

Accessing Our Training Videos

- Throughout this manual, you will see QR codes that will allow you to view training videos on a variety of installation subjects.
- You can access the videos from any computer, tablet or smartphone 24/7.
- Simply use your smartphone or tablet camera app to scan the QR codes throughout this manual.

Note: You can also access the video by clicking on the link or by visiting the website listed next to each QR code..

Test using the QR code below:



Or view the video at:

https://deephow.ai/p/ KgDb2aJ3zsU1r1DZ1FtY

Navigating This Manual

For ease of navigation, each Table of Contents contains shortcuts that let you go directly to your desired section by clicking on the subject.

Comments, ideas, suggestions?

Contact us at (937) 726-6268 or david.verbofsky@cornerstone-bb.com

deephow

^{*}The way individuals learn has changed dramatically. Understanding the common challenges with learning and development are imperative in understanding how to reshape training strategies to create a better experience. Through an Al-powered learning platform based on interactive how-to videos, **DeepHow-via-StanleyX** allows organizations to create connected relevant material that is aligned with needs of learners, bridging the skills gap in manufacturing, and service and repair.

Gutter Protection System Installation



Leaf Relief*

https://deephow.ai/p/ TqVFD7GzempF4N4VE1k5



Leaf Relief CH & DuoPro on new gutters*

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Navigating This Manual

To go directly to your desired section, click on the subject in the Table of Contents.

Gutter Protection Systems

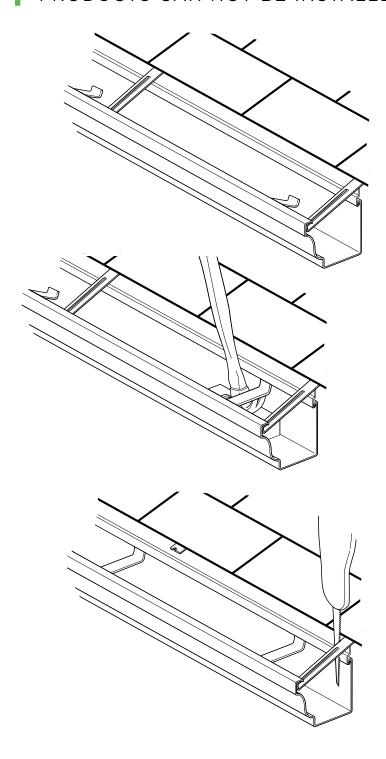
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Replacing Strap Hangers

PRODUCTS CAN NOT BE INSTALLED OVER STRAP HANGERS



Replacing strap hangers or bar hangers on existing gutters

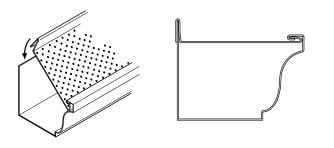
- Hook front of snap-in (free float) gutter hangers (OG13LR5) into front lip of gutters every 24" along length of gutter.
- Position block of wood inside gutter at hanger location. Using claw hammer, apply pressure to bottom of each hanger until hanger engages in existing roof apron or fascia apron. Remove wood block.
- For strap hangers, use a metal cutting tool, such as a reciprocating saw, to cut old strap hangers at drip edge and remove from gutter system.
- For bar hangers, remove nail or screw and remove bar hanger from gutter system.

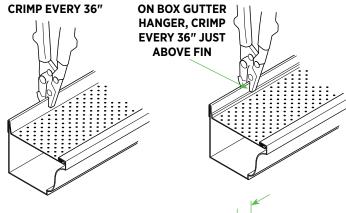
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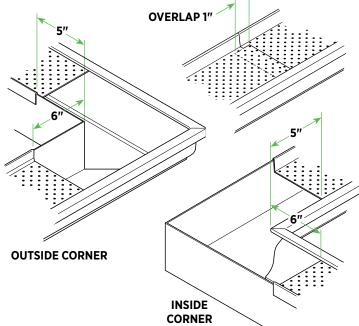
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New Gutters with Continuous Hanger

INSTALLING CONTINUOUS HANGER PRODUCTS (Including all "SN" and "D11" Leaf Relief products)





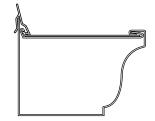


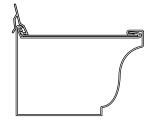
Mount product on the gutter

- Insert the front of the continuous hanger inside the front of the gutter.
- Insert the back of the continuous hanger on the back of the gutter.
- Using an end cap crimping tool, pinch back of continuous hanger and the gutter every 36". Pinch box gutter continuous hanger right above the fin to stabilize it.
- Overlap sections 1".
- At outside (or inside) corners stop the continuous hanger 5" and 6" from the corner areas.

