

# **Fiberglass Columns**

## **5 Costly Mistakes to Avoid**



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# Fiberglass Columns

## Background Information

### WHY FIBERGLASS?

Because they offer so many advantages over traditional wood columns, fiberglass columns have become very popular during the last several years.

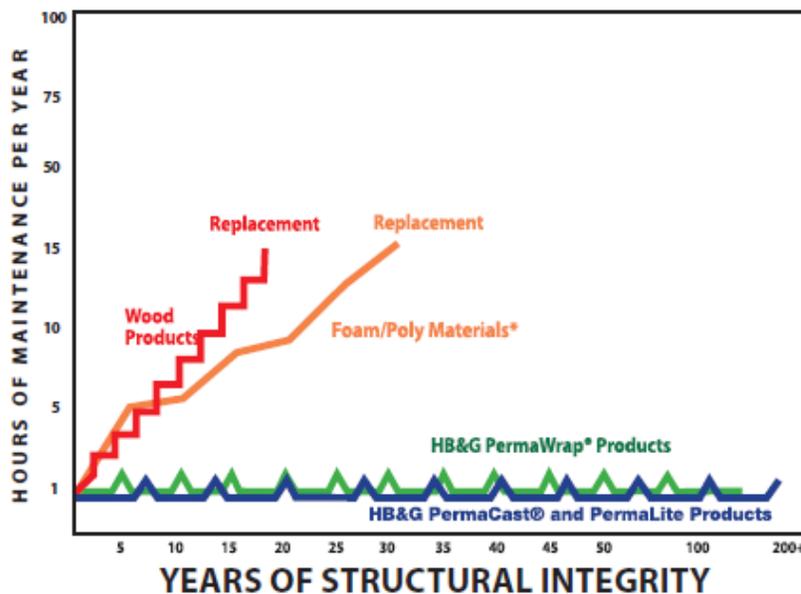
- Consistent quality and reduced maintenance
- Easy to install with standard carpentry tools
- Can usually be painted with acrylic paint or oil-based paint
- Most are readily available in a variety of sizes and styles
- Won't chip, warp, peel or splinter the way wood does
- Less impact from water or high humidity
- Resistant to termites and other insects

### WEATHER AND WOOD

Bad weather and extreme temperatures can take a toll on exterior wood columns, especially during the winter. When moisture gets into the tiny cracks in the wood and then freezes, it can cause wood columns to expand. That can split and crack even the toughest wood. Fiberglass columns are not susceptible to this problem.

### MAINTENANCE AND STRUCTURAL INTEGRITY

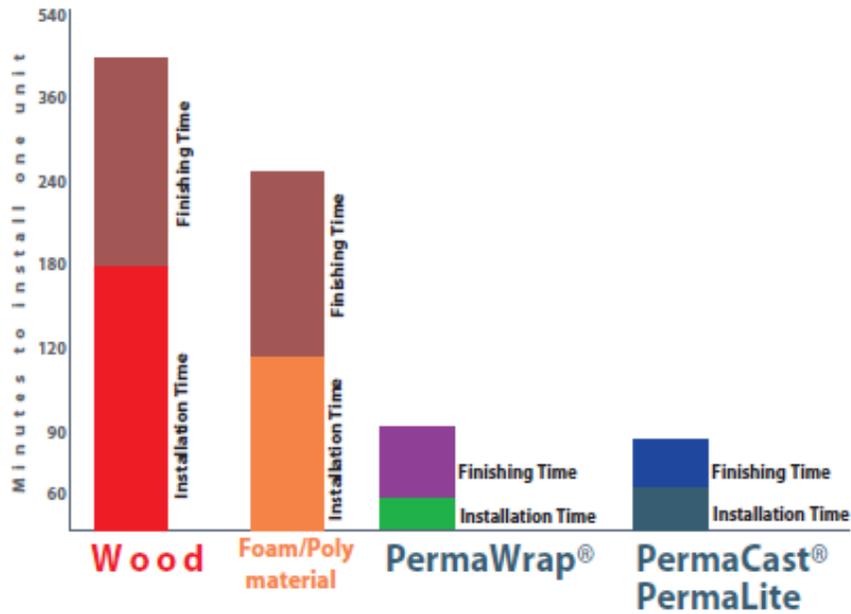
Fiberglass columns also require considerably less maintenance, and they offer many more years of structural integrity than wood for foam/poly columns. It should be noted that foam/poly columns are not load bearing.



\*Not Load Bearing

## EASE OF INSTALLATION

Fiberglass columns are relatively easy to install. The chart below shows that fiberglass columns take considerably less time to install and finish than wood columns. Where wood columns can take several hours to install and properly finish, fiberglass columns should take considerably less time.



Includes all tasks required by manufacturer to meet warranty requirements.

### What You Should Know Before You Begin

Fiberglass columns are a good choice if you need the columns to support the weight of a structure, like a porch roof. The term that refers to this ability is “load-bearing.” In addition to being load-bearing, most fiberglass columns are also weather resistant and insect proof.

