

A Consumer's Guide to Stair Lifts & Safe Stairway Access



*Understanding Stair Lifts: Need, Function, &
Stair Lift Purchasing Experiences Compared*

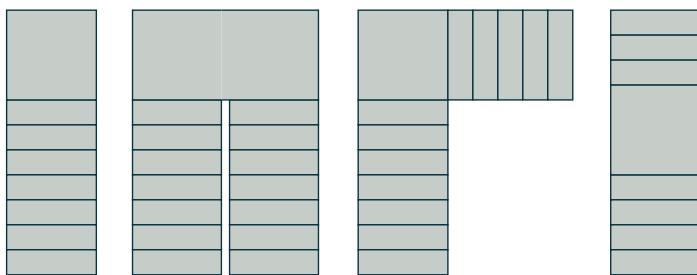


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Stairlift Definition

Stair lifts are known by many different names including chair lifts, stair glides, stair chairs, or any compound version of those terms such as stairlift and chairlift. These terms will be used interchangeably throughout this document. All stairlifts are basically comprised of the same three major components: the rail, which carries the stair lift up and down the stairs; the seat, which is available with or without many different options including color and upholstery; and the carriage, which contains the motor, electronics, and the battery that powers the stair lift.

Stairway Configurations



Common stairway configurations

Stair lifts are available for basically any type of stairway – whether it be indoor or outdoor. The most basic stairways are straight, with one set of steps leading to the next floor. A basic straight rail stair lift is needed for this type of configuration. Curved rail stair lifts are available for stairways that curve or turn. Some stairways have a landing in the middle, and then a remaining set of stairs usually situated 90 degrees from the initial set. Some stairs form a gentle curve from bottom to top. Curve rail stairlift products are either modular – meaning that a one-size-fits-all solution is available; or custom designed – meaning that a unique solution is designed for a specific set of stairs. Modular curve rail stair lifts can be installed much faster with less waiting for the product to be designed and manufactured,

but tend to cost more. Custom curve stair lift products cost less, but take longer to be manufactured and installed.



Purchasing a Stair Lift

Many different brands of stair lifts are available on the market today. There is actually little fundamental difference between many of them. What serves as the primary factor in consumers' choice to purchase a stair lift is deciding what company to work with. Some people like the price of a discounted stair lift they find online, but when it arrives at their home in boxes for them to assemble on their own, they end up paying more than they would have if they had hired a reputable company such as Centerspan in the beginning.

At Centerspan, we differentiate ourselves by

- **Being industry experts**
- **Always offering fast local service**
- **Providing FREE, no obligation evaluations in your home to ensure the proper product that meets your needs is installed**
- **Using only factory-trained and certified technicians to install and service your equipment**
- **Offering full warranty coverage on all of our products**
- **Being there when you have a need, as your local mobility and accessibility products provider**

The chart below compares stairlift purchase experiences:

	Online Vendor	Centerspan
Warranty Included?	Maybe - limited	YES (Parts & Service)
Professional Installation?	No	YES
Factory-Trained Technicians?	No	YES
Local Service?	No	YES
Available any time there is a need?	No	YES
Free Evaluation?	No	YES
Complete Needs Assessment?	No	YES
Training Included?	No	YES
Maintenance Available?	No	YES

Properly installing a stair lift requires extensive training and specific practical knowledge of the inner workings of the unit. Stair lifts are technically advanced products that contain sensitive electronic components and wiring that must only be accessed by trained professionals. Many online companies promote DIY stair lift products they describe as "easy installation". These vendors simply want to make the sale, and then their job is finished. Once received



and unpacked, most homeowners do not know where to begin, and either make critical technical mistakes, and/or have to end up hiring a knowledgeable professional to come install the unit at a premium. Sometimes general handymen are hired to install a stair lift. This is a mistake, because although they may be experienced in general repairs, wiring, and mechanical processes, they do not have the factory training and certification only available from the stair lift manufacturer. Failing to follow manufacturer installation requirements could also result in the voiding of your stair lift warranty!