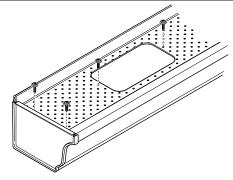
Special applications unique to DuoPro

- The inside/outside corner installation should be followed as shown in the section "DuoPro Inside/Outside Corner Applications."
- Facing the gutter, DuoPro must be lapped left to right.
- DuoPro can be installed on gutters with a flat back or with a curl.



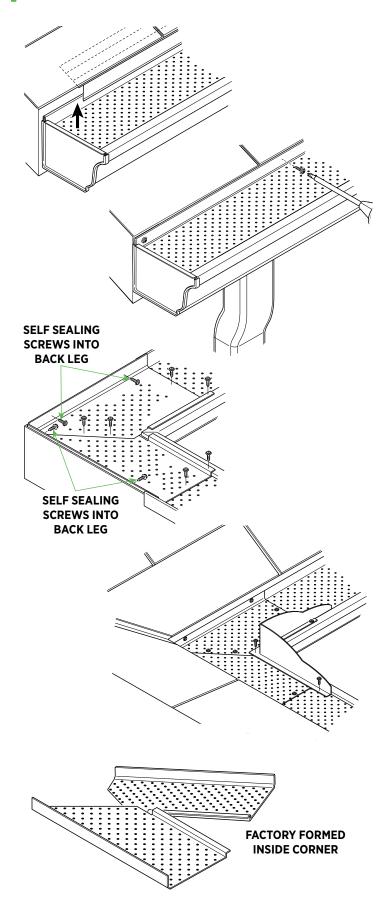


Note: To cut the DuoPro continuous hanger to receive downspout from above, secure the two layers of the product together with 1/2" screws before cutting for the 2nd floor downspout connection.



Installing Gutter

INSTALLATION OF ALL CONTINUOUS HANGER PRODUCTS



Installing gutter

- Insert the back of the gutter under the drip edge (flashing).
- Screw the back of the continuous hanger into the fascia board every 24" using the self-sealing screws. In applications with a metal roof or heavy sliding snow, attach every 12".

Note: Use the 1-1/2" screws that come with the product. Use a long enough extension bar so that the screws are attached straight and level.

 Screw the back of the access panel into the fascia board at each end with self-sealing screws.

Note: All screws going into the back leg of the continuous hanger should be the included self sealing screws.

Note: 3" x 4" or larger downspouts are required in areas with conifer (pine) trees.

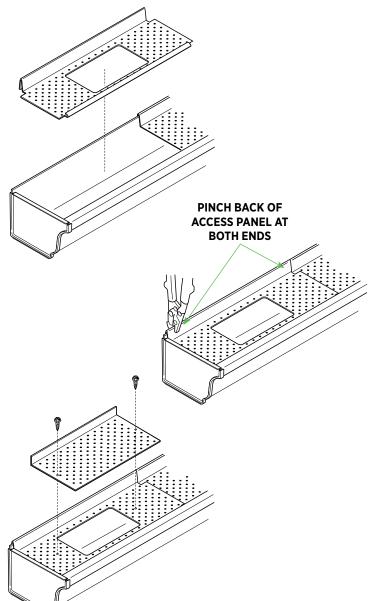
Note: The flow from high-level gutters must be transferred within downspouts directly into lower-level gutters. Seal the downspout into the lower gutter.

Installing inside/outside corners on continuous hanger product

- This product requires the use of Leaf Relief pre-fab corners.
- Ensure corner overlaps sections on both sides by 1".
- · Attach with screws as shown.
- Install water diverter directly on continuous hanger surface at inside corners and valleys with a minimum of three screws.

