

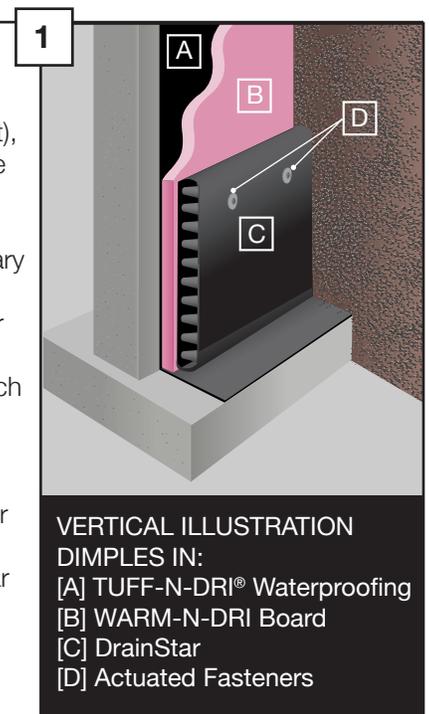
DrainStar® Stripdrain

RECOMMENDED INSTALLATION INSTRUCTIONS

All DrainStar® connections, splices and core interlocking should be overlapped with filter fabric, fastened to the foundation wall. This ensures that the DrainStar maintains a continuous barrier preventing soil entry into the DrainStar. DrainStar should be installed dimples out facing soil backfill, when used against membrane only applications. DrainStar should be installed dimples in, facing the foundation wall, when used with WARM-N-DRI® Board or a drainage pannel.

VERTICAL INSTALLATION INSTRUCTIONS

1. Unwind roll of DrainStar around excavation.
2. Starting at the termination point of DrainStar (at the sump connector tile or daylight exit), place DrainStar vertically against the foundation wall. The flap of filter fabric should face down, when it is an application with dimples facing in.
3. Attach DrainStar to the wall with powder actuated fasteners every 4-5 feet, as necessary to keep DrainStar snug against WARM-N-DRI. Fasteners should be installed at a level near the top of the DrainStar, to prevent soil backfill from folding the DrainStar over. For proper fastener type, size and installation tool, contact Tremco Barrier Solutions Technical staff at 1-800-876-5624. Do not use fasteners or nails that are too long, which may be damaged or knocked lose during backfill. After installation, a nail or fastener should not stick out more than one half inch from the DrainStar.
4. DrainStar can be maneuvered to fit inside and outside corners. Do not fasten DrainStar to the foundation wall closer than one foot on either side of corners, unless corner guards are used. It is normal to have a small amount of slack or gap between DrainStar and the wall corners when bending the DrainStar way from the dimple face. When bending toward the dimple face, a tight corner can be made, and the DrainStar will fit snugly into or around the corner.
 - Although not required, corner guards are recommended for use with DrainStar when bending DrainStar away from the dimple face at corners.
 - For applications with WARM-N-DRI, DrainStar dimple face in, corner guards are recommended for inside corners.
 - For membrane only applications, DrainStar dimple face out, corner guards are recommended for outside corners.
 - To install corners guards, slit the DrainStar dimple fabric vertically between the dimples at the location of the corner, bend the DrainStar to a sharp bend and place the corner guard over the open DrainStar fabric slit. Wrap the fabric tightly around the DrainStar and tape to secure; the top fabric edge should wrap over the bottom. The corner guard will be against the WARM-N-DRI board on inside corners, and will be outside the DrainStar on outside corners of membrane only applications.
5. Continue with installation until reaching the drain exit point(s).
 - For daylight or walk out drainage, install a DrainStar universal outlet fitting directly to the end of the DrainStar. Secure the fitting with a powder actuated fastener to ensure it does not become disconnected from the DrainStar. To connect a 4" pipe to the DrainStar universal outlet fasten the 4" pipe with 3" tape, screws or a 4" interior coupling.

