

# DELTA<sup>®</sup>-DRAIN

## Below grade foundation drainage membrane. Installation instructions for below grade foundation drainage.

### 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 Material 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<sup>®</sup>-DRAIN
- DELTA<sup>®</sup>-FAST'ners
- DELTA<sup>®</sup>-MOLD STRIP
- DELTA<sup>®</sup>-SEALANT

### Recommended Tools

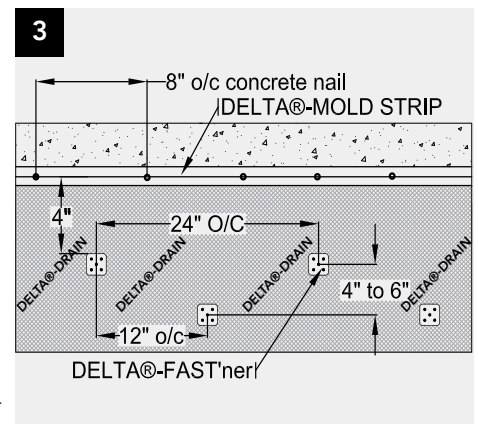
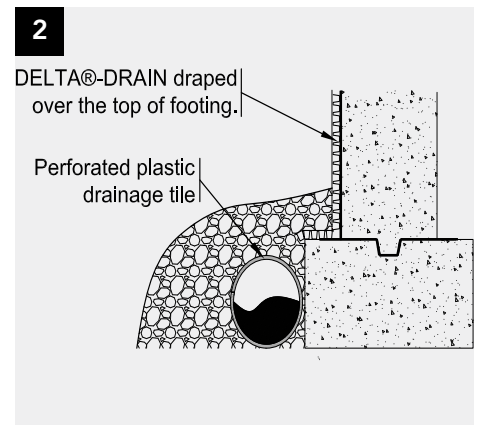
- Utility knife or tin snips
- Caulking gun
- Broom
- Hammer or automated nailing gun (i.e. Trak-Fast 1100 or Hilti GX120)
- Concrete nails 1 ¼" (3 cm) – 1 ½" (3.8 cm)

### Notes and Limitations

- These installation instructions for DELTA<sup>®</sup>-DRAIN are intended only as a guide and are for the convenience of the contractors, specifiers, 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.
- Apply waterproofing that includes cold joint protection prior to installing DELTA<sup>®</sup>-DRAIN. Alternatively apply dampproofing and cold joint protection prior to installing DELTA<sup>®</sup>-DRAIN.
- Ensure protrusions that may penetrate the membrane are removed from substrate.
- Prior to installation of DELTA<sup>®</sup>-DRAIN, clean top of footing of any gravel and debris with a broom.
- Maximum exposure time:
  - DELTA<sup>®</sup>-DRAIN shall not be exposed to UV light (sunlight) for more than 30 days.

### Installation

- For ease of installation, work with 2 people.
- The "flat tab" of DELTA<sup>®</sup>-DRAIN should always be at top of the installation with the geotextile facing the installer. (see Detail 1)
- Position the roll in the direction of installation for easy roll-out of DELTA<sup>®</sup>-DRAIN.
- With the flat tab lined up along the top of waterproofing or dampproofing (or expected final grade), roll out DELTA<sup>®</sup>-DRAIN continuously with the membrane draping over top of footing. (see Detail 2)
- Roll out DELTA<sup>®</sup>-DRAIN approximately 10' (3 m) in length along the wall.
- As one person holds the DELTA<sup>®</sup>-DRAIN, the other person installs the DELTA<sup>®</sup>-FAST'ners in the body at appropriate intervals. (see Detail 3)
- Install the DELTA<sup>®</sup>-DRAIN tightly and evenly over the foundation wall. Tuck extra filter fabric at flat tab over and behind the flat tab to prevent soil particles from entering the air gap.



