VADA® VENTED ROOF SYSTEM™

BY DURO-LAST®

INTRODUCTION

This document outlines the requirements for installing the VADA® Vented Roof System™ ("VADA System") by Duro-Last®, in conjunction with a Duro-Last Roofing System. Therefore, this document acts as a supplement to either a Duro-Last PVC Roofing System Specification or a Duro-TECH TPO Roofing System Specification.

All waterproofing components used with the VADA System will be inspected and included within the Duro-Last Roofing System warranty.

GENERAL REQUIREMENTS

- **PRIOR TO ORDERING:**
  - All VADA System projects must be requested and designed through the Duro-Last Engineering Services department on the Duro-Last Portal.
- Refer to individual product data sheets ("PDS") and safety data sheets ("SDS") for application guidelines, requirements, and limitations.
- The roofing system must be installed by an authorized Duro-Last contractor.
- Substrate must be prepped according to the appropriate roofing system specification, as mentioned above.
- All heat (hot-air) welds must be a minimum of 1-1/2 in. (40 mm) wide.

VADA VENTED ROOF SYSTEM INSTALLATION

1. GENERAL PROCESS

- After receiving an approved project design from Duro-Last Engineering Services, utilize and follow the provided parameters for installation.

2. PREPARE THE ROOF

Standard separation requirements apply for both new construction/full tear-off and re-cover

- **NEW CONSTRUCTION AND/OR FULL TEAR-OFF:**
  - **Must** install a vapor barrier
- **RE-COVER:**
  - Process to be determined by the Duro-Last Engineering Services department.
  - Existing roofing systems should stay in place, allowing for local code authority requirements.
    - **DO NOT SLICE EXISTING SINGLE-PLY MEMBRANES**
  - Existing roofing system defects must be corrected with like materials.
  - Any modifications to existing roofing systems must be patched with like materials to maintain an air-tight seal.
  - Remove all loose dust, debris and granules from the perimeter adhered roof area.

3. INSULATION/COVER BOARD/FAN FOLD BOARD/SLIP SHEET INSTALLATION

NOTE: PERIMETER COMPONENTS MUST BE BOTH ADHERED AND MECHANICALLY FASTENED.

- **PERIMETER AND INTERNAL PARAPET AREAS:** Mechanically fastened **and** adhered
  - Perimeter width, fastening pattern, and spacing to be determined by Duro-Last Engineering Services.
  - When installing multiple layers, it is acceptable to adhere all boards and only mechanically fasten through the top layer and all subsequent layers, at once.
- **FIELD AREA:** Mechanically fastened or adhered
  - Fastening or adhesion pattern to be determined by Duro-Last Engineering Services.

4. MEMBRANE INSTALLATION

NOTE: PERIMETER COMPONENTS MUST BE BOTH ADHERED AND MECHANICALLY FASTENED.

a. EXTERNAL PERIMETER AREA

1) Standard separation requirements apply for both new construction/full tear-off and re-cover
2) Using appropriately sized sheets of membrane, as directed by Engineering Services, picture frame the perimeter of the roof with membrane.
   - **FLEECE:** Use 3/4- to 1-in. (19- to 25-mm) beads of an approved low-rise foam, parallel to the edge of the roof, with bead spacing as directed by Engineering Services. Prime as necessary.

     – OR –
   - **NON-FLEECE:** Use an approved adhesive. Prime as necessary.
3) Using Duro-Last-approved fasteners and plates, fasten the adhered membrane at the roof edge, and as directed by Engineering Services.
4) Refer to ***Figure 1***, ***Figure 2***, or ***Figure 3*** for typical installation procedures.

b. INTERNAL PARAPET/EXPANSION JOINT AREA

1) Standard separation requirements apply for both new construction/full tear-off and re-cover.
2) Using appropriately sized sheets of membrane, on both sides of the parapet, as directed by Engineering Services.
3) On both sides of the parapet, Using Duro-Last-approved fasteners and plates, fasten the adhered membrane at the parapet base, and at the 60-in. (1,524-mm) mark.
   - If internal parapet/expansion joint enhancement exceeds 5 ft (1.5 m), follow Engineering Services guidelines.
4) Refer to ***Figure 4*** for typical installation procedures.

c. FIELD AREA

- Loose lay the membrane for welding.
  - Fasten membrane edges to hold in place, if necessary.

Figure 1 – VS1010
(Single 5-Ft (1.5-m) Roll Perimeter)

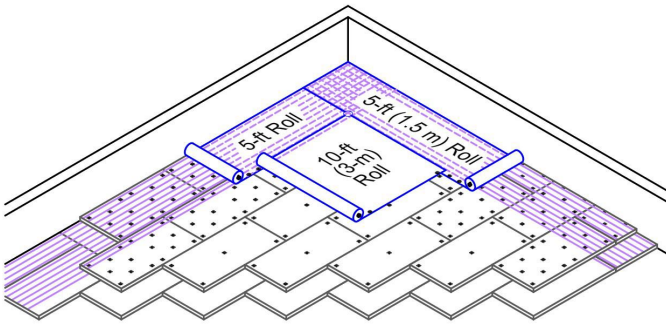


Figure 2 – VS1020
(Double 5-Ft (1.5-m) Roll Perimeter)

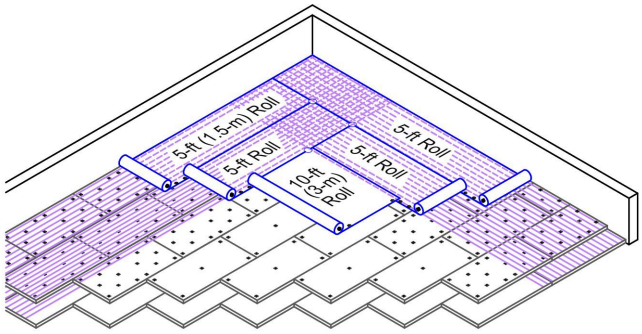


Figure 3 – VS1030
(Single 10-Ft (3-m) Roll Perimeter)