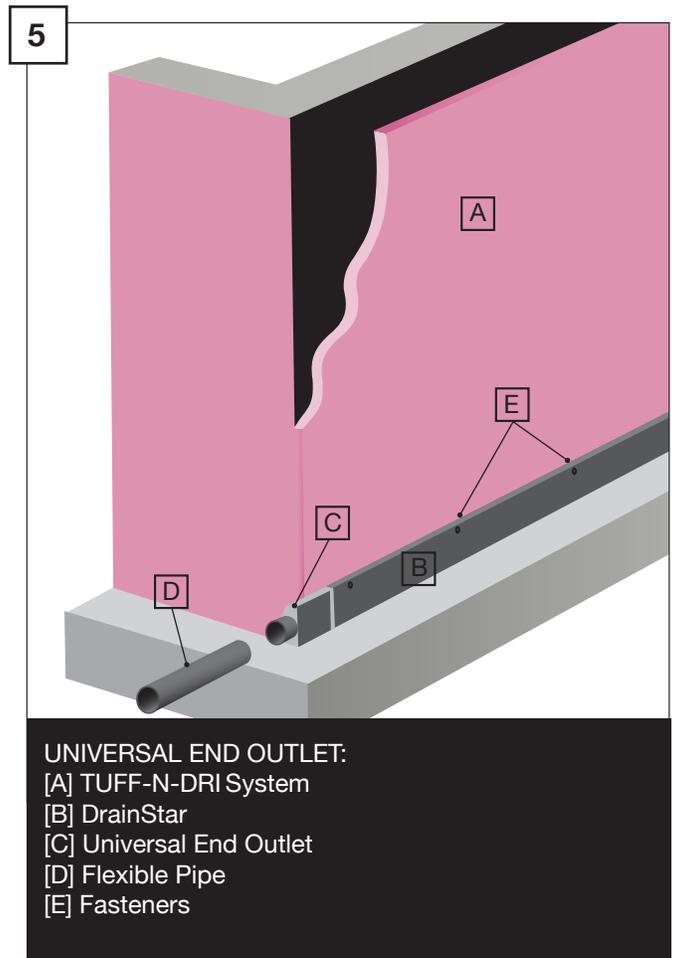
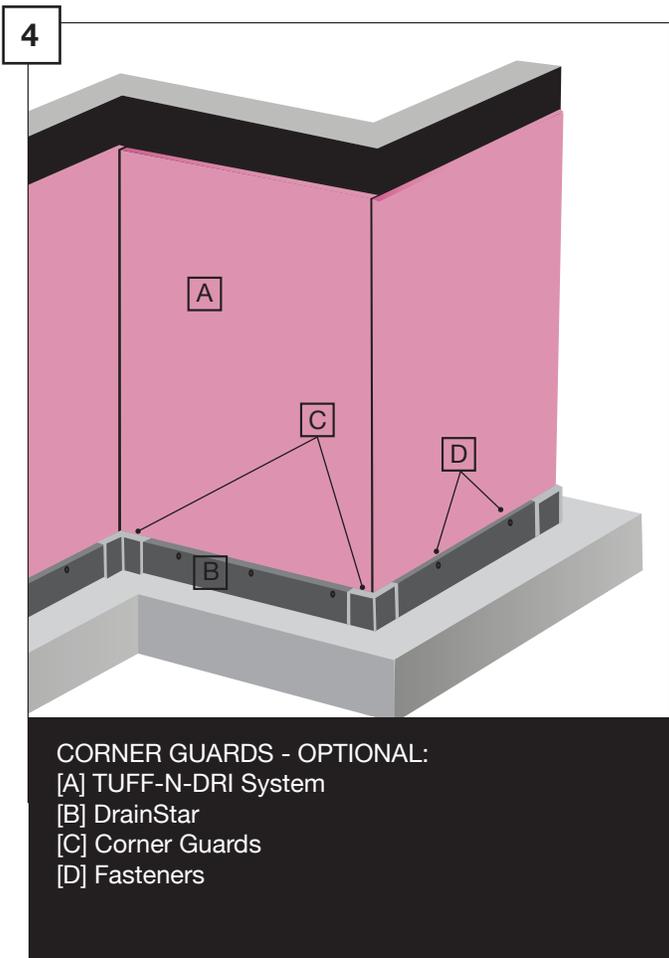
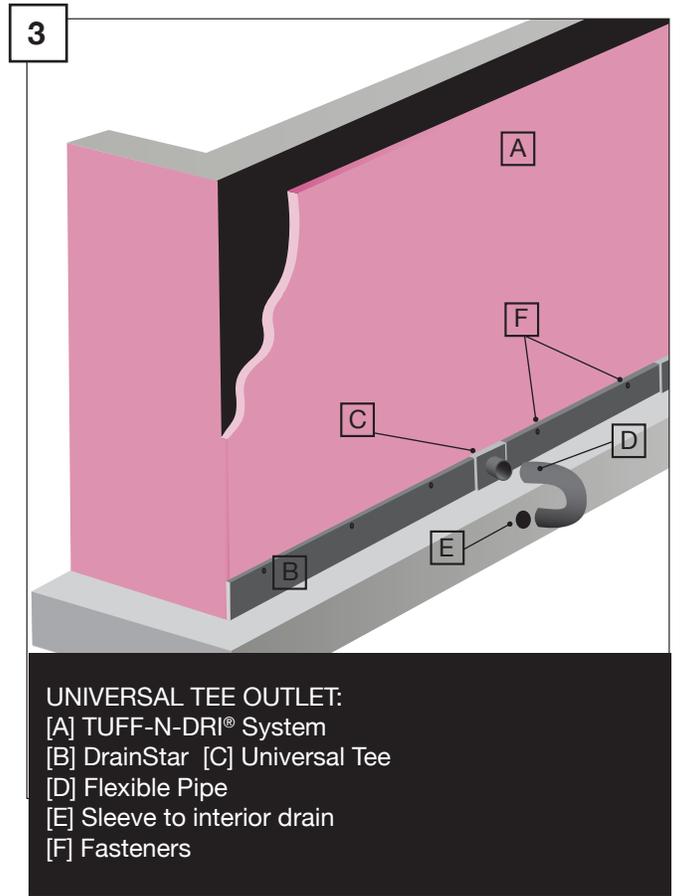
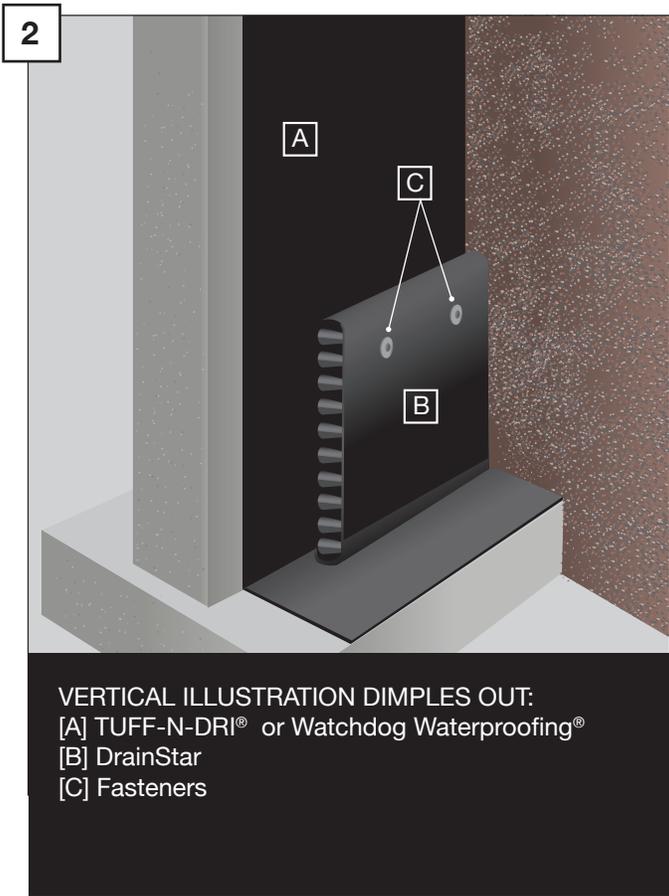