Access Panels for Continuous Hanger Products

INSTALLING ACCESS PANELS

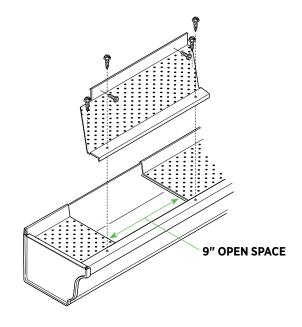


Installing Leaf Relief® continuous hanger Access Panel

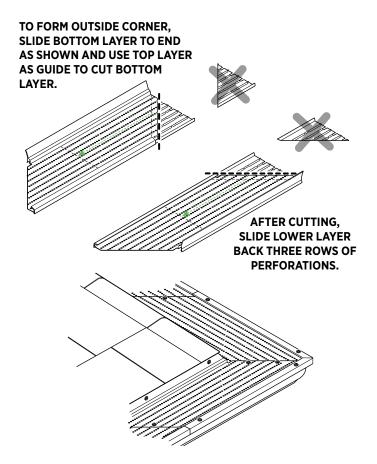
- Stop Leaf Relief continuous hanger 17" from end cap or 8-1/2" on each side from the center of downspout.
- Place the access panel inside the end cap to prevent water from overflowing.
- Pinch the back of the access panel and the gutter at both ends of the access panel.
- Install sliding panel above opening with one 1/2" screw on each side. The screws need to be placed in the middle of the access panel.

Installing DuoPro continuous hanger access panel

- Leave an open space of 9" at all downspout locations, or 4-1/2" each side of center.
- Attach pre-fab access cover over each opening with two 1/2" screws on the front lip of the product and two 1/2" at the overlaps. Use the two included self sealing screws to attach the back leg.



DuoPro Inside/Outside Corner Applications



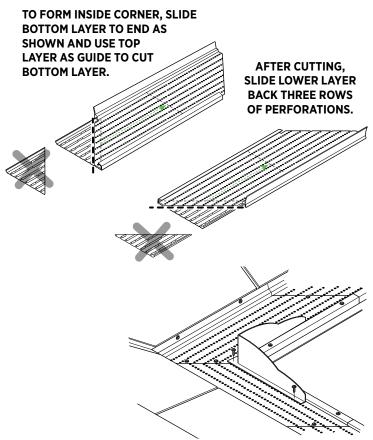
Note: Use the DuoPro Access/Corner Kit (UA11500). Ensure prefabricated corner overlaps continuous hanger by 1" on both sides.

Outside Corner

- Slide the bottom layer of each DuoPro prefab corner to the tip of the corner as shown.
 Use the prefabricated top layer as a guide to cut the bottom layer to fit into the corner.
- Slide the lower layer of each corner back three rows of perforations to allow top layers to overlap each other 1" for installation.
- Attach prefab corners over the straight run.
- Once in place on the gutter, first screw 1/2" screws on the front lip of each part and at the intersection of both parts then secure with self-sealing screws in the back.

Inside Corner

- Slide the bottom layer of each DuoPro prefab corner to the tip of the corner as shown. Use the prefabricated top layer as a guide to cut the bottom layer to fit into the corner.
- Slide the lower layer of each corner back three rows of perforations to allow top layers to overlap each other 1" for installation.
- Attach prefab corners over the straight run.
- Once in place on the gutter, first screw 1/2" screws on the front lip of each part and at the intersection of both parts then secure with self-sealing screws in the back.
- Install water diverter/deflector directly on continuous hanger at all inside corners and valleys.



Installation of All Retrofit Leaf Relief®

INSTALL RETROFIT LEAF RELIEF PRODUCTS OVER EXISTING HANGERS

Ply Gem's Leaf Relief retrofit leaf protection products can be used with all of the following hangers.



