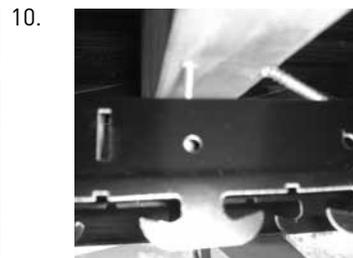
Install gutter to panel height.



With the perimeter trim installed, you are ready for carriers.



Install remaining carriers with necessary insulators.



Permanently fasten carriers with screws making sure panel is straight without belly or crown.



With the carriers installed you can run the panels.

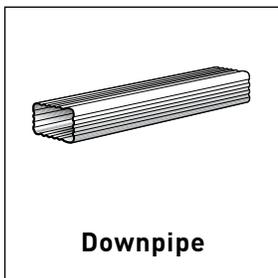
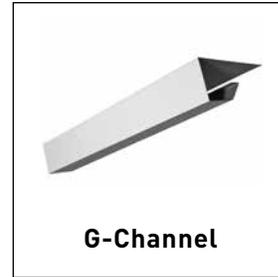
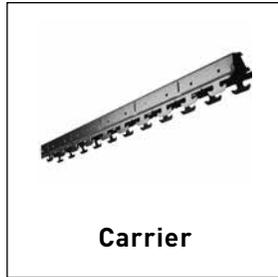


Bend the low end of the panel down into the gutter.



Bend the high side of the panel up to prevent back flow into the G-Channel.

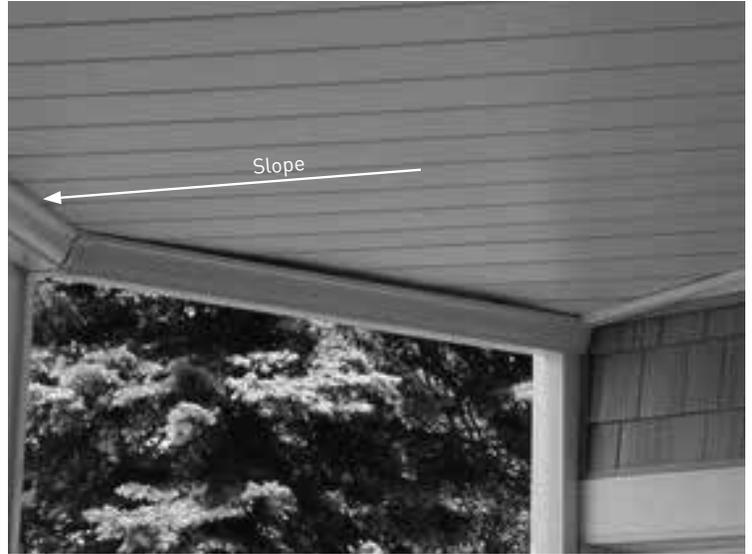
Glossary of Terms





1. Determine Drainage Location

This photo shows an example of drainage towards the house.



APPLICATION EXAMPLE

This photo shows an example of drainage away from the house.



APPLICATION EXAMPLE

This photo shows an example of drainage away from the house.



APPLICATION EXAMPLE

This photo shows an example of drainage away from the house.



2. Installation of the G-Channel

1" under the ledger/joist bottom



3. Alternate Installation of G-Channel

On the outside rim joist if drawing toward the house and rim joist is deeper.



4. Installation of Side Cap

Install the side cap with a mitre into the G-Channel and a temporary fastener at the gutter so it can be lowered into the gutter notch later.



5. Installation of Carrier

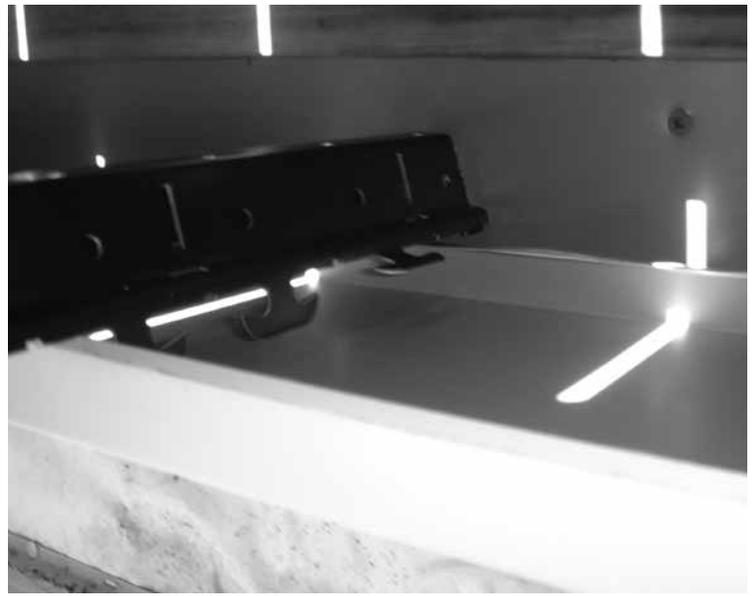
After you've installed G-Channel, Gutter and Side Caps; slide the carrier into position (into Side Cap lip). Before fastening carrier insulate the areas of the carrier with flashing tape that will come into contact with treated lumber.