VERTICAL ILLUSTRATION
DIMPLES IN:
[A] TUFF-N-DRI® Waterproofing
[B] WARM-N-DRI Board
[C] DrainStar
[D] Actuated Fasteners

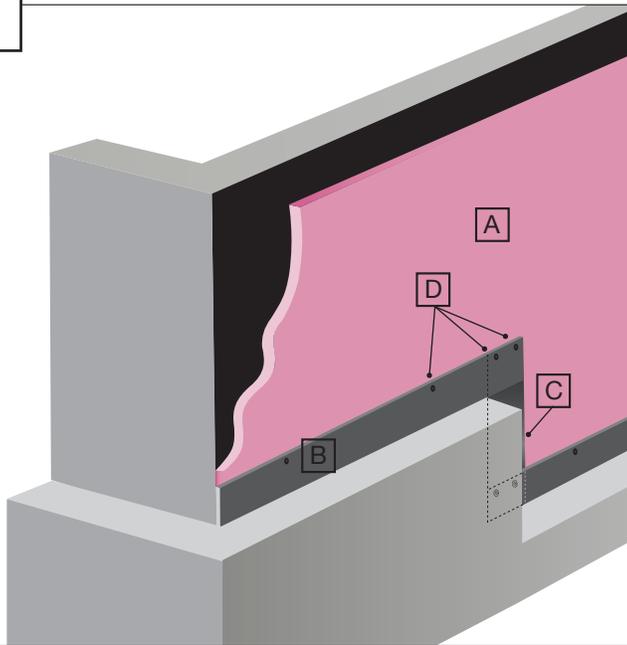
- For sump connections, install a DrainStar universal tee fitting within two feet of the sump sleeve through the footing. Secure the fitting with a powder actuated fastener to ensure it does not become disconnected from the DrainStar. Cut and remove the filter fabric (dimple face out applications) or fabric and core (dimple face in applications) out of the DrainStar around the inside hole of the 4" tee fitting (removing the fabric/fabric and core allows water to exit the DrainStar with out restriction). To connect a 4" pipe from the universal tee fitting to the sump sleeve, use 4" corrugated pipe or 4" PVC with elbows. Fasten the 4" pipe with 3" tape, screws or a 4" interior coupling. If possible, backfill the 4" pipe connection with gravel or soil with a shovel to ensure that the pipe is not damaged during backfill.