Installing classic Leaf Relief on existing gutters* https://deephow.ai/p/ A4fPr5cgqLxNwdYduhBk

Seamless Gutter

Leaf Relief	Width	Spike / Ferrule	Hidden Hanger Systems	Zip Hanger Systems
TP5300	5"	✓	✓	X
TP6300	6"	✓	✓	X
TP5100Q/TPC5100	5" Adjustable	✓	✓	X
TPC6100	6" Adjustable	✓	✓	X
TP53ZIP	5"	✓	✓	✓
TP63ZIP	6"	✓	✓	✓

Installation of All Retrofit Leaf Relief®

INSTALLATION OF FLAT, ZIP, AND ALL "TP" LEAF RELIEF PRODUCTS

Prepare the gutter

 Clean and flush existing gutters and downspouts thoroughly with water.

Note: 3" x 4" or larger downspouts are recommended in areas with conifer (pine) trees.

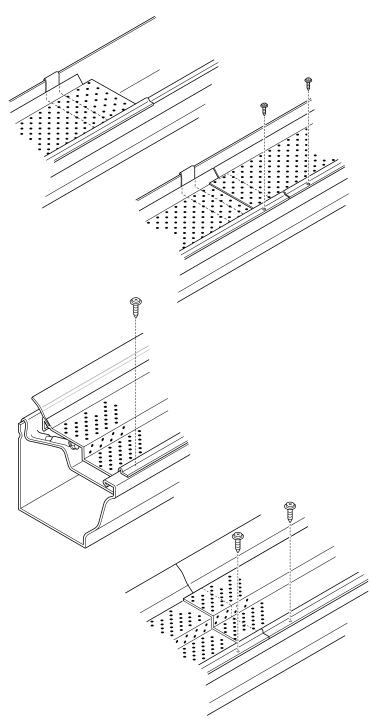
Note: The flow from high-level gutters must be transferred within downspouts directly into lower-level gutters.

Install Leaf Relief® system

Place the Leaf Relief sections on gutter with vinyl strip against the fascia or drip edge. For proper function, Leaf Relief surface (front-to-back) must be level or have slight slope toward fascia.

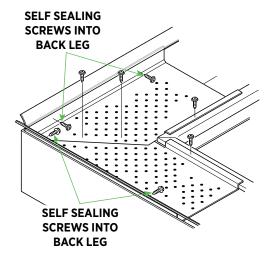
CAUTION: Do not install Leaf Relief over hangers that will result in a forward slope.

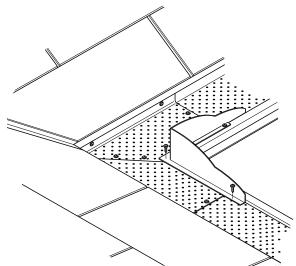
- To add rigidity, install Leaf Relief so the lower section is always closer to the nearest hanger.
- Overlap 1" using 1/2" factory notches on both ends.
- Add or replace hangers as needed for proper support (maximum support spacing is 30").
- Starting at one end, fasten front of Leaf Relief to gutter at overlaps and every 24" using #6-3/8" screws (not included with product).



Installation of All Retrofit Leaf Relief®

INSTALLATION OF FLAT, ZIP, AND ALL "TP" LEAF RELIEF PRODUCTS





Inside & outside corner options

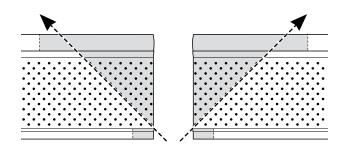
- With flat Leaf Relief products, use either factory-formed or field-formed corners.
 With zip products field-formed corners must be used.
- When using factory-formed corners, stop the adjacent Leaf Relief 4" from all corners.

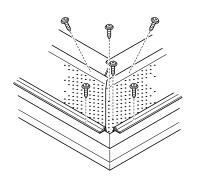
Install Leaf Relief corners

- Attach Leaf Relief corners using 8 screws as shown. All screws going into the back leg in the corner areas should be self sealing screws (not included).
- Install water diverter/deflector on top surface of Leaf Relief at all inside corners and valleys.

Note: Pre-fabricated corners must be at same level as Leaf Relief sections.

