

Stair Buying Guide

The Right Steps to a Custom Stair Company



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At Designed Stairs, we have successfully completed more than 150,000 custom stair projects all over the U.S., as well as in Japan, England and South America.

Throughout our history, Designed Stairs has been committed to a continuous process of improvement, refinement and innovation that has allowed us to become a world leader in the most complicated and challenging stair designs. Additionally, we have created standards and procedures that have enabled us to provide high quality staircases to builders in the “middle market” at affordable prices.

We have assembled a “Stair Buyer’s Kit” to help you build a better understanding of what a quality stair is comprised of. And, you’ll have a more successful experience as you move forward in choosing a stair designer and builder.

We will start by recommending that you equip yourself with as much knowledge and information as you can *before* you begin shopping. By knowing the right questions to ask, you can be a more effective shopper. Our goal is to help you understand and assess what you are buying, and in the end, you’ll have the stair you wanted at a fair price.

If you are unfamiliar with stair terms, we recommend that you go to the Terminology page on our website, and look thru the stair dictionary prior to reading thru this guide. Understanding the proper terminology is critical to successful stair shopping.

Here are a few definitions that are easy to remember:

- Stringers The long boards on the wall that “string” the stair together
- Treads The board that you tread on (or walk)
- Risers The boards that lift or rise up each tread
- Balustrade The rail, baluster (spindle) and newel (post) as one unit

The “Stair Buyers Kit” includes several free guides including:

Stair Parts and Lumber 101
Carpenter Built Stair vs. Milled Stair

There is also helpful information available throughout our website: designedstairs.com

The Right Steps to a Custom Stair Company

The Company: Size and Financial Condition

It is very important to understand the size and financial condition of the company you are considering. You will likely be required to make a down payment, and you need to know that a company will be there to see your stairs installed. If the company goes out of business, there will be no one to honor your warranty.

The size of a company is also important. Larger companies produce more stairs each week, giving them more flexibility in their scheduling process. If a problem arises, a larger company is apt to resolve that issue professionally, as there is a chain of command. A larger company should have an established process in all areas, including Customer Service, before, during and after the sale.

Also, there are very good reasons some companies grow, and others don't. It most likely is related to the overall service and value delivered. In Chicagoland, about 80% of new stairs are built by the top three stair companies. As the #1 stair company, Designed Stairs does as much stair work as the next three combined.

Lead-time

Any company will tell you they can meet your lead-time. Inquire about the *specific* lead-time for your selections. If you decide to work with standard styles and stocked parts, lead times can be very short. Should you decide to use custom material or parts, such as custom welded iron components, your lead times will lengthen considerably depending on the abilities of the craftsmen/supplier.

If the job is more complex a larger shop will have the flexibility and capacity to adjust to a changing or demanding workload. Ask prospective companies about how they have managed similar jobs in the past. Ask for a reference from a job of similar size or complexity.

Styles / Materials

Does the stair company offer you expert help during your selection process? Do they have the experience to advise you on trends and historic style and design elements? Have they worked with your materials before and can they access the materials you are requesting efficiently?

Refer to our website Styles page for more specific guidance on uncovering your personal stair style. See our Materials page for expert information on many materials.

Building Codes

Building codes will affect the type of stair that can be built. Building code requirements for stairs can be extensive and likely include: height of riser, depth of tread, height of railing, spacing between balusters, wall rail connections and measurement of treads at walking path. Getting codes right the first time is very important. Odds are your stair will not be inspected until your final home inspection, at which time you want up to code to close or move in. This is not the time to start re-work.

Some codes will allow stairs that are too steep and do not have a comfortable walk. Your stair company should go beyond knowing and following codes, they should be able to tell when to go 'above and beyond' the required codes to make a comfortable walking stair.

Design / Engineering

Some stair companies are simply stair builders, while others are stair designers, engineers and builders. At a minimum, use a stair company who integrates design into their process. Without the preplanning of design, you will have a carpenter figuring out at time of installation how to "make it work". This approach will not deliver a well-designed stair. Some stairs require a higher skill level of engineering. These types include: free standing stairs, curved stairs, elliptical curved and free standing curves that curve over 180 degrees. If you are not certain of what level of expertise your stair needs, confer with your architect.

It is safe to say you never want to be a "guinea pig" for any stair company. Make sure the stair companies you are looking at have significant experience with your type.

At Designed Stairs we have been a pioneer in engineering custom stairs. Even our competitors refer work to us when it is beyond their skills, and architects use us as resource for stair design.

