

# **DURASKIRT™**

A Concrete Solution for Life<sup>SM</sup>

## **MANUFACTURERS INSTALLATION MANUAL**

**AN INNOVATIVE PRODUCT OF:  
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# Thank you for choosing DURASKIRT™

## STATEMENT OF ORIGINALITY AND PURPOSE

### The long lasting solution to skirting problems

We at Creative Concrete Products, LLC understand the difficulties with other skirting products. We have been installing manufactured homes for 11 years and have used almost every type of skirting available.

The idea of a manufactured home was originally meant to be a temporary dwelling. But not anymore, these homes have become a permanent dwelling for millions of Americans. Manufactured housing is being made with all the conveniences of a custom home and is a very attractive place to call home. That is until it comes to the skirting. *Skirting has been left in the dust.* Builders are still going to the lumberyards, masonry and landscape suppliers trying to find something that will cover the gap from the home to the ground. They're using anything from metal to vinyl, from concrete blocks to pressure treated wood, from standard siding to bricks, rocks, lattice and so on.

We found that most people prefer concrete because it most resembles a custom 'site-built' home and has been proven to last. When our customers discovered that they had the choice to have a poured in place, 6" thick, concrete foundation under their manufactured home they chose it because of its durability and its ability to make their home look more permanent. However, there are still drawbacks, such as the extra *costs* (setting the home into the skirting, which costs at least \$500.00 per section, and the need for heavy machinery to pour the skirting) and the fact that it locks their home in and makes it difficult to move later. Other skirting has its problems too, such as rodents digging through wood or vinyl, or products like pressure treated wood or metal that aren't meant to be buried in a 'pit set' application, causing it to swell, rot, rust and deteriorate. Wood skirting also is known for wicking moisture up to the rim joist and causing it to rot. Ask anyone that owns a manufactured home about their skirting and they will tell you that unless you get something that will last you will be maintaining it again and again.

**DURASKIRT™** is one of only a few skirting products made specifically for manufactured homes. **DURASKIRT™ is made from a high strength Real Concrete which has sand, gravel, cement and air entrainment that is double reinforced with high tensile strength rebar and fiber-mesh, custom made to fit your home, easy to install and remove.** It's concrete without the mess. We pour the skirting at our shop so the mess stays at our facility. It can be delivered to your home-site on a small truck, with no need for machinery, so you don't need to accommodate large concrete and pump trucks or any other type of machinery. This helps make your driveway last to the end of your construction project. The panels are made similar to a standard foundation with vertical and horizontal rebar. We have designed this product with an open space under the rim joist. We've used this proven method to prevent moisture from reaching the floor of the home. Since the panels don't actually come in contact with the home they cannot draw moisture into the house, which is the leading cause of rot. This allows for years of comfort for the homeowner and contractor.

### How to measure the home

*NOTE: DURASKIRT™ is custom made to fit so all measurements have to be determined at the site. In order to speed your project along the measurements must be made as soon as the home is blocked in its permanent location. Call for specific information regarding proper measuring.*

- Take measurements from the corners of the home at the points that you want the skirting to come to.
- Measure for height frequently around the home from ground or concrete to rim joist. If necessary we can make panels different heights.
- On inside corners the panels will intersect. Indicate which side will go past the other.
- Give a dimension from a corner to the access for layout and indicate whether it will be a well or a door.
- The steel frame under the home may be less than 1 ½" behind the siding and you may need to add a filler strip or 'fir out' behind the bellyband (trim board) in order to make the panels clear the beams. The panels are 1 ½" thick.
- On the hitch end of the home the steel frame usually consists of a solid beam. In this case vents should not be used because the air flow is blocked by the beam. Try to fit the vents into other areas.
- Vents can also be installed to meet requirements for floodplain areas. We install them within a foot of the bottom of the skirting and place as many as necessary to meet the 'vent area' to 'enclosed area' ratio. This ratio may change for each jurisdiction so check with your local building department for this requirement. We use standard plastic foundation vents with a net rating of 75 square inches.
- **DO NOT place a vent near an LP or Natural gas vent. Write the dimension where the gas line will come thru the skirting so we can be sure that there are no vents in that area.**
- **We recommend that gas piping be placed tight against the underside of the floor joist when it exits the skirting. This allows the skirting to go under the pipe. In a gravel pad situation this MUST be done so that if the home or the skirting ever shifts or settles it won't put any pressure on the pipes.**

## Tips for installation

- After receiving the product measure the home before you start installing it. Make sure the home is the same size as the drawing indicates from the installation drawing that we make from the dimensions you gave us.
- Start the installation at the corners and work towards a filler location or crawlspace access.
- The corner where you start should be lined up vertically with the outside of the siding depending on the siding type. Note: Don't try to get the corner exactly plumb because the first panel will cause the corner to move and it will need to be readjusted.
- ***Do not allow more than a 3/8" gap between panels and fillers because the panels could come loose from the connector and fall resulting in damage to the panel or bodily injury.***
- Make sure the panels are vertically plumb as you install each panel to avoid being out of plumb where they meet from both directions. This will cause it to misalign.
- Do not stack the panels on an uneven surface. This can cause the panels to crack.
- The 'Tee' connectors should easily slip into the groove of the panel. If you have any problems check the groove for debris and clean it out. When using the connector with the nails then place the hammer against the side of the panel below the connector and slide the hammer along the side while hammering this will help prevent 'mushrooming'. We make different types of connectors. Ask about their specific use.
- The bottom clips must be secured or the panels may break while backfilling.
- **Try to avoid cutting through the rebar frame inside the panels or they may break.** If you must then you need to add further support to the panel. After cutting through the rebar the panel must be picked up and carried in a vertical position to prevent it from breaking.
- Perforations through the panels can be made by using a small hammer to chip a hole to the size you need. Stand the panel up vertically while chipping to prevent the panel from cracking. Always hit the face side of the panel and allow it chip out to the back.