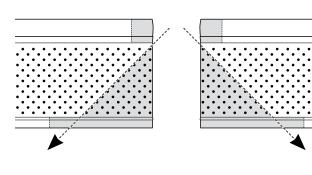
Field Forming and Installing Corners

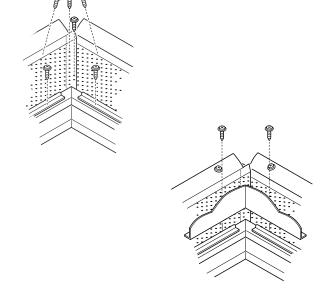




Outside Corners

- Refer to hole pattern and use tin snips to cut diagonally through the panel and back plastic strip at 45° angle.
- Notch and remove 1" of the front edge and plastic strip.
- Overlap 1" in corner and fasten with two screws, separated at least 2", going through both panels.
- Attach to back through the metal that retains plastic strip with screws 2" from the corner.
- Attach to front edge of gutter 2" from outer corner.



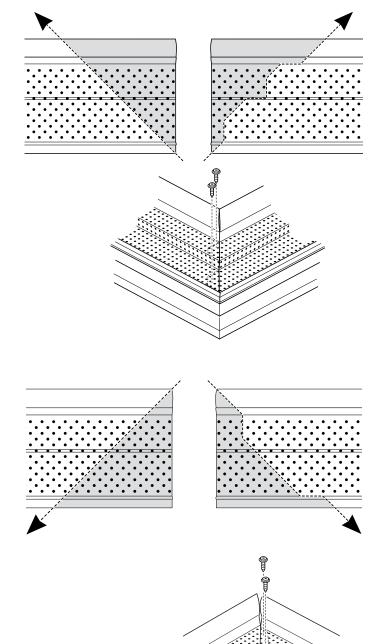


Inside Corners

- Use tin snips to cut panel diagonally, starting just inside metal that attaches plastic strip at 45° angle.
- Notch and remove one inch of the back edge and plastic strip.
- Overlap 1" in corner and fasten with two screws, separated at least 2", going through both panels.
- Attach to back through the metal that retains plastic strip with screws 2" from the corner.
- Attach to front edge of gutter 2" from outer corner.
- Install water diverter/deflector on top surface of Leaf Relief at all inside corners and valleys.

Mitered Corner Installation

INSTALLING ON ZIP PRODUCTS ONLY

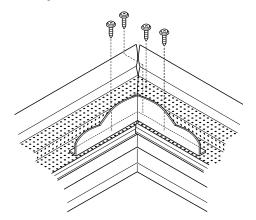


Outside Corners

- Refer to hole pattern and use tin snips to cut diagonally through one panel of Leaf Relief at 45° angle.
- Cut other panel as shown, leaving two 1" tabs.
- Overlap sections by 1" and attach through tabs with two #6-3/8" stainless steel screws.

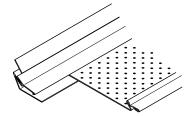
Inside Corners

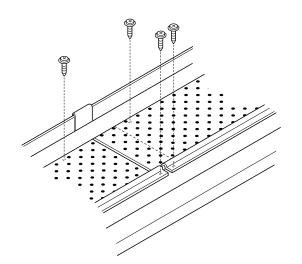
- Refer to hole pattern and use tin snips to cut diagonally through panel and back plastic strip of one panel at 45° angle.
- Cut other panel as shown, leaving a 1" tab.
- Overlap sections by 1" and attach with two #6-3/8" stainless steel screws.
- Install water diverter/deflector on top surface of Leaf Relief at all inside corners and valleys.



Adjustable Leaf Relief® Installation

FLAT OR SPIKE/FERRULE HANGERS - NOT ZIP HANGERS





Install Leaf Relief System

Note: When using adjustable Leaf Relief, first slide receiver onto the Leaf Relief sections.

Place the Leaf Relief sections on gutter with vinyl strip against the fascia or drip edge. For proper function, Leaf Relief surface (front-to-back) must be level or have slight slope toward fascia.

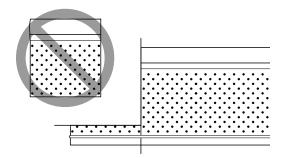
CAUTION: Do not install Leaf Relief over hangers that will result in a forward slope.

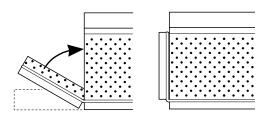
- Overlap 1" using 1/2" factory notches on both ends.
- Add or replace hangers as needed for proper support (maximum support spacing is 30").
- Starting at one end, fasten front of Leaf Relief to gutter every 24" using #6-3/8" screws.

