



MECHANICALLY FASTENED VINYL RIB ROOFING SYSTEM

TABLE OF CONTENTS

Introduction	2
Requirements	2
Approved Membranes	2
Approved Plates and Fasteners	3
Approved Cover Boards	3
Approved Insulation and Cover Boards	3
Vinyl Rib Description	3
Vinyl Rib Installation	3 & 4

INTRODUCTION

This document outlines the requirements for installing the Duro-Last® Mechanically Fastened Vinyl Rib Roofing System. The installation of vinyl ribs takes place after the installation of the membrane roof system and therefore, this document acts as a supplement to both the Custom-Fabricated Mechanically Fastened Roofing System and the Roll Good Mechanically Fastened Roofing System.

Also outlined are the membranes, plates and fasteners, cover boards, and insulation that may be used when installing vinyl ribs. Refer to the appropriate mechanically fastened roofing specification, as mentioned above, for a complete set of requirements for installing the roof system.

REQUIREMENTS

1. **This system will be engineered for wind uplift by the Duro-Last/Holcim Engineering Services Department.**
2. All products must be supplied by Duro-Last. The use of any other product, not listed in this specification, must be approved, in writing, by the Duro-Last Engineering Services Department prior to installation.
3. The roof system and vinyl ribs must be installed by an authorized Duro-Last contractor.
4. The required cover board, on which the membrane is installed, must be attached with Duro-Last Cleat Plates® and fasteners, as described in this specification.
5. Optional insulation and/or base board, installed underneath the cover board, will be mechanically fastened to the substrate. Refer to the appropriate mechanically fastened roofing specification for installation procedures and approved fasteners.
6. The membrane must be roll goods, unless the run for the vinyl ribs is less than 20 ft. Then, a custom-fabricated membrane sheet up to 52 x 20 ft, with tabs, rolled on a carpet tube, may be used. **All custom-fabricated membrane sheets must not be folded and must be packaged on carpet tubes.**
7. **The membrane must be:**
 - a. **60 mils or greater**
 - b. **mechanically fastened with Cleat Plates**
 - c. **mechanically stretched with grip pull or a similar device**
 - d. **installed so that overlaps between membrane sections run parallel to the slope of the roof.**
8. **Cover boards must be mechanically fastened with Cleat Plates.**
9. For non-residential installations, a Duro-Last Technical Representative must inspect the roofing system before a commercial warranty can be issued. Residential installations are not inspected by Duro-Last, and receive a material warranty only.
10. For non-residential installations, vinyl ribs must be installed after the membrane installation has been inspected by a Duro-Last Technical Representative. For Residential installations, vinyl ribs may be installed at the discretion of the roofing contractor, but generally after the completion of the membrane installation.

APPROVED MEMBRANES

The Vinyl Rib Roofing System must utilize only the following membranes, of 60 mils or greater. Refer to the membranes' product data sheets ("PDS") for further information.

1. Duro-Last
2. Duro-Tuff®
3. Duro-Last EV

APPROVED PLATES AND FASTENERS

The following Plates and Fasteners must be used to attach the membrane through the assembly to the roof substrate. Refer to the plate and fastener PDSs for application guidelines, requirements and limitations. The Safety Data Sheets (SDS) for the products must also be read prior to use.

1. Duro-Last Cleat Plates
2. Approved Fasteners:
 - a. HD Screw (#14)
 - b. EHD Screw (#15)
 - c. Concrete Screw (#14)
 - d. Concrete Nail (#14)

APPROVED COVER BOARDS

The membrane must be mechanically fastened over one of the following cover boards. Refer to the cover boards' PDSs for further information.

1. Duro-Guard® cover boards:
 - a. DensDeck® Roof Board
 - b. SECUROCK® Glass-Mat Roof Board
 - c. DEXcell® Glass Mat Roof Board
2. Cover board must be:
 - a. attached with approved fastening pattern
 - b. a minimum thickness of 1/4 in. thick
 - c. a maximum size of 4 x 8 ft
3. When installing directly over a steel deck, the cover board must have an adequate span rating, as stated on the PDS, for the profile of the steel deck.
4. When installing a cover board as part of a metal roof retrofit, insulation boards will be needed to fill the area between the metal ribs and provide support for the overlying board if the span rating of the board is exceeded.