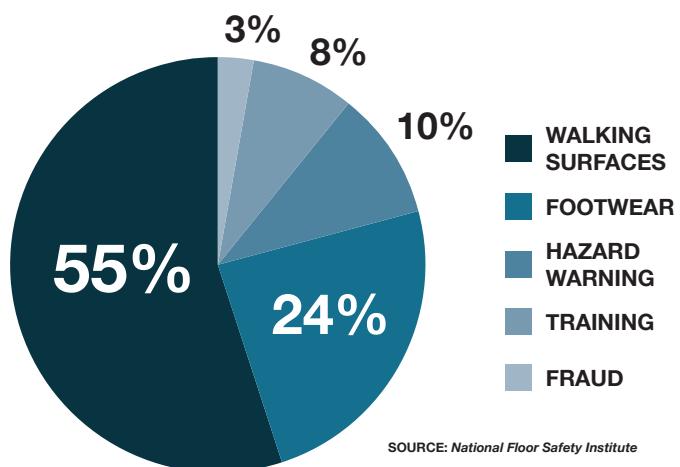
A stair lift is a complex piece of equipment responsible for safely transporting yourself or loved ones, so it is always best to consult factory trained and certified professionals such as Centerspan who sell, service, and install stairlifts daily; and who hold all appropriate manufacturer's certifications and training.

When it comes to reliability, Centerspan leads the way.

Process of purchasing a Stairlift

When it comes to purchasing a stairlift, there is a process that must be taken to ensure the highest level of customer satisfaction. It is very helpful for the customer to know and understand the process up front to avoid any miscommunication and so that the customer is informed about expected timeframes. At Centerspan, we feel that it is necessary to under promise and over deliver as opposed to the opposite which no one wants.

1 Identify need. Like most individuals we do not think about growing older or suddenly becoming disabled. With this being said, no one thinks ahead about buying a stairlift. The risk of an accidental slip or fall increases by over 70% for those over the age of 65. As the chart below shows, the number one cause of accidental falls are



due to walking surfaces, including stairways. Having a stairlift professionally installed is an excellent proactive step in dramatically reducing the chances of stairway accidents. If you are reading this, chances are that you have identified the need for a stairlift in the home for yourself or a loved one.

2 Contacting a Company. There are hundreds of stairlift dealers across the country and most likely, a company or provider is close by. It is important that the customer do some research to determine the qualifications of the stairlift company they choose to invite into their home. The representative may ask a few questions over the phone to identify the type of staircase and to understand the needs and expectations of the customer and will then ask to schedule a free evaluation.

3 Evaluation. The representative should give the customer a one to two-hour window time frame to arrive for the evaluation. Depending on the type of staircase and the customer situation, the evaluation could last anywhere from 10 minutes to one hour. The representative should identify if the staircase is straight or curved to start off with. Other criteria that the representative will be



checking for include: width of stairs, length of stairs, whether or not there are any doors at the top or bottom, if there is an outlet close by, and if there are any environmental hazards that need to be identified. Other things that the evaluator will be looking for is the height, weight, and level of mobility or ambulation of the customer to determine if any additional features (power seat swivel etc.) are recommended.

4 **Quote.** If the staircase is straight, chances are that the representative can provide a quote while at the evaluation. Sometimes, a curved rail quote can be presented at the site but they can be more complex and require additional time for quoting. (no more than a day or two). If the quote is accepted, the unit can be ordered.



