# Crack Repair System



Waterproofing & Foundation Repair



# Hydrostatic Pressure

Concrete walls become stressed when hydrostatic pressure (soil expansion) exerts tremendous force against foundation walls.



The structural integrity of your foundation wall is at risk during times of both extreme drought and heavy rainfall.

When extreme drought occurs, the soil surrounding and supporting your foundation dries, shrinks, and leaves large gaps between the soil and your foundation. During times of heavy rainfall, the surrounding soil swells and exerts a tremendous amount of hydrostatic pressure (soil expansion) against the walls.

The pressure (or lack of support) often becomes too much for walls and causes them to crack or bow. Efforts to stabilize or reposition bowing walls should be taken as soon as possible. When cracks appear in these walls, the structural integrity is compromised.

#### **Carbon Fiber Crack Repair System**



Refore After

The Carbon Fiber Crack Repair System is a patented technology that integrates the advancements made in aerospace to produce solutions for your home. The system is strong, yet safe and economical.

The Carbon Fiber Crack Repair System is used as a reinforcement of concrete and block basement walls. In particular, Woven Carbon Fiber straps can prevent damage by providing 10 times the strength of steel to resist soil pressure against basement walls. If desired, the Carbon Fiber System can be easily painted for aesthetically pleasing finish.

#### **Installation Steps**

Using high strength Polyurethane to fill the existing void, and high tensile strength Carbon Fiber sheets to stop any further movement, the Carbon Fiber System stops cracks in their tracks. With Carbon Fiber materials stronger than steel, Carbon Fiber bridges the forces to fix the crack.

The walls are prepared for installation by sanding the area



2. Inject polyurethane into the crack to stop water leakage.

clean of debris.



Prepare surface and apply primer.



The Carbon Fiber is bonded to the surface to cover the crack. A final coat of epoxy is applied.



## Why Carbon Fiber?

No excavating or drilling as the Carbon Fiber System installs easily without need for heavy or noisy equipment.

Compared to steel, Carbon Fiber is over 10 times stronger, much thinner (only one-tenth of an inch), and 40 times lighter.

Carbon Fiber repairs are completely maintenance free because they never will corrode like steel.

With the ease of installation, its incredible strength, and the durability of Carbon Fiber, it's easy to see that no other choice makes sense.



#### **Preventative Measures**

Over a fourth of all homes in the United States rest on expansive soils. Poor drainage is a major factor in causing the over saturation of soil. Monitoring your home and quickly addressing any problems can help reduce repair expense.





## **Crack Repair Injections**

The use of our injection systems provide superior solutions to cracks in concrete basements, foundation walls, and structures.

Our formulated injection system is designed to stop concrete deterioration at the crack, while protecting the steel reinforcement inside the impacted area. The urethane injection resin acts to push water away to facilitate the sealing of cracks in basement walls. Our system can protect the interior living space of your home from incoming water, air, and bugs as result of cracks in your foundation.



The walls are prepared for installation by sanding the area clean of debris.



2.

Injections ports are installed and sealed off.







Our specially formulated resin is injected into the crack through the ports.



**Life happens in your home.** We believe you and your home deserve the best. Grounded in our commitment to faith and family first, our trusted team has been caring for homes just like yours since 1987. We offer effective and permanent waterproofing and foundation repair solutions that will withstand the life of your home; **this is our Helitech Promise.** 



#### **HELITECH Waterproofing & Foundation Repair**

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