APPLICATION EXAMPLE

Carrier in position

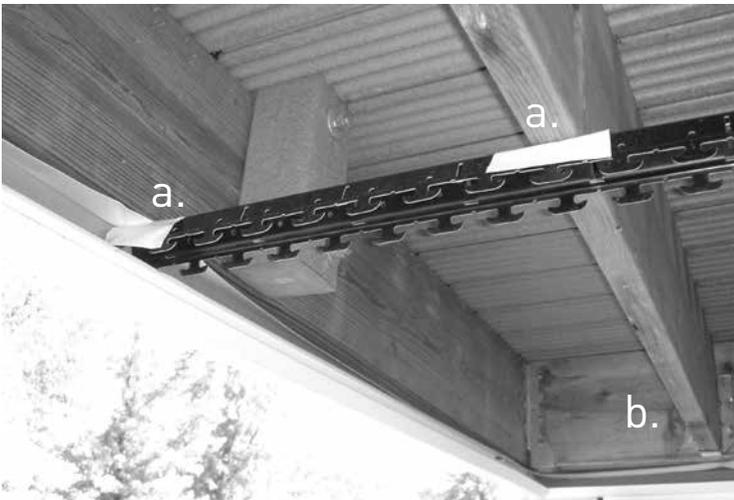
Carriers should be 30" to 40" apart.



APPLICATION EXAMPLE

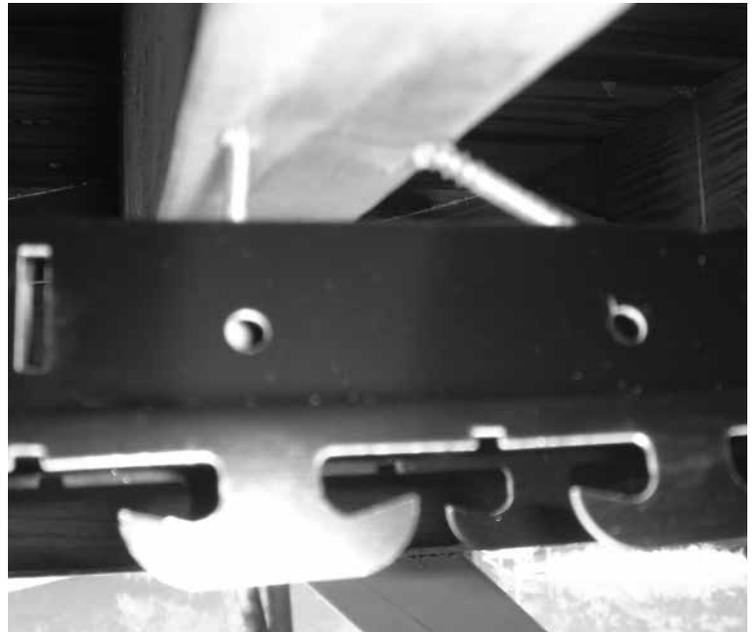
Carrier slides into side cap lip.

Bend the teeth of the carrier sideways so the first panel will nest into the side cap tightly.



APPLICATION EXAMPLE

Install window tape on the carrier where it makes contact with pressure treated lumber.



APPLICATION EXAMPLE

Fasten permanently by putting in a second screw on an angle to lock carrier elevation.



6. Carrier Tips

All the carriers need to start from the lip of the same side cap. This will keep all carriers aligned to receive the panels and avoid surface deflection.



7. Installation of Gutter

Install the first row of carriers around 3' from the wall (or the high side). This will drop the panel 1/4" in the first 3'.



8. Side Cap Location

The side cap must lay in the gutter after it is notched out to the beveled profile.



APPLICATION EXAMPLE

Side profile of the side cap. The size of the exposed face of the side cap will get larger as it falls to the gutter.



9. Notching the Gutter

The face of the gutter needs to be notched out to receive the gutter. With the gutter fitted into the side cap as shown, it can be attached.



10. Ceiling Panel Alignment

Once you have snapped a few panels into the first carrier, the location of the gutter can be determined. The slope line from the G-Channel through the first carrier will determine the height of the gutter. Raise the gutter until the panels rest on the gutter lip without bending downward.