VINYL RIB DESCRIPTION

Material – Composed of extruded Poly-Vinyl Chloride (PVC).

Profile – The ribs measure 1-3/8 in. wide at the base and taper to a point at the top, standing 1 in. tall.

Length – Individual sections are 10 ft long and may be strung together to the desired length.

Colors – Refer to PDS for available colors.

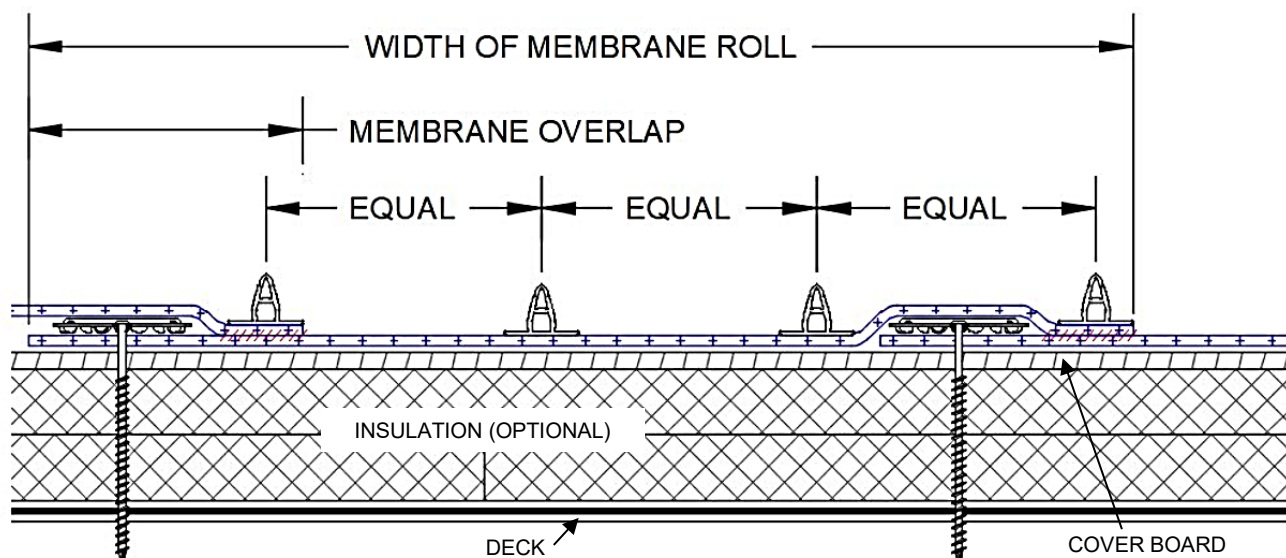
Ordering – Contact Duro-Last for minimum lead time and order quantity requirements.

VINYL RIB INSTALLATION

The vinyl ribs must be installed over a membrane which has been mechanically fastened through the entire assembly to the roof substrate. The membrane (60-mil minimum), and the entire assembly must be attached with Duro-Last Cleat Plates.

The vinyl ribs must be installed parallel with the roof slope. The top surface of the membrane must be clean in order to obtain a proper weld.

1. The vinyl ribs should be installed so that a rib covers each weld between membrane sections, and so that the ribs are spaced evenly as illustrated below. Additional rows may be installed between the vinyl ribs that cover the welds.



2. Determine the location of the first rib. The first weld between sections of membrane located adjacent to a perimeter edge is a good place to start.
3. Align the rib with the edge of the overlapping membrane section, as shown in the drawing above. Do not cover the edge of the seam. Check that the distance from the perimeter edge to the rib is the same along the entire rib length. Proper alignment of the first rib is very important. Prior to attaching the rib, get off the roof and view the rib from a distance to ensure that it is situated properly. If the edge of the membrane does not prove to be an adequate guide, use a chalk line instead.
4. Use a heat (hot-air) welder to attach the rib to the membrane. Use extreme care to keep the edge of the rib aligned with the reference line being used. Confirm that the installed rib is situated properly by viewing it at a distance prior to installing additional ribs.
5. Once the first rib is installed, utilize a custom-made jig with proper spacing, to install subsequent ribs.