

*presents*

# timber home. basics

*What is a timber home?*

*What makes a timber home different?*

*How is a timber home built?*

*What components make up a timber home?*

*What design and wood options are available?*

Find the answers to these questions — and much more — in this **FREE** fact-filled PDF download.

# Timber Home Fundamentals

In this handy introductory guide, aspiring timber-home owners will learn the fundamentals of timber-home construction — what it is, how it's designed, what it's made of and more. With this information, you'll be able to speak the lingo and communicate with timber-home professionals on a higher level.

## Different Types of Timber Homes

Timber homes may have a lineage that dates back centuries, but today's timber homes rarely come from the same mold. Designs run the gamut from traditional and classic to rustic or contemporary — and sometimes a mix of styles. It's this plethora of design options that can leave many newcomers to the style bewildered, wandering through a forest of references to timbers, trusses, posts and beams. Here's how to talk timber and describe what you want in your dream home.

### Timber Frame

This time-honored construction style, where skilled craftsmen join timbers by mortises (wooden holes) and tenons (wooden pegs), evolved before the use

of nails or screws. The configuration allows for open floor plans and cathedral ceilings.

### Post and Beam

This style features the same kind of open floor plans, but it uses metal fasteners between timbers, which can include plates, screws and through-bolts.

### Trusses

Both post-and-beam and timber-frame homes use timber trusses as the focal point of the home's design, drawing attention upward when you enter a home. The trusses carry the weight of a second floor or roof system to the walls without any support from below

(unless it's for decorative purposes only). Trusses and their individual components go by dozens of names and configurations (see page 4 for details).

### Hybrid Design

Becoming increasingly popular, this method combines the best elements of a timber home with the lower cost of conventional stick-built construction. Find more details on this style on page 5.

### Decorative Timbers

These timbers are for show only, because you want the timber look, but you're not concerned with the wood bearing any weight of the structure.

## How Timber Homes Stand Apart

When it comes to beauty, timber homes are in a class by themselves. But beyond face value, the construction methods used to build them stray from the norm. How so? In engineering terms, conventional homes rely on a "distributed load" system, meaning certain walls bear the weight of the roof. Timber homes are "point load" structures, with the frame shouldering the load and showcasing a breathtaking combination of wood and architecture.



# The Wood You Choose

You need to decide how you want to incorporate your timbers. What species of wood will you use? Wood species vary in their color and characteristics (knots versus clear-grain) and play a big part in the overall look of your home. The chart below shows a few popular species and their attributes, but you're not limited to these types. Ask your timber provider for more information about the types of wood the company works with.

## More Timber Choices

When it comes to timber construction, not only do you have a choice in what kind of wood species you'd like to use, you also can pick its age. From fresh young "green" timber to seasoned reclaimed wood, the type you choose can greatly influence the look and upkeep of your home.

## Green Wood

Green timbers come fresh from the forest. They have high moisture content (30 percent or more), making them easy for timber framers to craft, since tools cut through them like butter. Green timbers also have the advantage of being the most economical option for home buyers, since they don't undergo the costly handling and preparation processes that other types of timber require.

Their downfall is that what you see is not necessarily what you get. These timbers have a lot of drying to do — and all of it will be done after they're crafted into your home. As green wood dries, it will check (crack) or twist as it reaches a new equilibrium with its environment. Fortunately, this checking process shouldn't affect the structural integrity of your home, if it's properly built.

## Standing Dead Timber

Standing dead timbers are trees that were killed by insect infestation, fire or other means, causing them to dry out while still standing in the forest. Before you balk at the thought of building with bug-ridden trees, rest assured that once the tree is dead, the critters, left without a food source, have moved on. And there are big benefits to standing dead timber. With its low moisture content, this type of wood is more stable and less prone to checking or twisting than green logs. Standing dead timber does cost more than green timber because it's less plentiful.

## Air- or Kiln-Dried

To reduce the amount of movement of the frame as it dries, some timber home companies use air- or kiln-dried beams. Large kilns bake the timbers over several weeks, reducing the

moisture content to around 18 to 20 percent. Air-dried timbers are left in logyards for two to three years to reach a similar moisture content. In either case, you'll pay more for dried timber than you would for green wood, because of this additional investment in time and resources.

## Reclaimed Wood

If you're looking for wood with character and a rich history, consider reclaimed timbers harvested from carefully dismantled, centuries-old factories, barns, bridges and piers. Some companies have even discovered huge old-growth trees no longer found in our forests by dredging rivers and lakes near the sites of sawmills of yesteryear.