5 Ordering. Straight rail stairlifts can normally be kept in stock and do not always have to be ordered once the quote is approved. If the unit is in stock, the installation can be scheduled as soon as possible. If a straight rail unit is ordered, lead times usually range from about 7-10 business days unless the customer opts for express shipping which can cost significantly more on heavy items like stairlifts. If the unit is a curved lift, the ordering process takes a little longer. The first step in ordering a custom stairlift is the photo survey. This is different from the initial evaluation and pictures. In the photo-survey, the representative will set up dozens of targets all around the staircase and take many pictures. These pictures are used to create a 3-D map of the staircase, which serves as a template for custom rail manufacturing. The next step is drawing approval. The engineers will create a drawing of the lift and send it to the dealer for approval. Once approved, the lift can go into production and then ship out.

6 Installation. Once the unit has been shipped and received by the installer, the stairlift is ready to be installed. A one to

two-hour window will be given for the service representative to arrive. This installation usually takes about 2 hours for straight rails but can take up to 4-6 hours for the custom curved stairlifts. For a straight rail, the rail section will have to be cut to fit the length of the staircase and then rail sections will usually be joined together. A custom curve rail is already sized for that staircase. The rail is then secured to the stair treads using lag screws. Once the rail is secured in place, the lift can be loaded on the rail and tested. If everything looks good, the charger is plugged into the nearest outlet and tested for proper charging. The technician will then test ride the unit several times making sure that everything is running well. If the technician feels confident with the performance of the lift, the customer can now be trained.

7 Customer Training. This part is very important. If the end user has memory issues, it is helpful to have a third party present to ensure that the information is received and remembered. The first thing the technician will do is go over the necessary safety features and precautions of the lift. The next step is diagnostics. Some stairlifts have a small screen that will show certain codes to tell what the machine is doing. If there is an issue, the code will be able to tell what the problem is. Most issues can be resolved by referring back to the manual and correcting the problem. Stairlifts that do not have a code screen will emit a series of beeps to alert the user that there is a problem. The next step is to show the user how to ride and safely operate the machine. The technician will assist the user with proper operation of the lift and evaluate the rider to ensure that they are operating the machine correctly. The final step the technician will cover is proper care and maintenance of the machine. If properly cared for, the stairlift will last for years and years.

Care and Maintenance

One of the most important things to consider for proper care and maintenance of a stairlift is to make sure that the batteries always stay charged. In most cases, if the batteries are drained below a certain voltage, the charger will not recognize them and therefore will not recharge them. If this happens, the batteries will need to be replaced. Typical battery life, if maintained properly, is approx. 3-5 years. We have seen batteries last anywhere between 1 month up to 7 years... Another important consideration for care and maintenance of a stairlift is to make sure that the rail stays clean and free of dust. If dust accumulates where the guide wheels roll along the rail, the lift can become quite bumpy and eventually the bearings could wear out in the wheels and need



to be replaced. Lastly, it is recommended that the steel gear rack be cleaned and greased once a year. If the customer is unable to perform this operation,

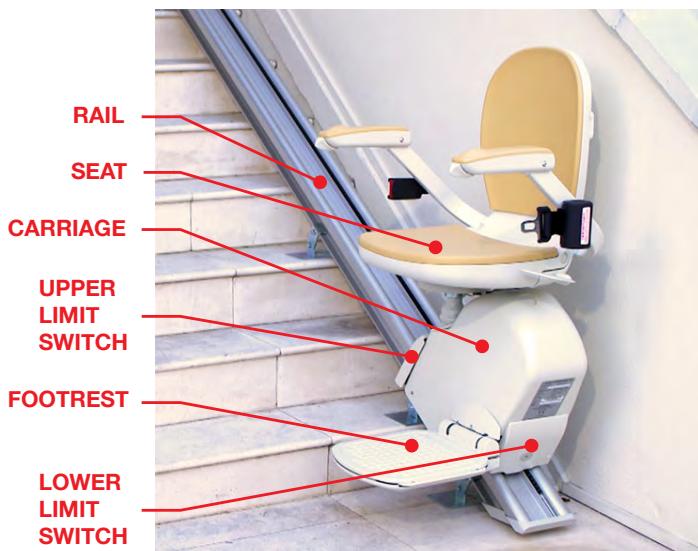
they should check with the installation company and inquire if they offer any maintenance contracts or annual preventative maintenance calls.

