R & M STEEL CO
STEEL BUILDING COMPONENTS

TS-324 (24-GA) Standing Seam Roof

Thank you for your business.
To place an order, you may:
Phone: 1-208-454-1800 Toll Free: 1-866-454-1800
Fax: 1-208-454-1801 Toll Free: 1-866-454-1801
Email: sales.rmsteel@gmail.com

R & M STEEL TS-324 STANDING SEAM ROOF

1) GENERAL:

- Specifically included are panels, panel clips, flashing, panel splices, ridge material and all necessary fasteners.
- Minimum roof slope is 1/4" in 12".
- Panels are rated for UL90® uplift rating UL580 when installed to roof support members spaced as listed in UL Construction Listing #552, supported at a maximum of 5'-0" on center by either joists or purlins.
- Panels have an FM1-120 uplift rating when installed to roof support members spaced at a maximum of 5'-0" on center by either joists or purlins

2) PANEL MATERIAL:

- R & M Steel TS-324 profile shall be precision roll-formed from 24 gage steel. Galvalume® steel sheeting is aluminum-zinc coated steel alloy coated steel sheet with a minimum yield strength of 50 ksi in accordance with ASTM A-792, Grade 50. It has a coating thickness of .55 oz. per square foot.
- Roof panels provided by R & M Steel for exterior use are precision roll-formed from pre-painted Galvalume® coils. Coils to receive finish paints are subjected to a strenuous cleaning process prior to coating. Next, the coils are prime coated and oven cured. The finish coat is then applied and monitored for proper oven-cure temperature and color uniformity. Finished material is subjected to stringent quality control tests including: physical bend and impact resistance, film thickness, hardness, gloss and color. This process is time-tested and uses a Ceram-A-Star 1050 topcoat. TS-324 roof accessories (end dams, cinch straps, gutter brackets) are provided as unpainted.
- Panel shall be factory-punched and notched at ridge, high side and lap locations.
- Panel sidelaps shall have factory-applied non-skinning Butyl mastic.

3) PANEL CONFIGURATION

- Panels shall have 3" deep trapezoidal ribs spaced 24" on center. Three minor ribs are spaced in the flat of the panel between the major ribs.

4) PANEL CLIP & FASTENERS

- Fixed panel clips shall only be used with panel runs of less than 120'. Floating panel clips shall be used up to a 250' panel run and shall be self-centering and allow for up to 1-1/2" expansion and/or contraction of total movement from the centered position. The clip design shall insure that movement does not occur between the panel and clip.
- The panel clips shall have factory-applied mastic to insure a weather-tight installation.
- Each clip shall be attached to the joist or purlin with two fasteners. Size and type will be recommended by R & M Steel for the specific application.
- Panel endlap fasteners shall be a No. 17 self-tapping carbon steel screw, hex washer head, 1-1/4" long. Fastener shall have a 20-year corrosion resistant coating.

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5) TRIM AND FLASHING

- Color-coated trim and flashing shall be 26 gauge. Trim shall be provided at eave, ridge, rake, and where necessary to ensure a properly constructed building.
- High eave flashing and flashing parallel to the roof panels shall accommodate the thermal expansion and contraction of the roof without damage to the roof panels or flashing.
- All exposed trim and flashing material shall be manufactured from galvanized or Galvalume® steel strip.
- Exterior gutters and gable flash shall typically be manufactured in 20' lengths wherever possible.

6) INSTALLATION

- Storage and installation of the roofing system shall be in accordance with R & M Steel's printed instructions.
- The R & M Steel TS-324 Roof hand crimper is specially designed for use with R & M Steel's TS-324 Standing Seam Roof. Under no circumstances shall the R & M steel crimper be used on any other manufacturer's roof system. In addition, under no circumstances is another manufacturer's crimper to be used on R & M Steel's TS-324 Standing Seam Roof (even if they appear to be the same). Permanent damage to the seam and/or the panel finish may occur if the R & M Steel crimping tool is not used and shall void all warranties.
- The panel splice shall have a 0.060" galvanized steel back-up plate and a 0.090" aluminum cinch strap.
- The back-up plate and cinch strap shall be factory-punched to ensure proper fit.
- Panel splice shall be sealed with pre-cut tape mastic.
- Standard maximum panel length shall be 70'-0".
- The use of cutting tools that damage the panel finish shall not be allowed.
- Panels shall not be marked with any graphite or lead markers.

7) CLEAN-UP

- Roof surface should be cleaned daily during construction of all filings, cuttings, screws, pencil markings and debris to prevent damage due to oxidation of foreign materials.
- Contractor shall thoroughly clean all panels, trim, and gutters of all foreign material upon completion of construction.

