

# DELTA®-MS

## Foundation Wrap Installation Instructions

### Health and Safety

- Required safety equipment: hard hat, safety boots, gloves, safety glasses.
- Always follow all safety precautions as directed by the Occupational Safety and Health Administration (OSHA-USA) or the Construction Safety Association (Canada).
- Please refer to Safety Data Sheets for all components and observe all recommended safety precautions therein.
- The general codes of practice for protection at work and instructions of the manufacturers for tools and components are to be observed at all times.

### Recommended Materials

- DELTA®-MS
- DELTA®-FAST'ners
- DELTA®-FLASH
- DELTA®-SEALANT (for gaps greater than 1/8")

### Recommended Tools

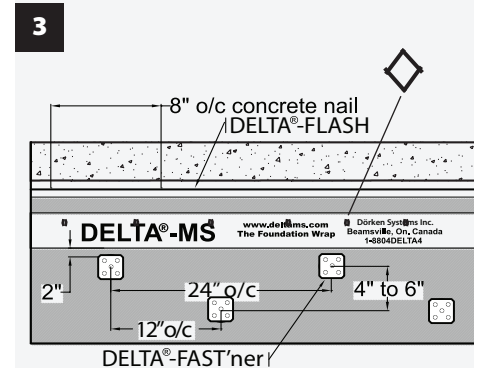
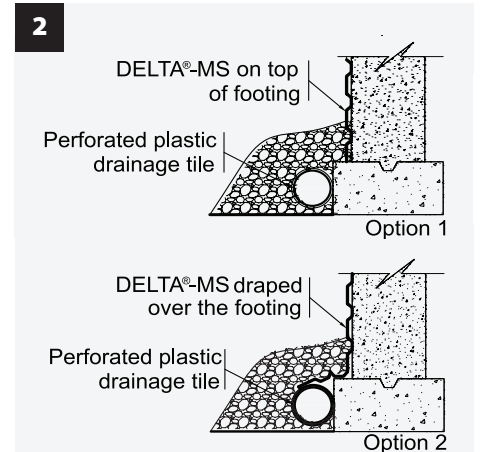
- Utility knife
- Measuring tape
- Hammer or automated nailing gun (Trak-Fast 1200 or Hilti GX3)
- Concrete nails 1 ¼" (3 cm) – 1 ½" (3.8 cm)
- Large caulking gun, chalk line, broom

### Notes and Limitations

- These installation instructions are intended only as a guide and are for the convenience of the contractor, specifier, and other interested parties. The final application and details are the sole responsibility of the design authority on record for the project.
- Always confirm the local building code requirements prior to installation.
- DELTA®-MS is not designed for permanent UV exposure. Always cover as soon as possible.

### Installation

- Mark a line (i.e. snap a chalk line) at expected final grade line as a starting point.
- Clean top of footer of any gravel and debris with broom.
- The "flat tab" and orange stripe of DELTA®-MS must always be at the top of the installation and facing the installer (see Detail 1).
- Option 1: Installation from top of footing to grade
  - Place the bottom of the roll on the top of the footing (see Detail 2, Option 1).
  - Position the roll in the direction of the installation for easy roll-out of the dimpled membrane.
  - (see [CCMC 12658-R](#), [ICC-ESR 2303](#))
- Option 2: Installation draped over footing (recommended best practice)
  - When installing DELTA-MS as foundation wall drainage membrane, roll out DELTA-MS continuously with the membrane draping over top of footing, with the flat tab lined up along the chalk line (see Detail 2, Option 2).
  - (See [CCMC 12788-R](#); meets NBC for foundation wall drainage)
- Always install DELTA®-MS tightly and evenly over the foundation wall.
- For ease of installation, work with 2 people.
- Roll out DELTA®-MS approximately 10' (3 m) in length along the wall.
- As one person holds the DELTA®-MS, the other person installs the DELTA®-FAST'ners in the body at appropriate intervals, as shown in Detail 3. For reference, the diamond shapes located on the orange stripe are spaced 6" o/c.
- For rolls greater than 7' (2 m) in height an extra row of DELTA®-FAST'ners is suggested in the middle of the membrane at 3' (1 m) o/c.
- Install DELTA®-FLASH at the flat tab using concrete nails (see Detail 3).
- The top of the membrane must be mechanically fastened and sealed to the foundation wall to prevent soil particles from entering into the air gap. Apply DELTA®-SEALANT where the space between DELTA®-FLASH and foundation wall is greater than 1/8". Best practice is to seal completely, leaving no visible gaps.