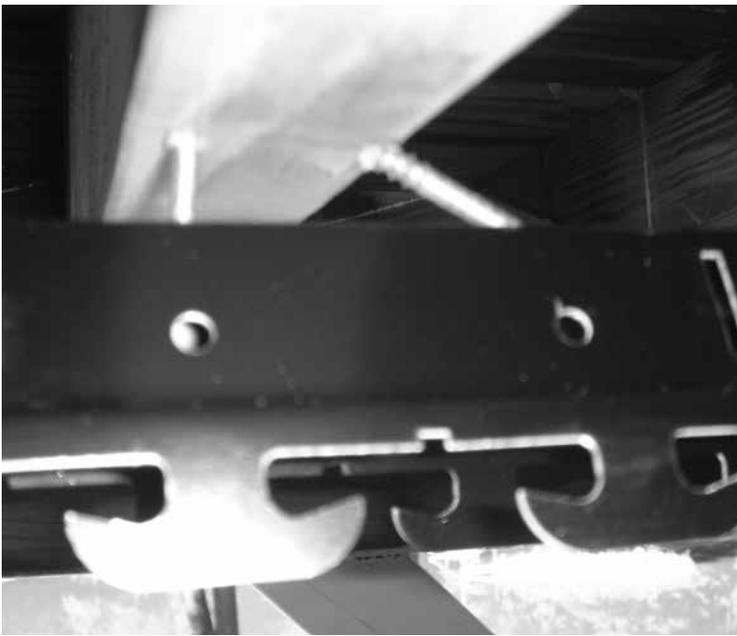
11. Carrier Spacing

Make sure carriers are spaced no more than 40" apart.



12. Installing Remaining Carriers

Now you are ready to install your second and third rows of carriers. Make sure they are straight and flashed where ever they are insulated treated lumber. All the carriers should start from the same Side Cap to align the teeth of each row. If the teeth are out of alignment the panels will not snap in without buckling the panel.



13. Hanging Technique to Permanently Fasten Carriers

Works best if you don't draw the carrier snug to the bottom of the deck joist – panels will hang better and straighter. You can hang the carrier with a screw straight up but, you will permanently fix it the carrier with the screw on an angle. The second screw is installed after the elevation is determined.



14. Insulating the Carrier

If carriers are going to touch the treated lumber it is **important** that you use QE flashing tape between the carrier and treated lumber.



15. Straightness

Make sure your carriers are straight – otherwise your panels will not fit or flow properly and the ceiling will have a "wave".



Gutter End

G-Channel End

16. Installation of Panels

Now you are ready to start hanging panels. Start at one end and work your way across adjusting the carrier elevation as needed. The panel elevation is correct when the panel rests on the gutter without creating a "belly" or low spot. The ends of each panel need to be bent as shown above.



17. Gutter Specifics

The end of the panel that slopes into the gutter should be bent down to fit into and flow into the gutter. The other side of the panel needs to be boxed and caulked in the unlikely event of any back-flow.

18. Prevent Water Wicking

Once you've cut your panel to length slit the bottom of the side wall 1/4" on each side and bend down with hand seamer to prevent water from wicking back under the panel.

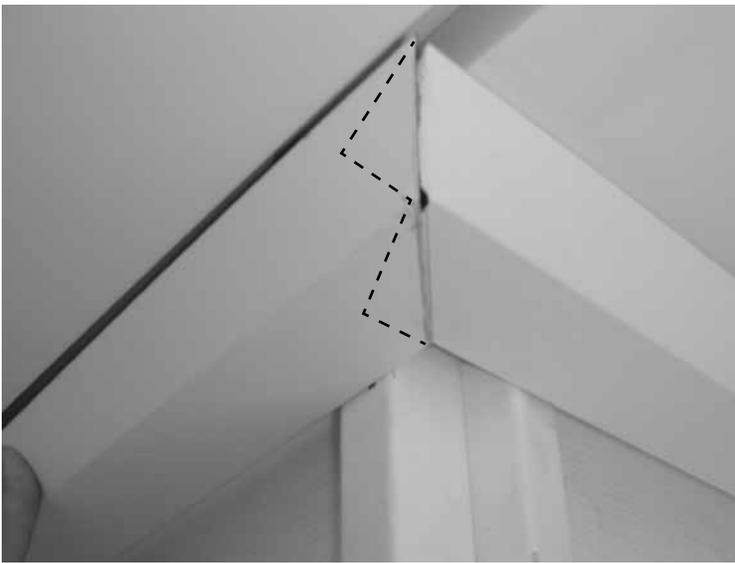


19. Boxing and Caulking

The end that goes into the G-Channel needs to be boxed up and caulked (to prevent any back flow into the G-Channel). Cut a 1/2" slit were the side wall meets the base and fold up to 90° bend. Then bend side wall tabs around and behind this upward bend.

