

Installation Instructions for Below Grade Applications of EnergyShield XR Continuous Insulation

For the purposes of this document, the reference to **EnergyShield XR** is for below-grade applications. Refer to the Atlas Residential or Commercial Installation Guides for above grade applications that are applicable for EnergyShield XR. Unlike polystyrene foam products, the polyisocyanurate foam core and durable facers will not degrade if exposed to chemical, UV or high heat. Consideration for compressive strength, moisture resistance and vapor control help maximize the effectiveness of long-term thermal performance in below-grade applications.

MATERIALS CHECKLIST

- Proper PPE
- **EnergyShield XR** continuous insulation
- Fasteners
- Straight edge
- Measuring tape
- Pencil
- Preferred cutting tools: utility or insulation knife, circular or table saw.

PREPARATION

- Materials should be delivered to the jobsite undamaged and in original packaging. Inspect **EnergyShield XR** for damage related to transportation, handling, or weather. Separate and discard any product damaged or beyond repair as it may not be fit for intended use.
- Confirm compatibility with any components adjacent to **EnergyShield XR**. Follow component manufacturer's instructions for specific surface preparation and installation requirements.
- Always refer to local building codes and/or consult with a design professional to ensure compliance with applicable codes & regulations.

PRECAUTIONS AND LIMITATIONS

- Follow local building code requirements.
- Reference IBC Chapter 26, Section 2603.8 and IRC Section R318.4 when installing in areas of "very heavy" probability of termite infestation. See **DrJ TER 2209-01** for approved protection methods.

STORAGE AND PRE-INSTALLATION INSPECTION

- Refer to Technical Bulletin 16 for detailed information on storage recommendations.
- Insulation shall be kept clean and dry and be protected from damage due to weather and physical abuse at all times.
- Prior to installation, ensure that the insulation and substrate are clean, dry and free of ice, dirt, oils, or any other material that could impede correct installation of the insulation or subsequent material layers.
- Do not install if surface conditions of the insulation or adjacent materials will impede correct installation.