### Installing around Corners

- Install DELTA®-MS on inside corners as tightly as possible by pushing the membrane into the corner, then anchor it in place (see Detail 4).
- Install DELTA®-MS on outside corners as tightly as possible by pressing the membrane around the corner, then anchor it in place (see Detail 5).
- Do not install DELTA®-FAST'ners within 3" (8 cm) of outside corners to avoid damaging the concrete.

### Joints and Overlaps

- Vertical joints require the installation of DELTA®-FAST'ners along the length of the joint 12" (30 cm) o/c, with minimum 6" (15 cm) overlap (see Detail 6).
- For foundations higher than the roll height, install the first course by rolling out DELTA®-MS at the bottom of the wall. The next course of DELTA®-MS shall overlap the bottom layer by at least 6" (15 cm), shingled downwards.
- Horizontal joints require the installation of DELTA®-FAST'ners along the length of the joints at 3' (0.9 m) o/c. DELTA®-FLASH is not required on the lower overlapped section (see Detail 7).

### Installation of DELTA®-FLASH or DELTA®-MOLD STRIP

- Install DELTA®-FLASH or DELTA®-MOLD STRIP at all below grade cuts of the membrane such as at window wells, walkouts, vertical termination, etc. (see Detail 8).
- Cut back DELTA®-MS 3" (8 cm) from the edge of wall openings.
- Position DELTA®-FLASH or DELTA®-MOLD STRIP over DELTA®-MS.
- Use DELTA®-FLASH or DELTA®-MOLD STRIP at sloped cuts in the DELTA®-MS.
- Anchor DELTA®-FLASH or DELTA®-MOLD STRIP 8" (20 cm) o/c.

### Repairs

- Should DELTA®-MS get damaged prior to backfill, cut patches of DELTA®-MS large enough to cover any tear. Minimum 6" (15 cm) around damaged area.
- Apply a bead of DELTA®-SEALANT around the tear.
- Apply patch over tear and install DELTA®-FAST'ners to hold the patch tightly against membrane making sure dimples align (see Detail 9).

### Service penetrations

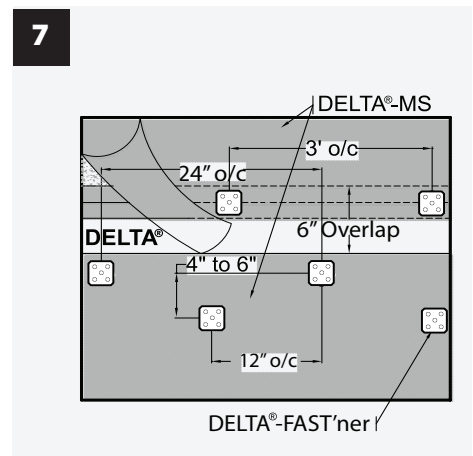
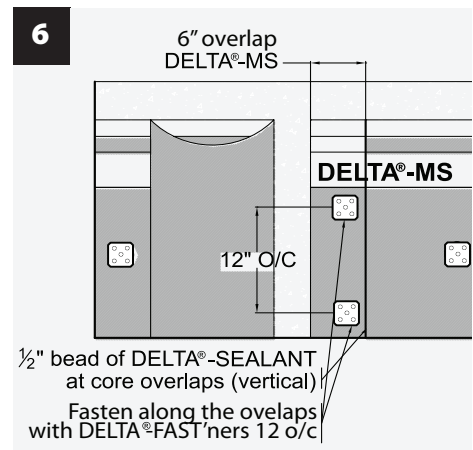
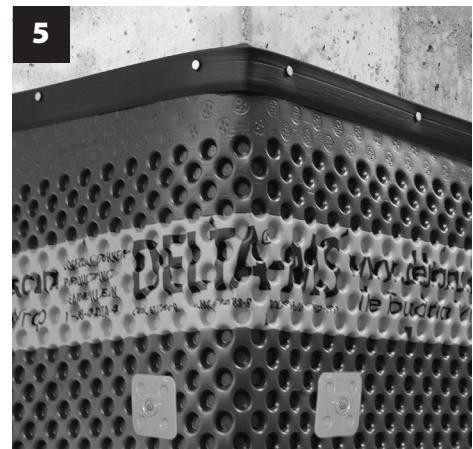
- When encountering a service penetration protruding from the foundation, roll DELTA®-MS flush to penetration.
- Cut the DELTA®-MS vertically. Fasten the cut end with DELTA®-FAST'ners to keep in place 3' (0.9 m) o/c vertically.
- Restart application on other side of service penetration. Unroll enough DELTA®-MS to go around the service penetration plus another 6" (15 cm) for overlap.
- Cut the length of unrolled portion horizontally at a point equal to the center of the service penetration (see Detail 10).
- Pull the slit portion around the penetration and trim the DELTA®-MS to fit snugly.
- Peel back the cut membrane and apply DELTA®-SEALANT around the penetration.
- Push the cut membrane back around the penetration.
- Interlock the overlapping dimples.
- Treat as a standard vertical lap with DELTA®-FAST'ners 12" (30 cm) o/c, being sure to place a DELTA®-FAST'ners on top and bottom of the slit.