Because these large posts and beams have been around so long, the moisture content percentage is often in the single digits or low teens, making them extremely hard and stable. But because it's more difficult to obtain and process reclaimed timbers, most companies charge a premium for this product. Many buyers are more than willing to pay the price, however, considering this lumber stock will one day be depleted.

# wood species

## 5 of the most common timber-home wood species

	SPECIES	AREA HARVESTED	HEARTWOOD COLORS	HEARTWOOD DECAY RESISTANCE		
				SAPWOOD COLORS	WEIGHT (when air dried)	
	Douglas fir	Pacific Coast, Rocky Mountain states, British Columbia	Orange-brown to deep reddish brown, or sometimes yellowish brown	Nearly white	Moderate	Moderately resistant
	Western red cedar	Pacific Northwest	Medium to dark coffee brown	Nearly white	Light	Resistant
	Eastern hemlock	New England, Mid-Atlantic, Great Lakes states	Wood buff or pale brown, sometimes with a faint reddish or purplish tinge	Color not distinguishable	Moderate	Slightly resistant
	Red oak	Southern states and mountain regions, Atlantic coastal plains, Central states	Light reddish brown, often with a pinkish tinge	White	Heavy	Slightly resistant
	Eastern white pine	Maine to northern Georgia and Great Lakes states	Creamy white to light brown, often with a reddish tinge	Nearly white	Light	Moderately resistant

## Timber Terms

It may seem like your timber producer is talking in a foreign language, but not to worry. Use this glossary of timber terms to help you translate. Soon it will seem like your native tongue.

### Distributed Load

Found in traditional “stick-built” construction, in which a skeleton of 2-by-4 or 2-by-6 studs hidden beneath carries the weight of the structure. “Load-bearing walls” are found throughout the house.

### Gentle Bent

When trusses are combined with vertical posts and horizontal beams, they create bents, which form the basic cross section of a timber frame. Bents give the frame the strength it needs to carry structural weight.

### Horizontal Beams

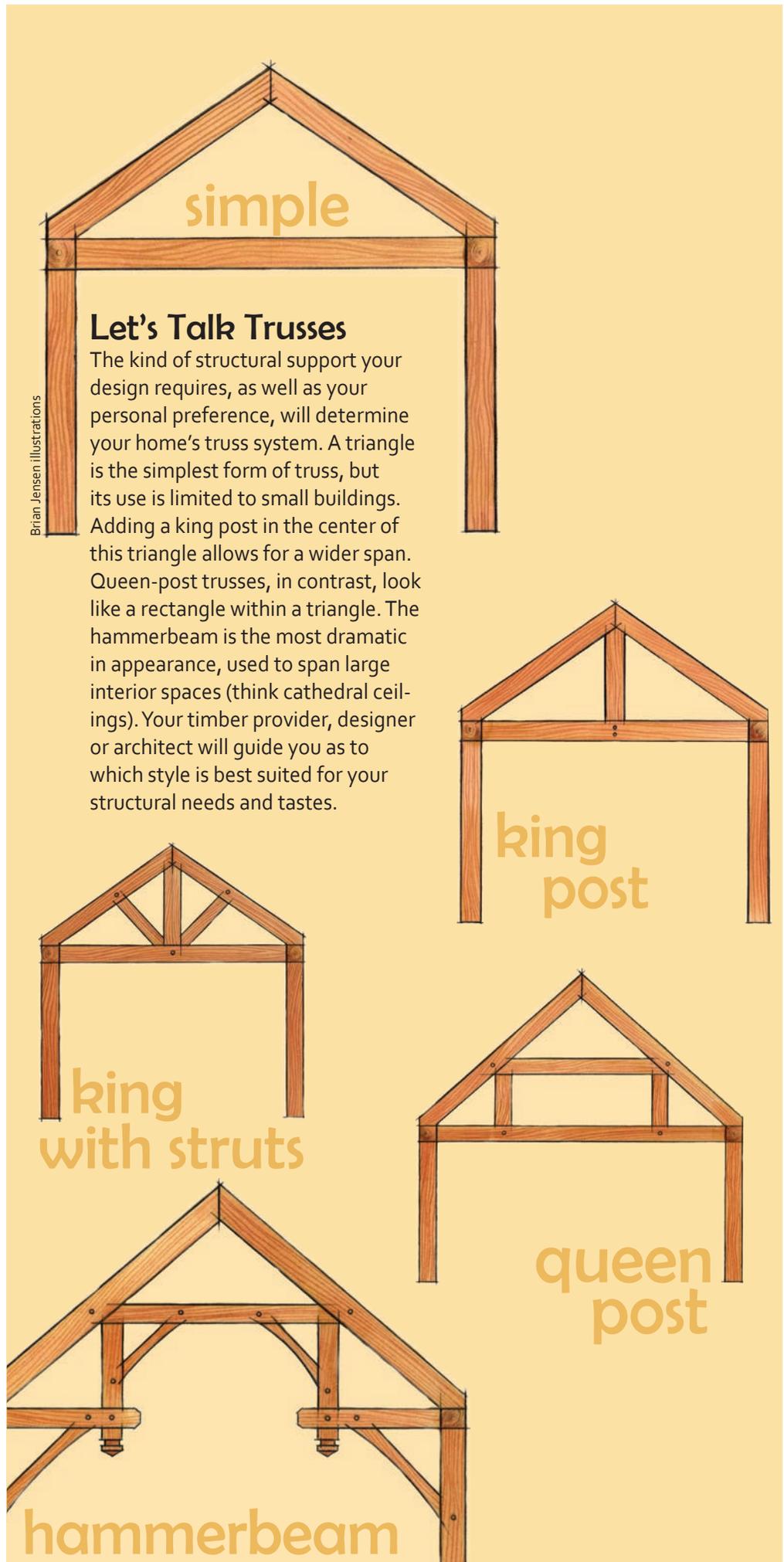
These include timber sills (the perimeter of floor sections upon which posts stand), girts (which span between posts; also where the term “girder” comes from), joists (used to support floors), purlins (used between exterior posts to tie roof sections together) and ridgepoles (the horizontal apex of the roof system).