### Installation of DELTA®-MOLD STRIP

- Install DELTA®-MOLD STRIP at the flat tab using concrete nails. (see Detail 3)
- Install DELTA®-MOLD STRIP at all below grade cuts of the membrane, such as at window wells, walkouts, vertical terminations, etc. (see Detail 4)
- Cut back DELTA®-DRAIN 3" (8 cm) from the edge of wall openings.
- Position the wider edge of DELTA®-MOLD STRIP over DELTA®-DRAIN.
- Use DELTA®-MOLD STRIP at sloped cuts in the DELTA®-DRAIN.
- Anchor DELTA®-MOLD STRIP 8" (20 cm) o/c using 1 ¼" (3 cm) – 1 ½" (3.8 cm) concrete nails.

### Installing Around Corners

- Install DELTA®-DRAIN on inside corners as tightly as possible by pushing the membrane into the corner, then anchor it in place with DELTA®-FAST'ners in the body and DELTA®-MOLD STRIP on the flat tab. (see Detail 5)
- Install DELTA®-DRAIN on outside corners as tightly as possible by pressing the membrane around the corner, then anchor it in place with DELTA®-FAST'ners in the body and DELTA®-MOLD STRIP on the flat tab. (see Detail 6)
- Do not install DELTA®-FAST'ners within 3" (8 cm) of outside corners to avoid damaging the concrete.

### Overlaps

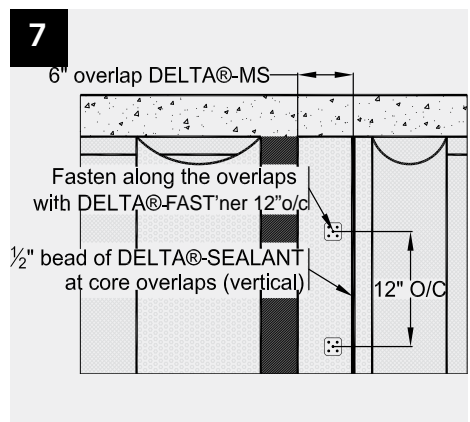
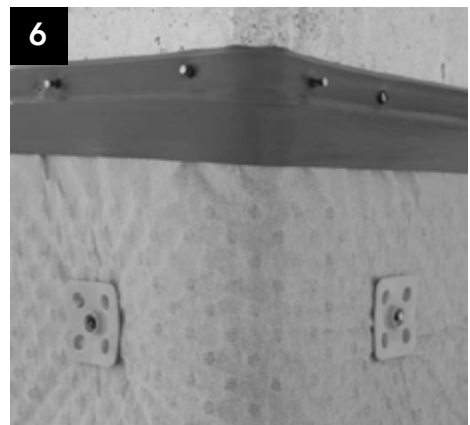
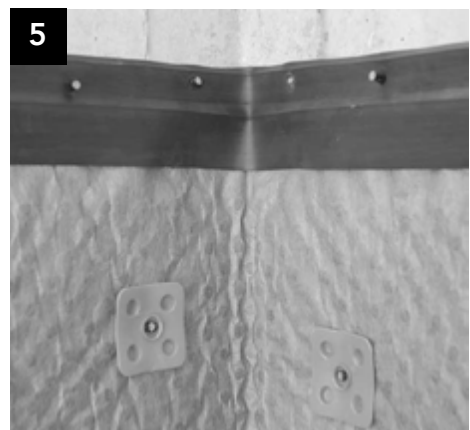
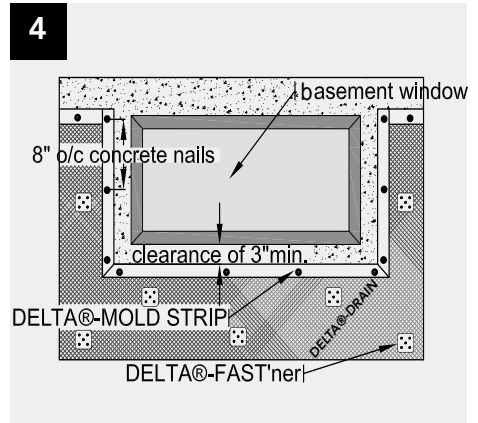
- Vertical overlaps:
  - Strip back the filter fabric of adjoining layers of DELTA®-DRAIN to allow the membrane to overlap.
  - Place a bead of DELTA®-SEALANT on dimpled membrane.
  - Overlap the core of DELTA®-DRAIN by 6" (15 cm).
  - Place back the filter fabric and fasten vertically with DELTA®-FAST'ners over full length of the overlap at 12" (30 cm) o/c. (see Detail 7)
- Horizontal overlap:
  - For foundations higher than the roll height, install the first course by unrolling DELTA®-DRAIN at the bottom of the wall. The next course of DELTA®-DRAIN shall overlap the bottom layer by 6" (15 cm), shingled downwards.
  - Install DELTA®-FAST'ners along the length of the joint at 3' (1 m) o/c.
  - DELTA®-MOLD STRIP is not required on the lower overlapped section. (see Detail 8)