BELOW-GRADE APPLICATION

EXTERIOR FOUNDATION WALL

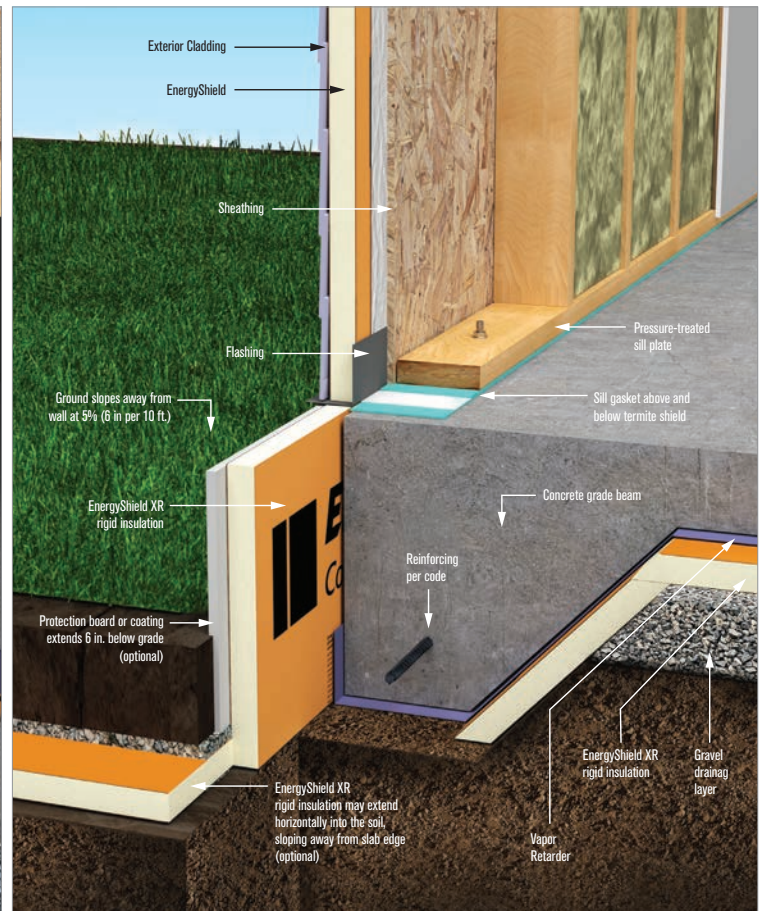
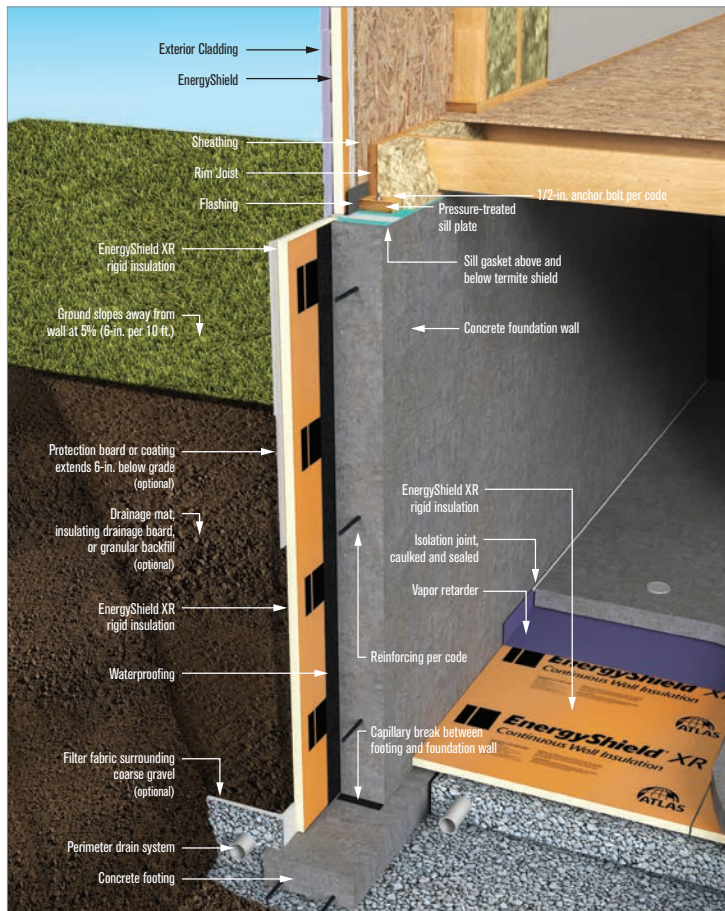
EnergyShield XR is engineered to insulate exterior foundation walls below-grade. Insulating block or concrete walls on the exterior surface helps eliminate effect of thermal bridging providing energy efficiencies for interior spaces.

1. Prepare exterior foundation walls with damp proofing or waterproofing membrane or coating.
2. Install EnergyShield XR extending the full height of the exterior foundation wall from top of footing. Tightly fit board joints together working across the foundation wall.
3. Secure insulation boards to exterior foundation wall with construction adhesive or mechanical fasteners. Alternatively, backfill is often adequate to hold insulation boards in place without the need for fasteners.
4. If desired, install a composite drainage material over insulation to promote adequate drainage in predominately wet climates.
5. Backfill to secure in place. Avoid damage to the insulation board surface.

UNDER SLAB

EnergyShield XR can be installed horizontally to insulate under concrete foundation slabs.

1. Prepare level aggregate base or grade for proper drainage.
2. Install EnergyShield XR with joints tightly together and against perimeter walls and/or vertically installed insulation boards. Stagger joints if installing multiple layers.
3. If required, cover entire floor slab area with a vapor code barrier, such as a polyethylene protective membrane or equivalent.
4. Set rebar and/or pour concrete as appropriate. Bury or backfill, as required.



STEM WALL

MONOLITHIC SLAB / GRADE BEAM