APPLICATION GUIDE FOR

Rolled Rib

STEEL ROOFING AND
SIDING PANEL

Effective Date: December 2018
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Steel roofing, siding and soffit products are often the best solution for providing an aesthetically pleasing, long lasting weather resistant exterior for your building or structure.

This manual provides basic recommended installation procedures and details for applying steel cladding to residential, commercial, agricultural or other buildings. The installation details shown are proven methods of construction, but they do not attempt to address every application. For details not covered in this manual contact your RSP representative.

Some field cutting and fitting of panels and flashing is to be expected and to be considered a part of normal installation work. It is recommended that a professional, experienced contractor be used when installing metal roofing and accessories.

Additionally, you may need to refer to local building codes or the project architect/engineer for specific requirements.

**Notice:** Rolled Steel Products, Inc. (RSP) assumes no responsibility for any damages caused by improper installation or any personal injury or property damage that might occur with the products use.

This manual is intended to be used as a guide when installing Rolled Rib Panel system. It is the responsibility of a knowledgeable, trained erector to ensure the proper and safe installation of this system.

Contents of this manual are subject to change without notice, to confirm the information is current, please contact your customer service representative or visit www.go-rsp.com
Thank you for choosing Rolled Rib Panel. Rolled Rib is a through fastener agricultural, residential and commercial panel for use on either roof and/or wall applications. The panels are easily installed over decking, skip sheathing, purlins or girts on a limited basis, refer to the span / load tables.

Base Material: 29 GA Grade E steel (typical)

Optional Material: 26 GA Grade E steel (non-stock, special order only)

Metallic Coatings: G90 bare galvanized, G60 painted

Standard Paint Coating: 40 year warranty SMP

Panel Configurations: Intermediate Ribs

Panel Width: 36 inches

Rib Height: 3/4 inch

Panel Length: 2’- 6” min. (< 2’-6” subject to shear charge) to 52’- 0” max. shop run.

Minimum Roof Slope: 2:12
Storage and Handling Materials
To preserve the appearance of the roofing and siding material from damage caused by moisture, corrosive chemicals or improper handling, it is necessary that you take a few simple precautions. If shipping damage is found, the carrier should be advised and a notation made on the bill of lading.

On the job site, reasonable care should be taken when handling painted surfaces during installation in order to protect the finish. Although the paint coating provides impact resistance, dragging panels across the surface of one another will potentially scratch the finish.

Prolonged storage of sheets is not recommended. If conditions do not permit immediate erection, extra care must be taken to protect the material from damage.

When handling panels, make sure they are supported adequately. Panels less than 23’0” in length can normally be lifted with a forklift. When lifting panels in excess of 23’-0”, it is recommended that a spreader bar and slings be used. Individual panels can be handled by people placed every 6’-0” to 8’-0” along the length of the panel.

Inspect shipped materials at the time of delivery and review the shipping list to ensure all the materials are accounted for. Each bundle should be handled carefully to avoid being damaged. Any damaged materials must be noted on the bill of lading. Whenever possible, the bundle should remain crated to help avoid damage until it is time to install.

Panel bundles may be placed on the roof in location(s) that have adequate structure to support the weight. Loading capabilities on the roof structure must be checked to confirm where, if any, location can accommodate this placement. It is recommended to consult with the building architect/engineer to identify such location(s).

When placing panel bundles on the roof, determine how much area the crated panels will cover. Also, it is helpful to place bundles in accordance with the direction the panel will be installed.

Note: RSP does not place panel bundles on the roof.
The Job Site
Site access for material delivery is the responsibility of the construction manager or property owner. RSP provides ground off-loading of materials. Weather and road restriction conditions, which are out of the control of RSP, may impact the delivery schedule. It is important to maintain communication with your RSP representative or the RSP truck manager to ensure a reasonable delivery schedule. Note: Longer lengths may require an additional forklift.

Site storage of materials:
- Properly secure panels for temporary site storage
- Site storage not recommended for more than 30 days.

Field Cutting Materials
Aviation snips ☺, metal cutting saw blades (for circular saws) ☺ or electric turbo shear ☺ tools are recommended for field cutting panel. Metal chips or slivers are generated when cutting metal and must be removed immediately to protect the finish and avoid shortening the life of the panel. To help prevent this from happening, turn panel over when cutting to allow metal chips and slivers to fall away. Also, brushing debris from the back side avoids damaging the paint on the top side of the panel.