### Service Penetrations

- When encountering a service penetration protruding from the foundation, roll out DELTA®-DRAIN flush to penetration.
- Cut the DELTA®-DRAIN vertically. Strip back the filter fabric at least 6" to allow for overlap.
- Restart application on the other side of service penetration. Unroll enough DELTA®-DRAIN to go past the service penetration plus another 6" (15 cm) for overlap.
- Cut the length of unrolled portion around horizontally at a point equal to the center of the service penetration. (see Detail 9)
- Pull the slit portion around the penetration and trim the DELTA®-DRAIN 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, then lap filter fabric over lap joint.
- With the filter fabric placed back, fasten vertically with DELTA®-FAST'ners over full length of the overlap at 12" (30 cm) o/c. (see Detail 7)

### Inspection and Clean-up

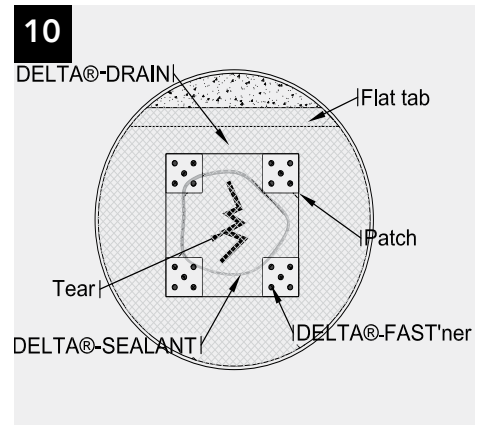
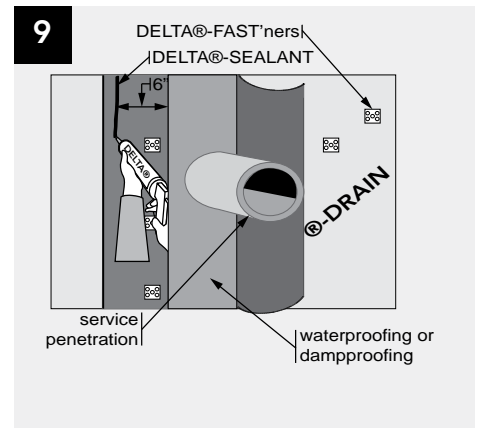
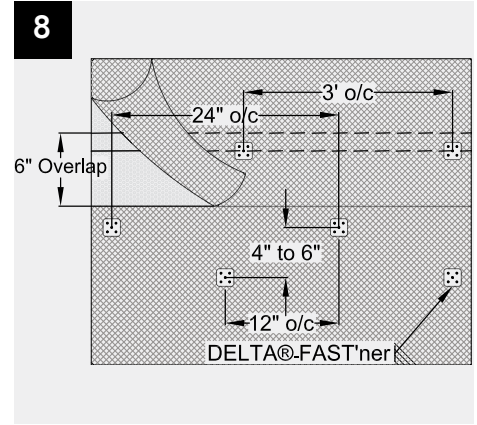
- To repair DELTA®-DRAIN, cut patches of DELTA®-DRAIN 6" larger than the tear. Ensure that the drainage core is kept free from debris.
- Apply patch over tear and install DELTA®-FAST'ners to hold the patch tightly against membrane. (see Detail 10)
- Walk around foundation and ensure all materials are installed as required.
- Clean up all excess materials and remove from excavation.



**Disposal of Waste**

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

For technical support, call our technical support team at 1-888-4DELTA4 (1-888-433-5824) extension 326, or visit [www.cosella-dorcken.com](http://www.cosella-dorcken.com).



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