ADDITIONAL INSTALLATION

- Ensure TUFF-N-DRI or WATCHDOG Waterproofing® membrane is sprayed to the proper 60 mils wet thickness on foundation wall and at footing /wall joint transition.
- Corner guards are recommended at the appropriate corners for vertical applications, but not required.
- Always cut filter fabric, or fabric and core, out of DrainStar inside the 4" hole when installing a universal tee.
- DrainStar can run up to 150 feet without an outlet. Tremco Barrier Solutions, Inc. recommends a minimum of two outlets per foundation. Installing one outlet per wall connected to an interior tile system is a preferred application. Two outlets at sump corner is also a good idea, to provide a back-up if one is damaged or disconnected. Check local code requirements for required outlets.
- If DrainStar cannot make a continuous loop around the foundation, as with a non-sleeved bulkhead wall or garage wall; terminate DrainStar at both sides of the wall, and drain fro both sides. Ensure all DrainStar terminations are overlapped with filter fabric and fastened properly to the foundation wall.
- If a roll of DrainStar ends in the middle of a foundation wall, applicator can use the "eggshell carton" method, or core interlocking, to begin new roll of DrainStar. Cut filter fabric away from the last two rows of dimples on the existing and new rolls of DrainStar, and press new DrainStar dimples into dimples of existing DrainStar. Re-wrap transition area with filter fabric and fasten properly to foundation wall. The "eggshell carton" method can also be used to step down DrainStar at footing elevation changes.
- DrainStar chimneys can be installed under window wells at the builder's request or as required by code. To install a DrainStar chimney, fasten DrainStar up the foundation wall and terminate at a level where it will properly drain water from below the window. Wrap the top and bottom of DrainStar with fabric to prevent soil or gravel from entering DrainStar. Where the footing DrainStar meets the chimney DrainStar, fasten DrainStar chimney on the outside of the footing DrainStar. The footing DrainStar should make a continuous loop, with the chimney DrainStar on the outside and the soil backfill against it.
- DrainStar can also be installed in an L-shape, and in a reverse L-shape across the footing and down the face of the footing to cover weep holes.
- DrainStar provides a water flow rate of 150 gallons/ft² (when tested to ASTM D4491).



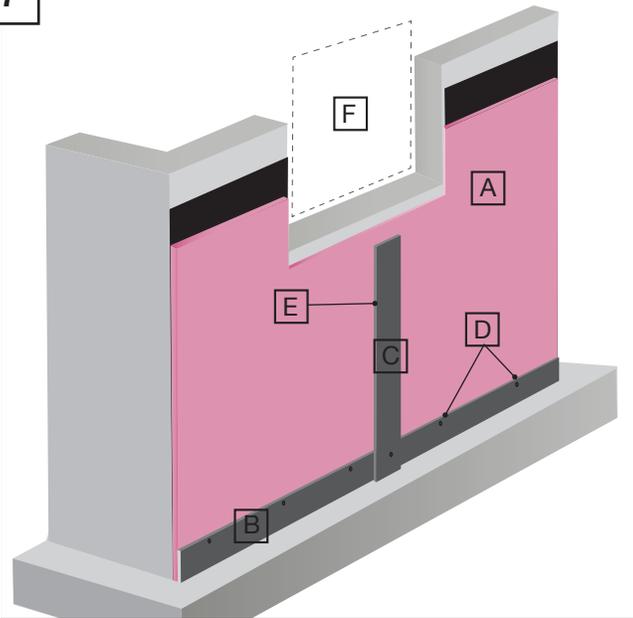
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STEPDOWN:

- [A] TUFF-N-DRI System
- [B] DrainStar
- [C] DrainStar Stepdown Piece (installed on top or eggshelled)
- [D] Fasteners

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WINDOW WELL CHIMNEY DETAIL:

- [A] TUFF-N-DRI System
- [B] DrainStar [C] Chimney
- [D] Fasteners
- [E] Fabric Covering DrainStar Dimples
- [F] Egress Window