Touch-up Paint
Painted panels and flashings have a factory applied finish. During handling and installation, panels may become scratched and/or nicked. Touch-up paint is available in matching colors from RSP, in a paint pen applicator ☺. (store paint horizontally and out of direct sunlight)
1. Before you begin, make sure your structure and substrate are straight, square and free of material defects. This includes nails, screws or staples that are not flush. Roof and wall surface imperfections can cause dents or oil-canning\(^1\) in metal panels and/or flashings.
2. Calculate length and quantities of panels needed (see page 10).
3. Calculate the lineal feet of trim required and divide by 10 (round up), trim length is 10’-6”, factor 3” overlap.
4. Fasteners to attach panels; Lineal Foot (LF) x 3 = number of panel fasteners.
5. For Trim and Flashing Screw quantity: (see page 10)
6. Check details for possible roof penetrations which must be added through the substrate prior to roof panel installation.
7. Minimum #30 Felt Paper or equivalent (recommended) over substructure / under panel.
8. Additional Ice & Water Shield is recommended in areas such as valleys, low side roof steps, eaves and gables/ridges in high snow areas. * Check with your local building department for codes that require Ice & Water Shield.

Note: Prior to panel installation determine which items need to be installed prior to panels (such as eave flashing, w-valley, off-set cleat, c-metal and jamb trim).

Checking Squareness:

Method “A” - The 3-4-5 triangle method system may be used. Measure a point starting from the corner along the edge of the roof along the Gable/Rake. Put a mark at 3’-0”. Then from the same starting point, along the Eave, put another mark at 4’-0”. Finally, the distance between the marks should be 5’-0” in order to have a square corner (as shown below).

Method “B” - Another method for determining the squareness of the roof surface, is to measure diagonally from a point at the Eave across to a point at the Ridge/Peak. Then perform the same process across the surface at opposite points (as shown below).

Note: Oil-canning can be defined as visible waviness in the flat areas of metal roofing, siding and trim. In technical terms, oil canning is referred to as elastic buckling.

Note: Oil canning is an aesthetic issue and is not grounds for panel or material rejection.
1. **SAFETY IS A CHOICE.** We encourage you to make it a priority!
2. The erector of the roof system is responsible for understanding and adhering to, OSHA and other safety requirements to accomplish the safest way to install the roof system. Refer to local codes for fall protection guidelines.
3. Consider all potential hazards prior to staging and starting your metal cladding project. Be aware of power-lines and other utilities near the working area. Do not step or walk on unsecured metal panels. Do not step or walk on metal panels with snow, frost, hail and sometimes water on them, because the metal panel may become extremely slippery.
4. Make sure you have the proper equipment and protective gear in place before you start the installation process. This should include long sleeve shirt or cut resistant sleeves, full length pants and grip type cut resistant gloves. Eye protection should be worn any time there is a hazard of flying or falling chips or debris. Additionally, wear hearing protection when operating loud tools or equipment.
5. Metal cladding and trim edges can be very sharp. Avoid running body parts along edges or letting the metal slide along your skin or clothing. Avoid contact with field cut edges and holes because they may contain sharp burs.
6. Use care when operating power tools or other equipment. If using electrical cords, protect the cords from the sharp edges of the cladding.
7. Observe where you are on the roof at all times. Constantly monitor locations of roof openings, vents and roof edges to prevent falls. Watch out for moving people and materials.
8. Avoid installing roof system on windy days. Wind can easily and quickly blow around panels and trims, making it dangerous to handle as well as damage materials.
9. Steep pitch roofs may require a lifeline system in order to install roof system safely. For more information, contact OSHA and other workplace safety organizations.
• Screw Gun(s) with 0-2500 RPM is recommended
• 1/4” and 5/16” magnetic socket, #2 square Phillips bits and 3/16” drill bit (double ended)
• Aviation Snips (left, right & straight)
• Turbo Shear for Drill Motor
• Tape Measure
• Chalk Line
• Hammer
• Drill Motor and 1/8” Drill Bits
• Pencil or Marker Pen
• Framing Square
• String Line
• Pop Rivet Gun
• Utility Knife
• Circular Saw (with metal-cutting abrasive blade or metal cutting blade)
• Metal Cutting Blade for Circular Saw
• Hand Bending Tools
• Safety Goggles
• Gloves (cut resistant) and Protective Clothing
• Hearing Protection
• Locking Pliers (both standard and “duckbill”) ☺
• Saw Horses
• Ladder and/or Scaffolding or Extension Lift
• Edge Roller ER3 (3 station) ☺