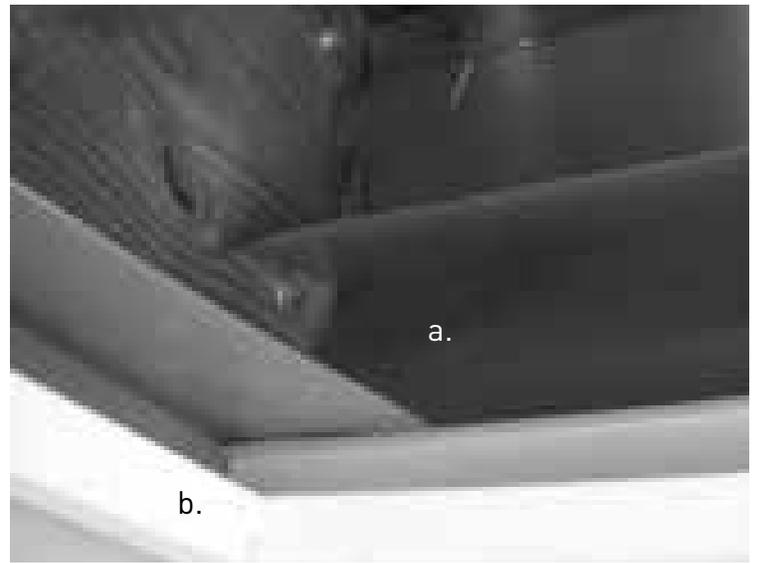
20. Installation of the Final Panel

When you get to the end the last panel will need to be ripped to size. Allow enough material for a 90° (3/4") bend (A) that will nest into the Side Cap. Fasten this bend into the throat of the side cap with zip screws.



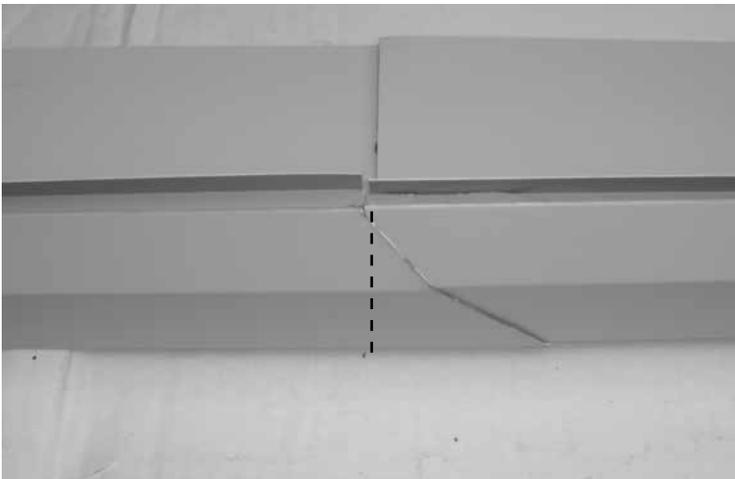
21. G-Channel Specifics

Outside miter of G-Channel.



22. Flashing

- a. Flashing to divert the water away from Side Cap when necessary.
- b. Inside miter of G-Channel



23. Side Cap Specifics

Overlapping/splicing of Side Cap to make it longer than 10 feet.



24. Ceiling Fans

Consult with a local electrician on local building & electrical codes. Having an electrician run electrical feed is a good idea—usually they'll leave the wire coiled and ready for you to run through the rib of the panels and into the junction box.

- Feed wire could also run down system pans in the rib encased in a wire mold.
- Caulk the hole the feed wire comes through.
- Junction box is fastened to framing above the panel rib to support the fan.
- ACQ compatible 4-6 lag bolts should be used to fasten the junction box that supports the fan.



25. Cantilevers

Install pan flashing using Quality Edge trim coil up inside the joist bays to bring water over the beam into the gutter.

APPLICATION EXAMPLE

This pan flashing needs to be sealed to the sides of the joists with caulk sealant or spray foam.



26. Side Cap Being Installed Inside the Joist



27. Change in Direction of Panels requires a side cap and G-Channel back to back



28. Column Tips

Any panel the column penetrates needs to be flashed dry. In other words they cannot carry any water. This is achieved with a tent flashing running the full length of the panel.

APPLICATION EXAMPLE

Additional Column Applications

Columns that come to the system and get trimmed around need to be flashed dry.



29. Dry Vents

It is recommend that warm air vents be diverted down to direct hot air away from inside the system. Install a 90° elbow and flash above to keep this area dry. Then install the wall grill on the bottom of the panel to allow the warm air to escape.

30. Helpful Hint

Make sure the entire system is enclosed to keep the birds and pests out of the system.



insideoutunderdeck.com
qualityedge.com