### Installation of DURASKIRT™ on a 'concrete' slab:

1. Measure the house to be sure the order matches the home dimensions. Make adjustments as necessary.
2. Start by installing a corner. Select the proper corner panel to be placed first. Plumb down from the outside of the siding or desired location to align the panel. Be sure that the bottom clip is on the outside of the panel so that it's easy to get to when you're ready to secure the panels later. If you need to bend the bottom clip to the inside then you will want to secure them as you are installing. To secure the bottom clips skip to step 10.
3. Insert the 'Tee' connector into the groove at the end of the panel and secure it to the rim joist of the home. (Make sure that the panel remains plumb during this process.)
4. Repeat step 3 for the other side of the corner. (If necessary you may need to skip to step 10 to secure the panel before you move on to the next step.)
5. Place the next panel under the home and align it with the 'Tee' connector. Check to be sure the groove is free of any debris before putting it on the connector. Also be sure that the panel is facing the right direction. The flat side always faces outward. The only exception to this is the filler panels, which are flat on both sides.
6. Move the panel over the connector, which was installed with the corner panel. It may be helpful to use a pry bar under the panel to allow the panel to move side to side easily.
7. Adjust the panel so that its plumb and the top of the panel lines up with the home. You may need to shim or wedge under the panel to temporarily hold it in place.
8. Line up the loose end of the panel with the siding and insert a 'Tee' connector and secure it to the rim joist as you did with the corner.
9. Follow steps 6 – 8 all the way around the house.
10. To secure the galvanized clip to the concrete slab or footing use a roto-hammer with a masonry drill bit to drill a hole through the clip and into the concrete and then use a split pin or quick bolt.
11. Caulk the joints. See instructions under concealing the gaps between the panels.
12. This step is for exposed aggregate only otherwise skip to the next step. Now you can apply the Cure and Seal to the surface of the panels to give it a shine. Make sure the surface of the skirting is clean and dry before application. **Wear eye and skin protection while using the sealer.**
13. Place the vents into the knockouts in the panels. The top of the vent can be identified by two holes for securing on the top corners. Use two galvanized screws to secure the vent to the tack strip. Do this by drilling the screw through the top toward the right and left sides of the vent upward at a 45° angle. The pressure that the screw puts in this location should secure the bottom of the vent. This does not hold the bottom of the vent in tight, but it does keep it from rattling and prevents rodents from entering.

Your installation is now complete and you can cover the gap between the home and the skirting with a trim board, unless you chose to tuck the panels up behind the siding.

### Installation of DURASKIRT™ on a 'gravel' pad:

The steps below are based on the assumption that, the home is being supported by piers that are placed on approved native soil, crushed rock or pitrun, and that the skirting will be placed on the same sub-grade. The supporting sub-grade needs to be at least a 1000 PSF rating or greater. The skirting can be placed directly on this type of soil. See chart for ground pressure rating.

1. The skirting needs to be placed directly against the ground. This will help hold the panels from moving when they are backfilled. You may need to place compacted fill or crushed rock up to grade before installing the panels.
2. Follow steps 1 – 9 of the ‘Installation of DURASKIRT™ on a *concrete* slab.
3. To secure the bottom clips simply drive a steel rod (rebar spike) into the ground through the hole in the clip. Be sure that the rod is in the ground securely to prevent the panel from moving while backfilling or the panel may break. If the ground is soft then you may need to support the panel further by placing supports behind the panels.
4. Follow steps 11 - 13 from the ‘Installation of DURASKIRT™ on a *concrete* slab.

Your installation is now complete and you can cover the gap between the home and the skirting with a trim board, unless you chose to tuck the panels up behind the siding.

#### **Concealing the gaps between the panels:**

- For exposed aggregate panels.
  1. Use a clear caulking in the gaps and then sprinkle sand over it. Make sure the sand is dry when applying.
  2. Brush off the excess sand from the panel and groove before applying the sealer.
- For smooth panels:
  1. Apply an exterior, clear or gray, paintable caulking into the grooves.
  2. Then rub dry cement over it (provided with order). Brush off the excess.

#### **Backfill instructions:**

Duraskirt™ can be backfilled to the bottom of the vents without additional bracing. Place fill material near skirting and manually shovel the fill against the skirting to avoid damage by machinery. Do not mechanically compact material next to the skirting. If backfill needs to exceed the height of the bottom of the vent (or less than 8” of the top of panel) then additional bracing (treated wood or steel kickers) can be placed behind the skirting to prevent it from bowing inward or breaking.

#### **Warranty:**

Duraskirt™ has a limited lifetime warranty providing that all the above instructions were followed. If the concrete skirting or the steel connectors are returned to us and found to have a manufacturer defect they will be replaced at no cost. Labor is not covered.

#### **Ground pressure application rates:**

1500 PSF = 10.4 PSI

1000 PSF = 6.94 PSI

DURASKIRT™ ground pressure = Never exceeds 2.1 PSI (303 PSF).

### **Cautions and Hazards:**

- **Installation is a two-person job. DO NOT attempt to install the panels by yourself.**
- **The panels can be awkward to carry. Use precautions when lifting and carrying the panels.**
- **Always make sure your path is clear while carrying the panels.**
- **Wear eye protection when perforating or cutting the panels for utilities.**
- **Wear protective clothing. Some parts are sharp or heavy.**
- **Use proper lifting techniques while installing the panels to prevent back injuries.**
- **When working together, make sure the other person is aware of what you are doing to avoid injuries.**
- **Keep your fingers clear of pinch points.**
- **Wear a dust mask or respirator while cutting concrete to avoid inhalation.**