Note: For adjustable Leaf Relief, adjust the "J" receiver to fit the width of the gutter and extend the receiver 7" past lap. Use #6-3/8" screws to fasten through Leaf Relief at "J" receiver, holding it against fascia every 24".

Special Applications

CLOSING OFF LEAF RELIEF® AT END OF RUN



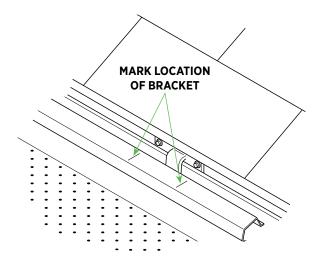


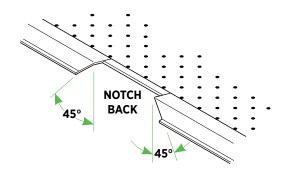
Closing Off Leaf Relief to Prevent Water Runoff

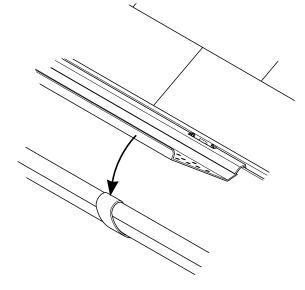
If Leaf Relief is level with end cap:

- At the end of the run, make a 4" cut on the back of the Leaf Relief up to the lip on the front.
- Cut parallel to the front about 1/2" from the lip.
- Make another cut 90° to the lip.
- Bend and fold under the excess material.
 Screw down the two layers to secure.
- Another option is to bend the gutter end cap ledge 90°.

WRAP-AROUND FASCIA HANGERS

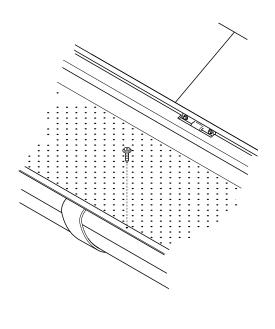




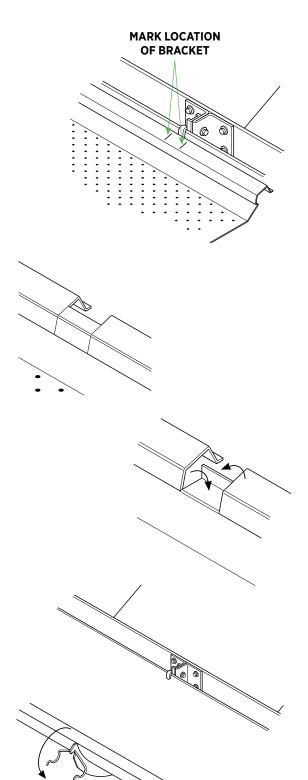


Installing on half-round gutters with wraparound fascia hangers

- Lay Leaf Relief® on gutter in front of hanger and mark location of bracket.
- · Notch back of Leaf Relief as shown.
- Firmly press back of Leaf Relief behind gutter and pivot down to rest on front lip of gutter.
- Attach with screws through Leaf Relief and front lip of gutter every 24".
- Continue installing Leaf Relief panels.
 Overlap 1" using 1/2" factory notches on both ends.
- Screw through the overlaps in the middle to reduce sagging.