Connections and Joinery

Have you ever heard the expression "the quality of a product is in the details"? It is very difficult to find a trim carpenter to build a stair to the level of detail offered by a professional stair company.

At Designed Stairs we chose our name because we put our focus into designing every detail of the stair for the best possible value. This value is achieved by combining efficient process, strength of materials and aesthetics. There are many design methods used today by stair companies that were pioneered by Designed Stairs. Some of these unique methods are still proprietary to Designed Stairs.

Connections and joinery are key to the quality of the stair. Here are things that you should look for in the construction of your stair:.

Milled Stringers

The stringers should be “milled” or routed with grooves approximately $\frac{1}{2}$ ” deep designed to hold the treads and risers.

The treads and risers are set into the milled stringers and pressure is applied with wedges, wood glue and wood fasteners. The result is that the tread and risers become remarkably strong and, by eliminating gaps, they keep the stair tight and free from squeaking, creaks and pops for many years.



Treads & Risers should not show end grain

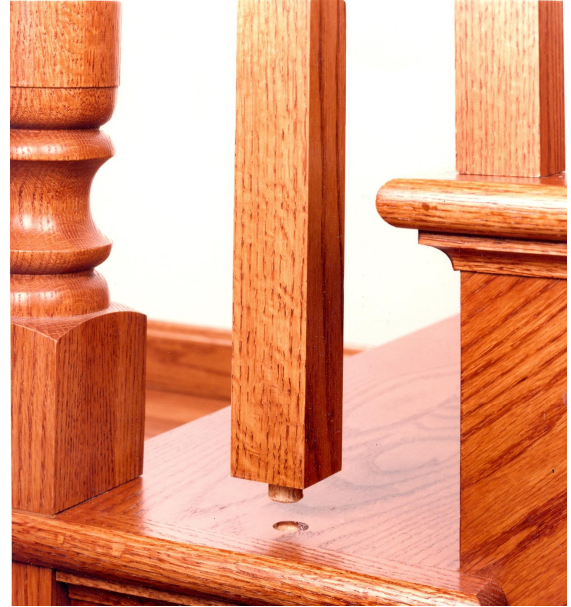
Risers should be mitered to stringers so no end grain is exposed, and treads should have an applied end cap (mitered tread return), so the end is not seen.



Balusters are set into the tread with tendons

An ideal connection for wood is “wood to wood; glue and pressure”. Wood moves over time, and this type of connection allows it to move naturally, while the pressure keeps it stable.

Treads are drilled to receive the ‘tendon’ ends of the balusters, which are glued securely into place.



Connecting the rail to the newels

There are a few methods that are used for connecting the rail to the newel. Each method listed here is acceptable, as each will deliver many years of tight rails.

- **Toe Nailing the rail into the newel**

The benefit is that the nail hole is small and nearly invisible. It will last for 50 years, and is a great value.

- **Bolting the rail to the newel**

This is stronger than toe nailing, however the bolt requires a larger hole and therefore a plug.

- **Rail routed inset**

The profile of the rail is routed approx ¼” deep into the newel. The rail is set into the routed space with pressure and glue. This method is extremely tight and will last generations. It is also the most labor intensive and costly method.

- **Rail caps**

Caps are attached to the rail and fit over the newel. The newel has a wood pin, the cap sits on top of the wood pin, and installed with glue and pressure. This is an extremely tight method.



Craftsmanship and Quality

Some companies will claim that your stair may be built totally on site. A pile of parts is delivered to the site, and a carpenter starts cutting and fitting. This method is not recommended for several reasons:

- 1) There is not forethought to the design details of how each intersection and connection will be planned.
- 2) All cuts are made with hand tools, and are less precise than when performed in a shop.
- 3) The end quality is largely up to the individual at the site.

Shop fabrication is the preferred method of construction, which allows for pre-planning and a level of precision due to larger equipment and a controlled environment.. Ideally, you want as much of your stair as possible fabricated in a shop. With this method, by the time the installer arrives at the site, every detail will have been designed, framing verified, stair fabricated and in a matter of hours to a few days your stair will be complete. There should be no surprises.

Why Designed Stairs?

By now you have learned a few things about selecting a stair company. You are making a decision that you will live with for many years to come. At Designed Stairs we believe that everyone should buy their stairs from us – and thankfully many do.

Simply put, you won't find a better value and service for stairs. At Deisgned Stairs, our passion for our work runs deep. Starting with responsibly harvested woods; shaping each part in our mill to exacting tolerances; designing every detail and connection; delivering expert style selection assistance; and offering the best installation skills in the marketplace – Designed Stairs really provides the best designed, constructed and installed stairs in the industry at the best value, bar none.