### Point Load

A system, such as a true timber-frame home, where a few brawny horizontal and vertical beams shoulder all the weight of the roof and walls.

### Vertical Posts

Serving as the legs of the timber frame, their names include principal posts (used at the corners) or king, queen and crown posts — to name just a few. Each has a specific role to support other beams or trusses. For example, a samson post supports the intersection of four horizontal upper-story beams. A joweled post (also called a gunstock post) is fashioned from a whole tree turned upside down to utilize the natural flare of the trunk.



## Mix and Match

Timber-home companies may specialize in a particular wood species, whereas others may offer an assortment of products to suit individual tastes, including a mix of old and new timbers. Be aware that the price for these beams can vary dramatically. Because wood is a commodity, a host of variables can influence its price. If you have your heart set on a particular type of timber but find it to be outside your budget, discuss strategies with your timber provider. It's likely the company may have a solution.

### Hybrid Homes

So far we've touched on the elements of timber-home construction in its purest form. But more and more of today's timber-home buyers are combining conventional construction with timber elements. These "hybrid"

designs typically reserve timbers for the public areas (great room, foyer, kitchen, dining area) and use conventional (stick) framing in less frequently viewed areas (bedrooms, bathrooms, mudrooms, garage, etc.). Why? Because the cost of the timbers ultimately competes with other upgrades, such as flooring, cabinetry and countertops, explains Bonnie Pickartz with Goshen Timber Frames in Franklin, North Carolina. "It's a matter of trade-offs. With home costs rising, people are looking toward hybrids as a good mix of the reality of a budget and the beauty of a timber home."

Another growing design trend is to mix and match different wood species and profiles of timbers, says John Garber with Dreaming Creek Timber Frame Homes Inc. in Powhatan, Virginia.

"We're seeing a blend of round logs and square posts to create almost a Polynesian feel. They're also using different wood species, such as an oak frame with cherry and walnut braces, for example. We have 38 different species represented in our model home, and many buyers like the idea of using different colors and textures of wood."

This willingness to embrace eclectic designs is causing many log-home providers to expand their product offerings to include timber construction. PrecisionCraft Log & Timber Homes in Meridian, Idaho, for example, has a team of architects on staff to help buyers sort out the right rustic style for their needs. "In this way, it all flows from their design, which is how it should be," says Jim Young, PrecisionCraft's president.

## Timber Home Anatomy

Timber homes are complex structures made of vertical posts and horizontal beams to form cross sections called bents. Other members provide support, bracing and structure to the frame. The illustration below shows the most common members of a home's structure.