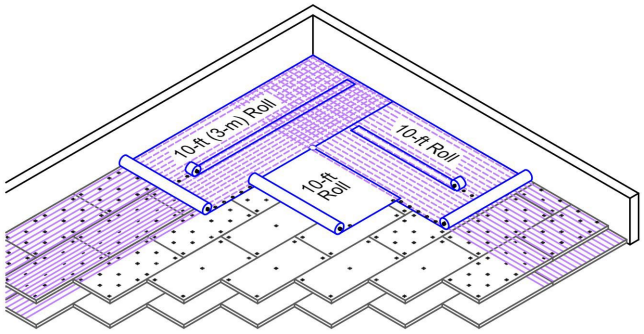
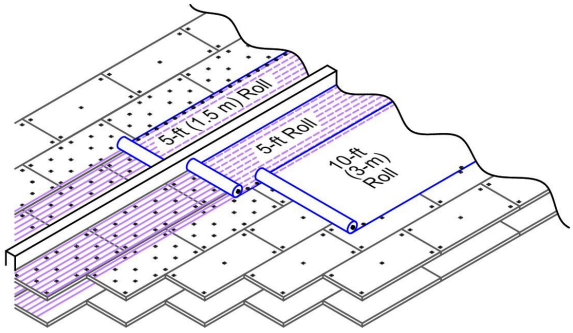


Figure 4 – VS1040
(5-Ft (1.5m) Internal Parapet/Expansion Joint Enhancement)



5. ROOF PENETRATIONS
Completely surround the penetration on all new layers of insulation, cover board, and membrane with:

a. 2 beads of 3/8-in. (10 mm) minimum of an approved sealant

– OR –

b. 2 beads of 3/4- to 1-in. (19- to 25-mm) wide low-rise foam

c. Refer to Detail VS4010

- **PENETRATION FASTENING:** Between the adhesive beads, secure the membrane by installing plates and fasteners at a maximum of 6 in. (152 mm) O.C., at least one per side, at the base of the penetration.

VADA VENT INSTALLATION

1. EXTERNAL PERIMETER-ADJACENT AREA
VADA Vents will be positioned adjacent to the perimeter area as directed by Engineering Services.

2. INTERNAL PARAPET/EXPANSION JOINT AREA
VADA Vents will be placed along both sides of all internal parapets/expansion joints, spaced as directed by Engineering Services.

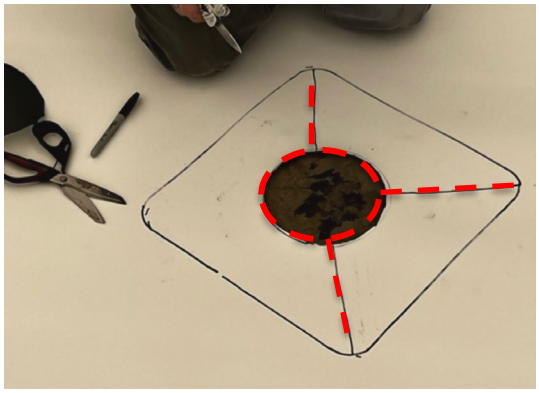
3. FIELD AREA
VADA Vents in the field will be spaced as directed by Engineering Services.

4. GENERAL INSTALLATION

1) Outline the vent base, the 6-in. (152-mm) vent hole circle, and three corner cuts from the vent circle to the outer edge. (Refer to Figure 5.)

2) Cut the membrane along the inner vent circle and the three corner cuts, using an appropriate membrane cutting tool. (Refer to Figure 5.)

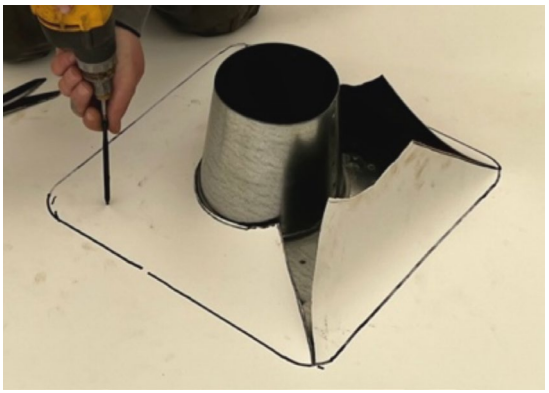
Figure 5 (Mark and Cut Membrane)



3) Place the vent into the membrane opening and position the flaps over the vent base. (Refer to Figure 6.)

4) Using four Duro-Last-approved fasteners, fasten the vent base at least 1 in. (25 mm) into the deck, 2 in. (51 mm) from the edge on each corner. (Refer to Figure 6.)

Figure 6 (Place and Secure Vent)



5) Position a Stack Flashing over the vent base and heat (hot-air) weld to the deck membrane. (Refer to Figure 7.)

- All heat (hot-air) welds must be a minimum of 1-1/2 in. (40 mm) wide.

Figure 7 (Weld Stack Flashing)

6) At the top of the stack opening, typically within 1 in. (25 mm), caulk the inside of the Stack Flashing where the external turbine fasteners will be installed.

7) Position and press the turbine firmly and fully over the Stack Flashing and the vent base.

8) Secure the turbine with three equally-spaced approved fasteners along the bottom collar. (Refer to Figure 9.)

Figure 8 (Secure the Turbine)

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