Stairlift Components

Seat: Stairlift seats can come in a variety of colors, shapes and sizes. Most of the seats by the manufacturers are made from a composite material and have different cushion options but there are still a few that have a steel frame. Some seats can have custom color and fabric options, and some seats are just one color like a light brown or beige.

Handicare offers a few different color options of the seat cushions as standard options and can

provide custom seat colors for an upcharge. Harmar can offer custom upholstery and pattern options for an upcharge. Acorn and Bruno stairlifts come in one color (beige) only. Stairlift seats are equipped with an offset seat swivel. This means that the seat post is offset to one side so when the seat swivels at the top, it blocks more of the staircase to prevent anyone from falling past the lift. A drawback to an offset seat swivel opposed to a center swivel is that the seat is not able to swivel at the bottom of the stairs. Some of the higher end units can be equipped with a power seat swivel for those individuals that have limited torso range of motion.



Carriage: The carriage is the part of the stairlift that houses all of the “guts” of the lift. Inside of the carriage you will find the motor, the gear housing, the batteries, the circuit board, wires, and limit switches.

Motor and Gears: A typical stairlift is considered a rack and pinion system. This means that the motor turns a sprocket (pinion) up or down on a gear rack that is in the rail. This is a very reliable system and has been adopted by most of the stairlift manufacturers. Harmar has adopted a “helical drive system” for their Pinnacle stairlift.

This means that instead of turning a gear up a rack, a helical shaped drive screw is rotated like a corkscrew to drive the unit up and down the rack on the rail. What this does is require less power which can make the batteries last longer in case of power failure. It also allows for a plastic or composite gear rack that eliminates the need for lubrication and reduces friction.

Control Board (Circuit Board); The control board, or circuit board is the brains of the machine. This board tells the motor when to run and can be programmed to alert the user if there are any problems inside of the operation system. The circuit board is not something that a typical stairlift technician can repair and if the board goes bad, it will need to be replaced. Circuit boards are typically protected by a fuse to prevent power back up which could “fry” the board.

Limit Switches: Limit switches are used to tell the circuit board information. There is a limit switch inside of the seat to tell the circuit board if the seat is turned. Most stairlifts also use limit switches to tell the machine when to stop at the top and the bottom of the rail. Limit switches also known as micro switches are very sensitive and have been known to go bad for no particular reason. The good news is that they are small, inexpensive, and very easy to replace quickly.

Shrouds (Covers): The shrouds are basically the plastic covers that conceal all of the wires and main lift components. The shrouds on most stairlifts come in only one color which is an “off-white” or “beige”

Rail: The stairlift rails come in a variety of shapes, sides, and colors. Straight rail stairlifts have an aluminum rail with a steel gear rack inserted into the rail (except the

Pinnacle, which is a plastic gear rack.) The aluminum is typically a brushed finish which is a dull “silver” color. Straight rail stairlift rails are cut to fit depending on the installation and length of staircase. Custom curve rails are not cut as they are custom built from the manufacturer. The custom rails are typically a dual rail system that consists of two tubular rails. These rails can be powder coated an any color the customer chooses. Handicare offers a few standard color options with custom colors as an upcharge. Harmar offers custom powder coating for an upcharge. Acorn curve rails are white only and Bruno curve rails are a dull Beige only. Handicare also has a unique single tube rail called the Freelite. This also can be made in any color for an upcharge.



Curved Rail for the Harmar Helix Stairlift

Guide Wheels: The guide wheels or rollers are what keep the unit centered and allow movement up and down the rail. The wheels or rollers are typically composed of a polymer and contain sealed bearings.

Rack: This is the part of the rail that allows the motor to turn the unit up and down the stairs. The gear rack is made out of steel (except Pinnacle) and is recommended to have a light coat of grease for lubrication.