☺ Indicates available at RSP.
To calculate the quantity of Panel Fasteners needed:
Total lineal footage of panel x 3 = quantity (round up)
Trim Fasteners: (also see installation details)
Ridge Cap & Snow Break = 30 ea per piece
End Wall Flashing = 15 ea per piece
All other Trims/Flashings = 10 ea per piece
(Optional) use panheads/nails for installation of All Trim/Flashings that are attached prior to panel; such as Base Metal, C-Metal, etc.
Use only fasteners with washers designed for siding and roofing. After placing the panel in the proper position, start at the bottom of the panel and apply fasteners at the Eave (see fastening patterns below). Then apply fasteners at the Ridge / Peak (see Installation Details). Fasteners are to be applied according to manufactures specifications. Do not over tighten the fasteners so as to distort the metal or cause damage to the washer. The washer should be in firm contact with the surface of the panel (see Example 1 below).

Screws are recommended because of their strength and holding ability vs. nails. Screws should penetrate the wood sub-straight at least 5/8” or 1/4” exposed thread past the surface when securing into metal framing.

**Example 1**

- **Correct**: Sealing material visible at edge of washer.
- **Too Loose**: Sealing material not visible, no compression.
- **Too Tight**: Washer is deformed, edge will not seal properly.

**FIELD CONDITION**

- **BEAD MASTIC (BETWEEN RIBS)** (@ SLOPES ≤ 3:12)
- **FASTENER NEXT TO HIGH RIB PANEL TO PLYWOOD SHEATHING OR SOLID DECKING @ EAVE**
  - #14-10 x 1” FASTENER (OSB)
  - #10-16 x 1” FASTENER (LUMBER / PLYWOOD)

**EAVE, RIDGE & PEAK CONDITION**

- **PREVAILING WIND**
- **FIELD CONDITION**
  - CONSULT WITH ARCHITECT OR ENGINEER FOR STITCH FASTENER USE & APPLICATION
- **FASTENER NEXT TO HIGH RIB PANEL TO PLYWOOD SHEATHING OR SOLID DECKING @ EAVE**
  - #14-10 x 1” FASTENER (OSB)
  - #10-16 x 1” FASTENER (LUMBER / PLYWOOD)
Note: See Trim & Flashing Profile sheets for individual shapes
TRIM AND FLASHING PROFILES

29 gauge standard / 26 gauge optional

UNIVERSAL RIDGE CAP 5RC
Length 10'-6" SPECIFY SLOPE

LT RIDGE CAP 5LTRC
Length 10'-6" SPECIFY SLOPE (FOR SLOPES ≥ 8:12)

SOFFIT RIDGE 5SR
Length 10'-6"

PEAK CAP 5PC
Length 10'-6"

FLYING GABLE 5FG

MINI-GABLE 5MG
Length 10'-6"

MODIFIED MINI GABLE 5MM
Length 10'-6"

GABLE TRIM (RAKE FLASHING) 5GT
Length 10'-6"

EAVE FLASHING 5EF
Length 10'-6"

GABLE TRIM (OLD STYLE) 5OG
Length 10'-6" SPECIFY SLOPE

OUTSIDE CORNER 5OC
Length 10'-6" SPECIFY SLOPE

STYLE G 5SG
Length 10'-6"

EAVE FLASHING 5SEF

CUSTOM EAVE FLASHING 5CE

INSIDE CORNER 5IC

* Made on order. No-stocking item, allow 2 days for production. Non-returnable.

Effective Date: December 2018
** Made on order. No-stocking item, allow 2 days for production. Non-returnable.
**Made on order. No-stocking item, allow 2 days for production. Non-returnable.**
NOTES:
• Eave overhang with plumb cut condition
• Install eave flashing prior to roof panel
• Apply a continuous strip of 3/4" tape sealant or caulking between eave trim and roof panel (optional)
• 2" panel overhang typical (1 1/2" overhang suggested when gutters are used)
• Stock length is 10'-6" (field cut as required)

**EAVE FLASHING 5EF**

NOTES:
• Eave overhang with square cut condition
• Install eave flashing prior to roof panel
• Apply a continuous strip of 3/4" tape sealant or caulking between eave trim and roof panel (optional)
• 2" panel overhang typical (1 1/2" overhang suggested when gutters are used)
• Stock length is 10'-6" (field cut as required)

**EAVE FLASHING 5SEF - 3x3 DRIP 5TT (SIMILAR)**
### CUSTOM EAVE FLASHING 5CE

**NOTES:**
- Eave overhang with plumb cut condition
- Install eave flashing prior to roof panel
- Apply a continuous strip of 3/4" tape sealant or caulking between eave trim and roof panel (optional)
- 2" panel overhang typical (1 1/2" overhang suggested when gutters are used)
- Stock length is 10'-6" (field cut as required)