Many fiberglass columns come with a lifetime warranty. Be sure to check the manufacturer’s requirements, specification and warranty information before making your purchase.

The information contained in this document pertains to the most common types of fiberglass architectural columns only, and specifically does not pertain to wood or cellular PVC columns. Follow these tips for a better experience adding fiberglass columns to your project, but remember that if the instructions from the manufacturer contradict any of this information, it’s always best to follow the manufacturer’s recommendations.

# 5 Costly Mistakes to Avoid

These are some of the most common, but easily avoidable, mistakes that people make when trying to add fiberglass columns to a building.

## Mistake Buying the Wrong Size Column

### #1

Fiberglass columns are available in many diameters and lengths. Getting the length right may be as simple as measuring twice, but different columns, especially in widths, are designed to support different amounts of weight. This is referred to as “load-bearing capacity” and it’s a critical element in selecting the correct columns for your project.

If you’re not certain of the requirements, you should consult a structural engineer or architect to verify the load-bearing requirements of the structure. From there it’s easy to choose the proper size column, but you must also be sure to have the structural engineer or architect verify the maximum space between columns.

Be sure to plumb and level, with 100 percent of bottom contacting the substrate and a minimum of 75 percent of top contacting the soffit. Center the load over shaft and evenly distribute the weight around the bearing surface.

Not only is it unsafe to ignore load-bearing requirements, but most manufactures warranties are also void if the load-bearing capacity is exceeded. Be sure to conform to the manufacturer’s specifications, as well as to local codes and the architect’s design criteria.

**Most manufacturers provide load-bearing specifications, like the PermaCast® chart shown to the right.**

**Be sure to access this information and compare it to requirements of the project before making your purchase.**

ROUND & SQUARE PERMACAST® LOAD BEARING SPECIFICATIONS	
Split columns are not load bearing	
COLUMN DIAMETER	STRUCTURAL LOAD
6"	8,000 lbs. Max
8"	10,000 lbs. Max
10"	14,000 lbs. Max
12"	18,000 lbs. Max
14"	20,000 lbs. Max
16"	20,000 lbs. Max
18"	20,000 lbs. Max
20"	20,000 lbs. Max
22"	20,000 lbs. Max
28"	20,000 lbs. Max
30"	20,000 lbs. Max
36"	20,000 lbs. Max

## Mistake

### #2

## Bottom of the Column Does Not Fully Contact the Substrate

Because fiberglass columns are load-bearing, they must transfer the load of the roof to the ground. To insure the load is properly transferred the bottom the fiberglass columns must have full contact with the substrate.

Many exterior substrates are not flat and have some slope. To transfer the slope to the bottom of the column you should take four measurements. Measure from the front of the column, the back of the column and the left and right of the column. Be sure to mark the front when you draw your cut lines.

Cut the column to match the slop, being sure to install the column so it has 100% contact with the substrate.

## Mistake

### #3

## Failing to Pre-Drill Screw Holes

There are many instances when you will need to put a screw into a fiberglass column, such as to attach a railing or to secure the column with brackets. Any time a screw needs to be put into a fiberglass column you must pre-drill the hole.

Failure to pre-drill screw holes may cause the material to crack and chip off. This can occur on the inside of the column where it can't be seen. A crack will weaken the column and significantly reduce its load-bearing capacity.

## Mistake

### #4

## Filling the Column with Masonry

Most fiberglass columns are not designed to be filled with masonry. There are applications that call for a concrete pillar, wrapped by a decorative column. In these applications you should use an expansion & contraction barrier inside the column. This allows for the expansion and contraction of the concrete, and it protects the column from undue stress, which may crack the column. For most fiberglass columns, filling with concrete is not recommended.

## Mistake

### #5

## Not a Concentric Load on Column Top

Fiberglass columns are designed to transfer the load of the roof to the ground. The top of the fiberglass column must be concentrically loaded. That is, the load must be centered on the top of the column, and at least 75% of the top of the column top must have contact with the structure.

## SPONSOR INFORMATION



### Manufacturers of PermaCast® Columns

Phone: (800) 264-4HBG

Fax: (334) 566-4629

[HB&G Columns](#)

## RESOURCES

### [Installing Round or Square PermaCast® Columns](#)



**PermaCast® columns are cast from a proprietary fiber-reinforced polymer composite with exceptional strength-to-weight characteristics and requiring minimum maintenance. They are weatherproof, insect proof, and highly durable.**

Caution: Installing fiberglass columns requires certain skills. Consult a professional. This document contains only general information, intended to help you avoid some of the most common problems associated with most fiberglass columns. Neither Porch Designer nor HB&G Building Products assumes responsibility for any damage caused by errors or omissions in this document. It is most important to understand the requirements of the individual column manufacturer, and follow their instructions carefully. This document does not provide extensive enough information to impart the knowledge needed to properly install fiberglass columns.