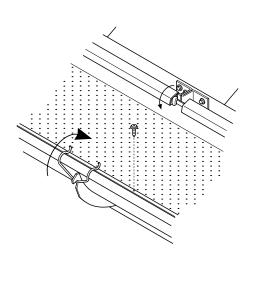


SPRING CLIP BAR HANGERS

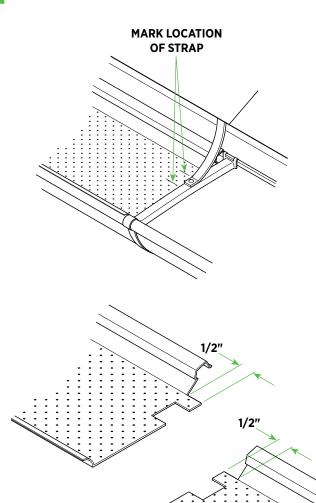


Installing on half-round gutters with spring clip bar hangers

- Lay Leaf Relief® on gutter in front of hanger and mark location of bracket.
- Cut and notch Leaf Relief.
- Release spring clip on front of gutter and bend up back tab holding gutter.
- Place Leaf Relief on gutter, bend hanger tab over the back of the Leaf Relief. Fasten hanger spring clip over Leaf Relief.
- Attach with screws through Leaf Relief and front lip of gutter every 24".
- Continue installing Leaf Relief panels.
 Overlap 1" using 1/2" factory notches on both ends.
- Screw through overlapping panels to reduce sagging.

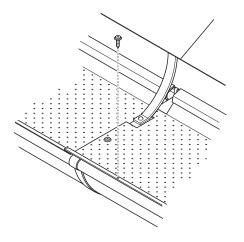


WRAP-AROUND STRAP HANGERS / EXISTING GUTTERS

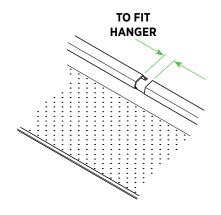


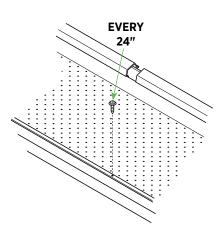
Installing on half-round gutters with wraparound strap hangers

- Place Leaf Relief® panel on gutter next to hanger and mark location of strap.
- Cut and notch Leaf Relief and lay in position on gutter.
- Place next section of Leaf Relief on gutter, mark location of strap. Cut and notch as shown.
- Overlap the two pieces 1".
- Attach with screws through Leaf Relief at every hanger overlap and every 24" through the front lip of the gutter.
- Screw through overlapping panels to reduce sagging.



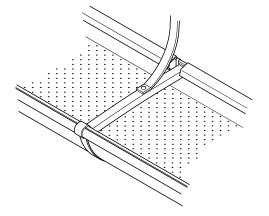
WRAP-AROUND STRAP HANGERS / NEW GUTTERS



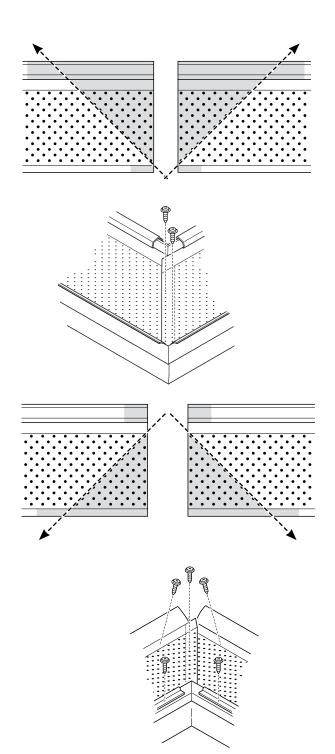


Leaf Relief® and new gutters with wraparound strap hangers

- Plan location of strap hangers and Leaf Relief panels.
- Notch Leaf Relief at each hanger.
- Overlap 1" using 1/2" factory notches on both ends.
- Attach with screws every 24" through the front lip of the gutter.
- Screw through overlapping panels to reduce sagging.
- Attach hangers over Leaf Relief to gutters.
- Install gutters to structure per manufacturer's instructions.



Installing Corners on Half-Round Gutters

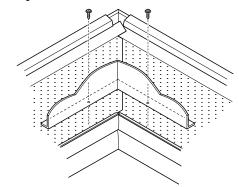


Outside Corners

- Refer to hole pattern and use tin snips to cut diagonally through the panel at 45° angle.
- Notch and remove 1" of the front edge.
- Overlap 1" in corner and fasten with two screws, separated at least 2", going through both panels.

Inside Corners

- Refer to hole pattern and use tin snips to cut panel diagonally at 45° angle.
- Notch and remove 1" of the front edge.
- Overlap 1" in corner with screw through both panels.
- Attach to front edge of gutter 2" from outer corner.
- Install water diverter/deflector on top surface of Leaf Relief® at all inside corners and valleys.



NOTES



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