### Recommended Best Practice (optional)

- Install cold joint protection prior to the installation of DELTA®-MS at cold joint area at the base of the wall, if:
  1. A fluctuating water table is encountered.
  2. Footing drain is insufficient to take away water drained by DELTA®-MS without temporary backup.
  3. Footing drain is placed on top of footing.
  4. Floor slab is poured level with, rather than on top of footing.
- Apply cold joint protection membrane to cover the footing and wall to a point 12" (30 cm) higher than the anticipated water table (see Detail 11).

### Clean-up and Inspection

- Walk around foundation and ensure all materials are installed as required.
- Clean up all excess materials and remove from excavation.



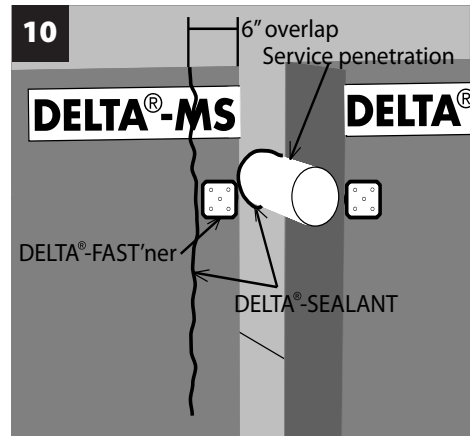
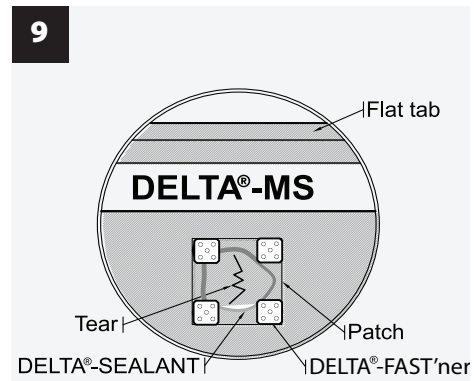
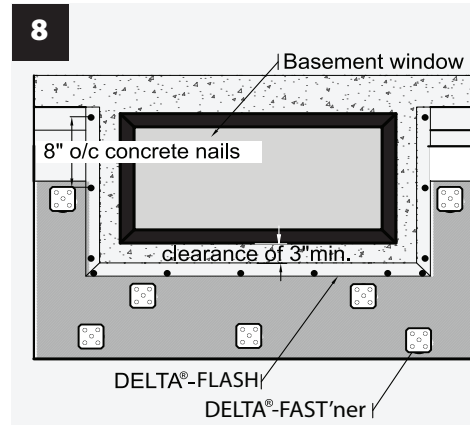
**Disposal of Waste**

- DELTA®-MS is made out of environmentally friendly HDPE.
- Waste can be recycled where facilities allow.

**Evaluation Reports (certifications)**

- ICC Evaluation Service [ESR-2303](#) Dampproofing and Wall Waterproofing Membrane System
- [CCMC 12658-R](#) DELTA®-MS Dampproofing Membrane
- [CCMC 12788-R](#) DELTA®-MS Foudaton Wall Drainage Membrane

For technical support, call our Technical Support Team at 1-888-433-5824 extension 326, or visit [www.dorken.com](http://www.dorken.com).



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03/24/2022