8) MAINTENANCE

- The owner shall keep the roof free and clean of debris and corrosive materials at all times.
- Gutters and downspouts shall be cleaned periodically and kept free-flowing at all times.
- Flashing and sheeting interfaces shall be inspected yearly to ensure connection and water-tightness.
- Endlaps, eaves, ridges, curbs, translucent panels and other interfaces shall be inspected and maintained yearly. Normal adjustments or tightening of fasteners may be required.
- The use of tar and other topical applied products shall not be permitted unless specified by the manufacturer.
- Copper, lead flashing, exposed iron, or debris shall not be permitted on the roof.
- Pipes to and supports for roof-supported units shall be of a non-corrosive or rust-free material. Field painting of pipes and supports may be required to resist corrosion. Condensation from roof-top units shall be piped to interior or exterior locations. Damage due to condensate water is not covered under manufacturer's warranty.

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9) ERECTION SEQUENCE

- The R & M Steel TS-324 Standing Seam Roof is designed to be erected starting from either end of the building. In rare cases, due to the building layout, it may be required to start erection from a specified end. In those cases, it will be noted as such on the erection drawings.
- Sequencing of steel shall be clearly marked on the order documents at the time of order entry.

10) COORDINATION WITH OTHER TRADES

- Supports for the R & M Steel TS-324 Standing Seam Roof shall be provided and are required as shown in the drawings and as noted in these specifications. All necessary clearance dimensions for proper elevations relative to the roof panels have been shown. The customer shall be responsible for coordinating these dimensional requirements with other trades associated with the building roof system.

11) ERECTION CARE

- The erector must be skilled in the erection of metal building systems and is responsible for complying with all applicable local, federal and state construction and safety regulations. This includes OSHA regulations as well as any applicable requirements of local, national, or international union rules or practices. The Erector remains solely responsible for the safety and appropriateness of all techniques and methods utilized by its crews in the erection of the metal building system and/or the TS-324 Roof. The Erector is also responsible for supplying any safety devices such as scaffolds, runways, nets, etc., which may be required by the governing codes to safely erect the metal building system and/or TS-324 Roof.
- Anchorage for safety devices may be added at an additional cost provided specific connections are designed and clearly noted on the order documents. All anchorage points must be noted with exact location, magnitude and direction of force for a fully-braced structure.
- The erector of the R & M Steel TS-324 Standing Seam Roof shall exercise great care and attention to the details as shown on the erection drawings and in the R & M Steel TS-324 Standing Seam Roof Installation Guide to insure a secure and proper fit of all components. R & M Steel shall not be responsible for supervising and/or coordinating the erection of the TS-324 Standing Seam Roof with other trades. Erection drawings take precedence when a situation differs from that shown in the Installation Guide.
- Due consideration must be given by the erector to the effects of thermal expansion and contraction when erecting a roof tie-in to an existing structure to insure a safe, secure, weather-tight condition. Flashing for tie-ins to existing buildings is typically not included as part of the material provided by R & M Steel. Refer to the sections and details for specific materials provided by R & M Steel.
- The erector acknowledges that all details for all conditions can not be noted on the plans and that due care and judgment are required to make a safe and watertight condition. Sealants and caulks may be required based upon actual conditions encountered.

12) FIELD-CUTTING OF PANELS

- When field-cutting or mitering R & M Steel TS-324 roof panels, non-abrasive cutting tools such as nibblers or tin-snips shall be used. Abrasive cutting tools such as mechanical grinders, saws, shears, or scissors can damage the Galvalume® or painted finish and create excess metal shavings that can corrode the panels. The use of non-approved cutting devices may void your manufacturer's warranty.

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13) ROOF-TOP UNITS AND CURB SUPPORTS

- The R & M Steel TS-324 Standing Seam Roof Curb Framing System is level with roof secondary structural members. The outer roof curb, in a double curb system, will have channels attached to accommodate the clip off set of 1/2" for short clips and 1-1/2" for tall clips. Refer to the details for proper dimensions.
- The R & M Steel TS-324 Standing Seam Roof is designed as a floating system. Curb framing and flashing must be designed accordingly to allow the curb system to float with the TS-324 Roof during thermal expansion and contraction.
- Roof curbs should be laid out maintaining a "3-purlin-space" rule. This rule is that a roof curb should always be located a distance of at least the equivalent of three purlin spaces from the ridge or eave of a building and from any adjacent roof openings or curbs.