**STYLE D 5SD**

**NOTES:**
- One piece eave flashing (no surface fasteners)
- No eave overhang condition
- Install Style D flashing prior to roof panel
- Apply a continuous strip of 3/4" tape sealant or caulking between eave trim and roof panel (optional)
- 2" panel overhang typical (1 1/2" overhang suggested when gutters are used)
- Stock length is 10'-6" (field cut as required)
NOTES:
- One piece eave flashing and custom Soffit trim / Fascia trim
- Eave overhang with soffit condition
- Install eave flashing prior to roof panel (install face fastener at time of soffit trim installation)
- Apply a continuous strip of 3/4" tape sealant or caulking between eave trim and roof panel (optional)
- 2" panel overhang typical (1 1/2" overhang suggested when gutters are used)
- Stock length is 10’-6” (field cut as required)

EAVE FLASHING 5EF W/ CUSTOM SOFFIT / FASCIA TRIM

NOTES:
- Install panel with proper fastener according to fastening guide (page 11).
- Apply a continuous strip of bead mastic or caulking between outside closure and peak cap (optional)
- Install formed outside closure over roof panel (continuous caulk bottom of closure - optional)
- Attach peak cap to top of each panel rib
- Stock length is 10’-6” (field cut as required)

PEAK CAP 5PC
NOTES:
- Ice and Water Shield under Flashing recommended
- Locate valley trim over substrate
- Apply a continuous strip of 3/4" tape sealant or caulking between trim and roof panel (optional)
- Stock length is 10'-6" (field cut as required)

W VALLEY 5WV

NOTES:
- Install pitch break over lower panel and attach to substructure
- Apply a continuous strip of 3/4" tape sealant or caulking between pitch break and roof panel (optional)
- 2" panel overhang typical
- Stock length is 10'-6" (field cut as required)

REVERSE PITCH BREAK 5RPB

Effective Date: December 2018
NOTES:
- One piece pitch break flashing
- Install pitch break flashing over lower roof panel and attach to substructure (under upper panel)
- Stock length is 10' - 6" (field cut as required)

PITCH BREAK 5PB

NOTES:
- One piece endwall flashing
- Install endwall flashing over lower roof panel and attach to substructure (under upper panel)
- Stock length is 10' - 6" (field cut as required)
Installation Details - Metal Roof

GABLE TRIM 5GT

- #12 x 3/4" STITCH SCREW (1 EA @ 24" O.C.) W/ STRIP MASTIC (OPTIONAL)
- MINI-GABLE
- #12 x 3/4" STITCH SCREW (1 EA @ 18" O.C.)
- ROLLED RIB PANEL
- STARTER PANEL END
- 1 EA @ 2'-0" O.C. FASTENER NEXT TO EACH HIGH RIB. NEXT TO EACH SIDE OF HIGH RIB @ EAVE
- ROLLED RIB ROOF PANEL (IF REQUIRED)
- FIELD BEND ROOF PANEL (IF REQUIRED)

NOTES:
- Field bend roof panel as required at the end of the panel run (optional) Edge Roller ER3 (see Tools & Equipment page)
- Stock length is 10'-6" (field cut as required)

MINI GABLE 5MG

- #10-16 x 1" FASTENER (1 EA @ 24" O.C.) W/ STRIP MASTIC (BETWEEN GABLE TRIM & PANEL, OPTIONAL)
- GABLE TRIM
- #12 x 3/4" STITCH SCREW (1 EA @ 18" O.C.)
- ROLLED RIB PANEL
- STARTER PANEL END
- 1 EA @ 2'-0" O.C. FASTENER NEXT TO EACH HIGH RIB. NEXT TO EACH SIDE OF HIGH RIB @ EAVE
- ROLLED RIB ROOF PANEL (IF REQUIRED)
- FIELD BEND ROOF PANEL (IF REQUIRED)

NOTES:
- Field bend roof panel as required at the end of the panel run (optional) Edge Roller ER3 (see Tools & Equipment page)
- Stock length is 10'-6" (field cut as required)
NOTES:
- Field bend roof panel as required at the end of the panel run (optional) Edge Roller ER3 (see Tools & Equipment page)
- Stock length is 10'-6" (field cut as required)

MODIFIED MINI GABLE 5MM

NOTES:
- Field bend roof panel as required at the end of the panel run (optional) Edge Roller ER3 (see Tools & Equipment page)
- Stock length is 10'-6" (field cut as required)