Rail Supports: The rail supports are how the rail is secured to the staircase. All stairlifts are screwed into the stair treads. The rail supports are also known as rail feet. Some are behind the rail, some sit underneath the rail. Some supports are meant for the rail to sit flush on the stair nose and some supports are designed to hold the rail off of the stair nose depending on the design of the lift.

Batteries: Stairlifts are operated on a 24volt DC system. This means that inside the lift there are two 12 volt batteries to give the unit 24 volts of Direct Current (DC). Most stairlifts use 7-8 amp hour batteries which can be purchased at most battery retailers. The life cycle of the sealed batteries is typically 1-3 years but batteries have been known to last anywhere from 3 months to 8 years. It depends on usage and battery conditioning. The batteries are rechargeable and are designed to be recharged between uses of the stairlift.

Charger: All battery powered stairlifts require an off-board battery charger that converts power from an outlet into power to charge the batteries. The chargers are designed to be plugged into a wall outlet and recharge the batteries between uses of the lift. If the charger is not working it is important to check the breaker or test to see if anything else is working in that particular outlet. Chargers have been known to go bad if there is an extreme power surge caused by lightning or power company issues. A charger is easily replaced by a service technician or qualified individual and don't cost that much if it is out of warranty.



Assessing Need & Fall Statistics

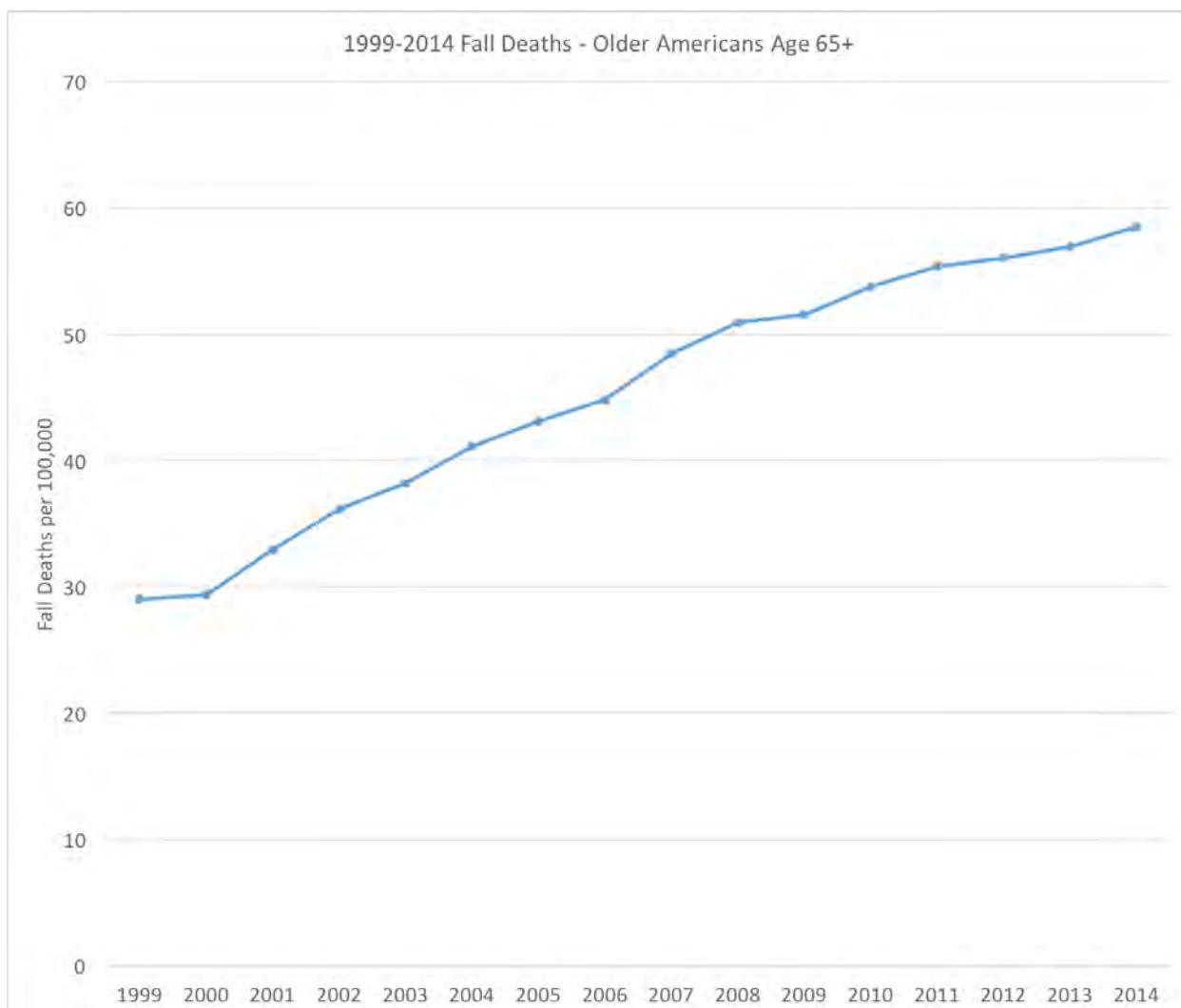
According to the Centers for Disease Control, every 20 minutes, older Americans die from an accidental fall¹. The severity and cost of these accidents is catastrophic. The chart on the next page shows the increase in fall deaths of Americans 65 and over, between 1999 and 2014, per 100,000 population².

According to the CDC, the impact of these falls are extremely serious¹:

- **One out of five falls causes a serious injury such as broken bones or a head injury.**
- **Each year, 2.5 million older people are treated in emergency departments for fall injuries.**
- **Over 700,000 patients a year are hospitalized because of a fall injury, most often because of a head injury or hip fracture.**
- **Each year at least 250,000 older people are hospitalized for hip fractures.**
- **More than 95% of hip fractures are caused by falling, usually by falling sideways.**
- **Falls are the most common cause of traumatic brain injuries (TBI).**
- **Adjusted for inflation, the direct medical costs for fall injuries are \$34 billion annually. Hospital costs account for two-thirds of the total.**

1. Centers for Disease Control and Prevention. <http://www.cdc.gov/homeandrecreationsafety/falls/index.html> [online] Accessed April 15, 2016

2. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. <http://www.cdc.gov/injury/wisqars> [online] Accessed April 18, 2016



Best Solution: Don't Fall!

Having a professional, factory-certified provider such as Centerspan install a stair lift in your home, is one of the best decisions that you can make with regard to preventing falls and accidents on the stairs, which is the most dangerous area of your home for falls. Unfortunately, most people are reactive to these incidents, and it is only after an accident that they have a stair lift installed. However, being proactive instead, and making the decision to plan ahead and avoid potential catastrophies by having a stair lift installed now, can save not only money, but you or your loved ones' lives.



Benefits of Using Centerspan

Call or visit our website today to schedule your **FREE Evaluation**, and find out why people everywhere are turning to Centerspan!

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*Centerspan is always happy to schedule a **FREE, no obligation in-home evaluation at your convenience, in order to assess your specific situation, goals, and needs; and to determine the right solution needed in order to meet them.***



At Centerspan, we believe in local, hands-on service. We don't believe that personal issues such as your mobility can simply be solved by selling you products over the phone or online. We are right there when you have a need.



We stand by everything we sell, and every product we install. Your satisfaction is key to our success. We will always go above and beyond to make sure that you are satisfied with our products, and happy with our level of service.



Every product we install is fully covered under our 1 Year Labor Warranty. We only work with product manufacturers who provide additional warranties on parts, so that you are fully covered against all defects and service issues.



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