GABLE TRIM 5OG

Effective Date: December 2018
NOTES:
- Apply a continuous strip of 3/4" strip mastic or caulking between sidewall flashing and panel (optional)
- Field bend roof panel as required at the end of the panel run (optional) Edge Roller ER3 (see Tools & Equipment page)
- Stock length is 10'-6" (field cut as required)

SIDEWALL FLASHING 5SW
NOTES:
• Apply a continuous strip of bead mastic or caulking between outside closure and ridge cap (optional)
• Install formed outside closure over roof panel (continuous caulk bottom of closure, optional)
• Attach ridge cap to top of each panel rib
• Stock length is 10'-6" (field cut as required)

**UNIVERSAL RIDGE CAP 5RC or LT RIDGE CAP 5LTRC, 7FCRRO**

**NOTES:**
• Install vented closure between each rib of the roof panel (continuous caulk bottom of closure, optional)
• Attach ridge cap to top of each panel rib
• Stock length is 10'-6" (field cut as required)
• " Hold panel end 2" down each side of ridge for venting
**NOTES:**
- Ice and Water Shield under trim recommended
- Locate Flying Gable trim over substrate
- Apply a continuous strip of 3/4" tape sealant or caulking between trim and roof panel (optional)
- Stock length is 10'-6" (field cut as required)

**FLYING GABLE 5FG**

**NOTES:**
- Install base metal at the base of the wall prior to wall panel installation
- Stock length is 10'-6" (field cut as required)

**BASE METAL 5BM**
NOTES:

- Install c-metal prior to wall panel installation and after the soffit material is in place
- Stock length is 10'-6" (field cut as required)

**SOFFIT C-METAL 5SC**

NOTES:

- Install wall light flashing over the top edge of the lower wall panel and before upper wall panel is installed
- Stock length is 10'-6" (field cut as required)
NOTES:
- Install C-metal prior to wall panel installation
- Typically C-metal is installed along the sides of framed openings such as doors, window and wall vents
- Install C-metal slightly higher than the top of the framed opening
- Stock length is 10'-6" (field cut as required)
NOTES:
• Attach outside corner trim to the wall panel / substructure with fasteners
• Stock length is 10'-6" (field cut as required)

OUTSIDE CORNER TRIM  50C

NOTES:
• Attach inside corner trim to the wall panel / substructure with fasteners
• Stock length is 10'-6" (field cut as required)

INSIDE CORNER TRIM  5IC
<table>
<thead>
<tr>
<th>SIZE</th>
<th>TYPE</th>
<th>FINISH</th>
<th>APPLICATION</th>
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<tbody>
<tr>
<td>#12 x 3/4&quot;</td>
<td>STITCH WITH WASHER</td>
<td>GALVANIZED PAINTED</td>
<td>TRIM TO PANEL and/or TRIM TO TRIM</td>
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<tr>
<td>#10-16 x 1&quot;</td>
<td>METAL TO WOOD WITH WASHER</td>
<td>GALVANIZED PAINTED</td>
<td>PANEL TO WOOD SUBSTRUCTURE</td>
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<td>#14-10 x 1&quot;</td>
<td>TYPE &quot;S&quot;</td>
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<td>PANEL TO OSB</td>
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<tr>
<td>#14-10 x 1 1/2&quot;</td>
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<td></td>
</tr>
<tr>
<td>1/8&quot; x 3/16&quot;</td>
<td>BLIND RIVET</td>
<td>PAINTED</td>
<td>TRIM TO PANEL and/or TRIM TO TRIM</td>
</tr>
</tbody>
</table>

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1. Trim opening 20% smaller than pipe diameter.

2. Slide flashing down over pipe.

3. Apply sealant between pipe flashing and roof.

4. Press base down to fit irregularities. Use large screwdriver to press into tight angles.

5. Use fasteners to finish sealing.
- SEALANTS and MASTICS
Bead Mastic (roll of solid caulking)
  1/8” round X 50’
  3/32” x 3/4” x 45’
Weather-Tite Sealant

- HYDRASHELL SUPREME
Synthetic Underlayment 40” x 300’ rolls

- FASTENERS and ACCESSORIES
  Metal to Wood
  Metal to Metal
  Stitch Screws
  Pancake Head Fasteners
  Type “S” Fasteners
  Magnetic Hex Drive Sockets
  Rivets
  Square Drive
  Phillips Head

- PAINT
  Paint Pens for touch-up

- CUTTING TOOLS
  MagSnips
  Aviation Snips
  Metal Cutting Blades (for circular saw)
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